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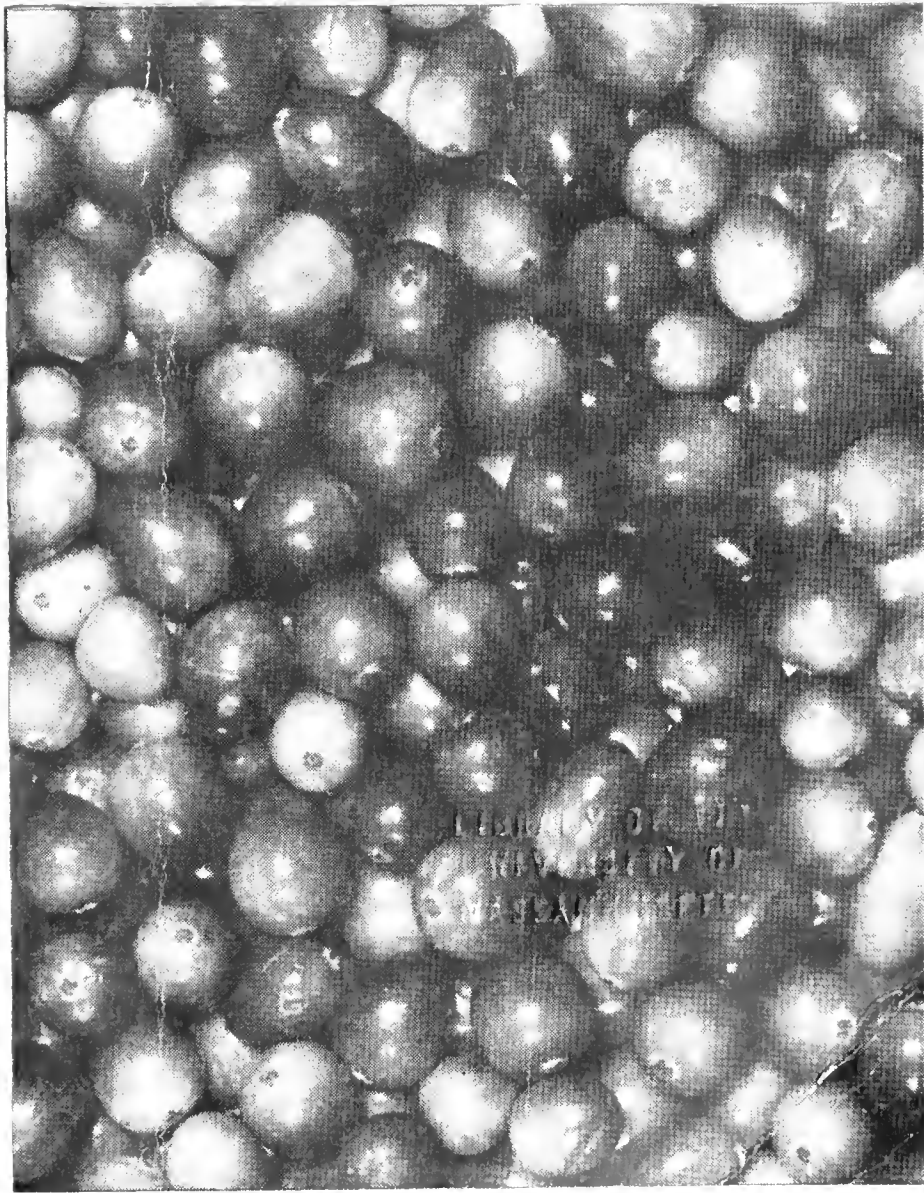


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One of the Selections from the U. S. D. A. Cranberry Breeding Project. Story on page 6.
Picture taken March 1947 (berries actual size). (Cranberries Photo)

12-13

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Growers Cranberry Company recently completed the most successful year in all its 52-year history. Its sales more than doubled its previous largest year.

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National advertising of Ocean Spray Cranberry Sauce, appearing in Woman's Home Companion, Better Homes & Gardens, This Week, and American Weekly—is reaching 23,000,000 consumers.

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Such as spring or that pineapple ginger ale salad with gay "cranberry tidbits" sandwiched in the top. Sure to make a hit at a "Hostess-Banquet Luncheon." For Spring weddings, or shower luncheons, "cranberry hearts" atop pineapple slices spread with green tinted cream cheese and chopped nuts. And those pert little "cranberry chicks" are sure to please the young set—and grown-ups, too. Serve them with chicken—roasted, fried, creamed—or with chicken salad. Or perch them atop vanilla pudding.

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Cape Cod Growers' Association Has Instructive Spring Meeting

Trade Exhibit is Popular Feature—No Positive Action on "Union" With Cranberry Clubs

Cape Cod Cranberry Growers' Association offered an ambitious spring meeting for members and other growers at Wareham Memorial Town Hall, April 30th, which was attended by about 300. Program was in two parts, a trade exhibit in the forenoon and a business and speaking program in the afternoon. Proving of noticeably special interest to the growers was the exhibit of cranberry equipment by 18 exhibitors, indicating the importance growers are placing upon modern methods of bog building and operation.

At noon there was a well-prepared roast beef luncheon, buffet type, by New Bedford Public Market, Russell Makepeace having

charge of this arrangement.

The business meeting was called to order by President George E. Short shortly after 2 p. m., and after reports by officers the two major matters were acted upon. One was to change the by-laws so that the annual meeting is to be held on the nearest Tuesday to the 19th day of August instead of the first Tuesday after the 19th, as has always been the custom. The change was made in consideration of a request of U. S. Crop Reporting Service which makes its first official release of the crop in prospect at the time the Cape association is in session, this being a long-standing "courtesy" custom to the industry.

Postpone Action on "Union"

On the most important business matter, that of a "union" of the CCCGA and the four Massachusetts cranberry clubs, the action was a postponement of decision.

Considerable discussion developed concerning this and the actions of the cranberry clubs which had all given consideration at previous meetings, in the main postponement, or really negative action having been taken by them. Finally on motion of Russell Makepeace the matter was turned back to a special committee which included all clubs and the association county agents and others in its membership for further discussion and new recommendations. Many were disappointed with the results of this earnest attempt for closer cooperation between these cultural, non-marketing organizations, and a good deal of thought had been put into plans by which this might be accomplished. Many others, however, seem to feel the groups should continue to function separately, as is the case at present.

One objective of the spring meeting was to obtain more members for CCCGA and this was successful to some extent, more than 30 new members being registered, this number being increased since. New and old members who desired were given copies of the new and major bulletin, "Weather in Cranberry Culture", by Dr. H. J. Franklin and Dr. Neil E. Stevens.

Exhibit

Although the day started out with rain (which later cleared) many began to come early to see the exhibits which were on display in the basement of the building and outside. Exhibitors numbered 18 and felt that their efforts were amply repaid from the interest shown. Items included all small equipment, a very good display of irrigation equipment, tractors, spray equipment, frost prevention machine, tile, pumps, flumes, and other items.

List

Exhibitors were H. F. Davis Tractor Company, 1035 Commonwealth Avenue, Boston; Frank E. Gregory, auto exchange, 107 No. Main Street, Brockton; Russell H. Trufant, North Carver; Veg-Acre Farms, Forestdale; Sempos Products Company, East Wareham;

(Continued on Page 27)

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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of May, 1947—Vol. 12, No. 1

Published monthly at The Courier Print Shop, Main St., Wareham, Massachusetts. Subscription, \$3.00 per year. Entered as second-class matter January 26, 1943, at the post-office at Wareham, Massachusetts, under the Act of March 3, 1879.

FRESH FROM THE FIELDS

By C. J. H.

MASSACHUSETTS

April, judged from its effect upon next fall's cranberry production, would be put down as slightly favorable, in the opinion of Dr. Franklin. Continued cool toward the close and the first days of May, however, was not helping matters very much. Temperatures were slightly above normal for the month as a whole, in spite of the coolness of its close. This was favorable for the quantity of berries in prospect, but not so favorable for the keeping quality.

Rainfall Up

Rainfall was heavy—6.30 inches. This assured plenty of water for most troubles and water supplies in general are pretty well up.

There were but two frost warnings sent out during the period. The first was on the 22nd, but no injury was done, and the second was for the 28th, with 18 being forecast, which proved to be generally within a half degree of light. This caused no damage in the principal cranberry area, but there was a slight injury to some lowes up at the Lowell bog in Middlesex County.

Fruitworm May Be Light

Bogs were greening up well as May began, although growers of course were still faced with the diverse possibilities of the poor bud showing. As concerns insects, Dr. Franklin said indications were that fruitworm might be light again this year, a definitely favorable factor in itself if this proves to materialize as he hopes. First reason he gives for this is that last year's extremely light infestation was a basic indication that the following year should be light, and

second, the fact that April temperatures were above normal.

WISCONSIN

Crop prospects for 1947 indicate that Wisconsin may expect about a normal production, with the "hedge" that a crop below is a possibility, due to the rather light budding throughout the state. According to Vernon Goldsworthy there is further possibility that oxygen damage having occurred last fall and there are undoubtedly some vines that were injured in spring kill, probably more than normal. Insect population is expected to be less than normal, because of the open winter through most of the areas.

Labor situation for '47 will not be as tight as it has been during the war and last couple of years. That definitely seems a brighter prospect.

"Goldy", Sampson Leave

Vernon Goldsworthy and his assistant and bookkeeper, Ralph Sampson, left the Sales Company in April to build and develop their own properties in the northern part of the state. "Goldy", however, will return during June as consultant entomologist and to help with other problems. He will also be back in the harness for a month or so in October to help with the harvesting and shipping of the crop. This is the first time in 14 years that "Goldy" has not been almost constantly active in the general Wisconsin cranberry field, but even though he is busy on his own properties he has offered to give any assistance possible to growers who may call on him for advice. Samp-

son is coming back the first part of September to help with inspection and shipping and to assist with growers' income tax reports.

"Goldy" Writing Text Book

Goldsworthy is also at work writing a textbook on cranberry growing, cultural practices and marketing, and hopes to have it published in the near future.

The GI Training School which was held at the Rapids has closed after a very successful course, and there is considerable hope it may be re-opened next fall, and this may come about early in November.

NEW JERSEY

Temperature—The average daily mean temperatures for April have been almost exactly normal (51.7°) at Pemberton. Growth on both cranberries and blueberries has been slow in starting, with blueberries two or three weeks behind 1945 and 1946 development.

Precipitation—Precipitation was frequent and rather light, being of the typical April shower variety. By the 24th, 2.45 inches had fallen, which is $\frac{3}{4}$ of an inch below the normal monthly total.

Frosts—The first frost warning of the season was sent out from the Cranberry Laboratory on the evening of April 22. Temperatures as low as 19 degrees were reported on cranberries. Temperatures in blueberry fields generally did not fall that low and no injury has appeared.

Meetings—A Burlington County Cranberry growers' meeting was held at Pemberton on the evening

Cranberry Breeding Investigation of the U. S. Dept. of Agriculture

F. B. CHANDLER, R. B. WILCOX, H. F. BAIN, H. F. BERGMAN, and HAIG DERMEN (1)

1) F. B. Chandler, Research Professor, Mass. Cranberry Station, formerly Horticulturist, U. S. D. A.; R. B. Wilcox, Associate Pathologist, U. S. D. A.; H. F. Bain, Research Advisor for Biron Cranberry Lake Development Co., Mid-Cranberry Lake Development Co., Midwest Cranberry Co., formerly Senior Pathologist, U. S. D. A.; H. F. Bergman, Senior Pathologist, U. S. D. A.; Haig Dermen, Associate Cytologist, U. S. D. A. All of the authors are or have been members of the staff of the Division of Fruit and Vegetable Crops and Diseases, Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, U. S. Department of Agriculture. The crosses were made by Bain and Bergman; the false-blossom-resistance work was done by Wilcox, later assisted by John M. Delap; the selection work mostly by Chandler and Bain; and the polyploidy work by Dermen and Bain.

The authors wish to express their appreciation to the Agricultural Experiment Stations in Massachusetts and New Jersey, to the Wisconsin Department of Agriculture, and to the Wisconsin Cranberry Sales Co., for assistance in conducting this program. Special acknowledgment is due the New Jersey Experiment Station for support of the cafeteria tests in 1945.

The authors also wish to thank J. J. Beaton Co., Biron Cranberry Co., Theodore Budd & Son, Cape Cod Co., Cutts Bros., A. D. Makepeace Co., Pomona Fruit Co., J. J. White Inc. and Harold E. Scammell for making acres of bog available for the first and/or second test of the seedlings; and to the Wisconsin Conservation Department for greenhouse facilities for growing seedlings in Wisconsin.

INTRODUCTION

The United States Department of Agriculture, in cooperation with the New Jersey and Massachusetts State Experiment Stations, initiated a cranberry breeding project in 1929, with the aim of originating varieties that would show resistance to the spread of false-blossom disease and that would produce large crops of superior fruit. Under this program 10,685 seedlings of known parentage have been grown from crosses made in Wisconsin and Massachusetts. The New Jersey Experiment Station also crossed Early Black and McFarlin, and data on the 112 seedlings of that cross are included in this paper. Approximately 1800 seedlings had fruited by 1940, at which time some 40 selections were made for a second test, 6 of them being from the N. J. cross. Since then 5497 more have fruited, and 182 additional selections were made in 1945. The best of these seedlings have been set in Massachusetts, New Jersey, and Wisconsin for a second test.

New Jersey was chosen for the first nursery study of the seedlings, as false blossom spreads more rapidly there than in the other states. This nursery was operated under an agreement between the U. S. Department of Agriculture, J. J. White, Inc., and the New Jersey Agricultural Experiment Station. The bog was about 5 acres in size and eventually was filled with seedlings. In addition, the part first set was cleared and replanted with seedlings during the study.

The Wisconsin nursery was established in 1939 as a four-party cooperative project between the U. S. Department of Agriculture, the Wisconsin Department of Agriculture and Markets, the Wisconsin Agricultural Experiment Station, and the Wisconsin Cranberry Sales Company, the last-named organization agreeing to finance development and operational costs in a separate contract with the Biron Cranberry Co., near Wisconsin Rapids, where the seedling marsh is located. The purposes were (1) to provide a suitable location for running a second test on a large number of seedlings that were under unfavorable conditions in the New Jersey nursery; (2) to test New Jersey selections under Wisconsin environmental conditions; and (3) to test the tetraploid cranberries. Three or four vines from 900 of the 1800 seedlings growing in the first block were set in 1939 and 1940. Approximately one-third of these are still undergoing tests. In 1944 and 1946 vines from 490 additional seedlings (including the 1945 selections) were set in Wisconsin. During this period 640 locally grown seedlings were added to the nursery, making a total of 2030 seedlings and selections grown in Wisconsin.

In Massachusetts, some seedlings were set in the State Bog, and the A. D. Makepeace Company also built a bog in which about 1600 seedlings are being tested. The youngest seedlings are in the Makepeace bog, and selections from these will probably be made in 1947, 1948, and 1949.

METHODS OF BREEDING

Varieties that were known to be somewhat resistant to false blossom were used for one or both parents in nearly all crosses. The actual crossing was done mostly in Wisconsin and Massachusetts. Seventeen varieties were used as parents in the breeding work in Wisconsin and an attempt was made to make all of the crosses both ways (reciprocal crosses) for example, Early Black was used as the female parent and McFarlin as the male or pollen parent, and the cross was also made the other way, using McFarlin as the female parent and Early Black as the male parent. In Massachusetts six varieties were used as parents and an attempt was made to use each one as a female parent, with each of the other five as the male parents. This would give all possible crosses and reciprocals of the varieties used. A list of the successful crosses will be found in Table 1.

Before the flowers opened in the spring they were emasculated and covered with cheesecloth in glass bottles to prevent pollinating insects from contacting the flower and to prevent wind pollination. Blossoms not pollinated by hand did not form berries. This indicates that the pollen, if wind borne, was not passing through the cheesecloth. Several days later, pollen was collected from the male parent and transferred on the thumbnail or a smooth instrument to the end of the pistil. The flowers were covered again after pollination and were kept covered until the berries started to develop. The seeds were removed from the resulting berries in January, February, or March, and planted immediately. The number of seeds developed in the hand-pollinated berries was usually greater than in the open-pollinated ones. The seeds were germinated on sterilized agar in test tubes. When the plants were 1 to 1½ in. tall, two or three months old, they were transferred to a mixture of sand and peat and were kept in the greenhouse until

they were a year old. The seedlings from the first crosses were set 5x5 ft. in the bog in 1934. Later crosses were planted in 1937, and the last ones in 1943. About 8700 of the seedlings were set in New Jersey since false blossom is most abundant there and spreads most rapidly. While in the nursery, the runners were tucked into the ground or cut off to prevent mixing, and the berries were all harvested to prevent the development of volunteer seedlings.

See table 1

Method of Selecting Seedlings in 1940

The "40 selections" were made after most of the 1800 plants in the group had produced a pint or more of berries for two or three years in succession. All berries on the plants were picked in 1938, 1939, and 1940 and were held for three or four months to allow storage disorders to develop. The individual lots of berries were then carefully hand-sorted, and records were made of percentage of spoilage, berry shape, size (cup count), color, and general appearance. Meanwhile, the producing areas of the seedlings had been measured, and so it was possible to calculate yields on a barrel-per-acre basis.

By using the two or three-year records, three sets of tables were constructed for each cross represented in the block of seedlings. In one series of tables, the individual seedlings were arranged in order of average yields; in the second series, in order of average percentage of sound berries free from spoilage for the two years; in the third series, in order of general appearance as determined by placing small samples of berries from every plant in small trays and arranging them while all samples were in view.

Each cross in turn was then analyzed in the following manner: The three rating-tables were placed side by side, and the top plant in the first table (the one giving the yields) was sought in the other two tables. If its position was above the middle (or average) in the other two tables, it was marked for further consideration; if below the middle in either, the plant was discarded. Plant by plant, the first

TABLE 1.
Number of Cranberry Seedlings Set in Bogs, by Crosses and by Number of Selections Made for the First Test

Cross or Reciprocal	No. of Seedlings Set in N. J.	No. of Selections*			No. of Seedlings Set in Mass.	No. of Selections**		
		40	93	S			C	
Early Black:								
Aviator	517	‡	0		155	2		
Centennial	381	‡	2	1	158	—		
Howes	128	‡	0		0	—		
McFarlin	1326	19	15	9	240	4		
Paradise Meadow	364	‡	1		119	—		
Prolific	24	0	1	1	0	—		
Searles	389	‡	2	5	5	0		
Shaw's Success	414	‡	9	3	1	160		
McFarlin:								
Aviator	491	‡	7	1	1	195		
Bennett	230	1	0	1		0		
Berry Berry	133	0	3		2	0		
Centennial	444	0	12	5	4	137		
Howes	323	0	3	3		0		
Holliston (Mammoth)	147	0	0		1	0		
McFarlin	31	0	0			0		
Paradise Meadow	210	‡	3	3		136		
Potter	27	2	0		1	0		
Prolific	246	5	0	3		0		
Searles	311	‡	1		3	0		
Shaw's Success	284	‡	10	6		222		
Stanley	162	0	0	1		0		
Vose's Pride	162	0	4	2		0		
Whittlesey	22	0	0		1	0		
Paradise Meadow:								
Aviator	247	‡	2	2		3		
Centennial	53	‡	1			14		
Shaw's Success	170	‡	4	1		168		
Searl:								
Howes	592	2	1	1	2	0		
Searles	37	0	0			0		
Shaw's Success:								
Aviator	295	‡	4	9		170		
Centennial	232	‡	8	6	1	116		
Totals		8692	40	93	63	26	1993	19

‡ Not fruiting in 1940 when the 40 selections were made.

* 40 refers to "40 selections" made in 1940. Second test of these selections reported in Table 7.

93 refers to 93 selections made in 1945.

S refers to special selections made in 1945.

C refers to canning selections made in 1946.

** A few selections made at the State Bog, fall 1946. No selections were made from the Makepeace nursery.

table was worked through in this manner until the top 25 per cent of the seedlings had been either retained or rejected on the basis of their ratings in the other two tables. The second and third tables were then subjected to the same type of analysis. The seedlings retained up to this stage, accordingly, rated near the top in yield, keeping quality, or appearance, and not below average in the other two characters.

The relatively small number of plants falling in this select group were then checked for berry size, vine type, date of ripening, and other characteristics, and additional eliminations were made of plants unsatisfactory in any of these respects. Finally, it was judged that even the best plants in some

crosses were not promising enough to justify further trial. At the time the selections were made, Mr. Wilcox had tested 143 of the more promising seedlings for probable false-blossom resistance by his "cafeteria" method (described later), and 27 of the best seedlings in this tested group were included in the "40 selections."

As conducted, the method of selection virtually limited the choices to plants growing in favorable locations on the extremely variable nursery site. Because many seedlings could not be fairly tested under such conditions, cuttings from all plants in poor locations were transferred to the Wisconsin nursery and the plants retested under the more uniform growing conditions.

The above method of testing resulted in the selection of 40 seedlings which were considered outstanding, and these have been called "the 40 selections." These were included in the group set in Wisconsin for a second test. The 40 selections were also set in rod-square blocks at the J. J. White Inc. bog and at Theodore Budd & Son's bog in New Jersey, and later at the State Bog in Massachusetts. Early Black and Howes were included in these tests for comparison.

Method of Selecting Seedlings in 1945

The following is the "step-by-step" method of determining the superior seedlings in the latest group of selections. In August 1944 the yields of the 5497 seedlings that fruited were estimated in relation to the uprights present. As the seedlings from crosses made in Wisconsin had been set longer than those from Massachusetts the estimated yields were consistently higher in the former than in the latter. In each group of crosses, the third of the seedlings with the greatest yield were harvested. Some duplicate samples were taken and a total of 2301 samples were stored. The amount of the harvest sample was a pint, or all of the berries if a seedling had less than a pint of fruit. Each sample was marked with the date of harvest and the amount of immature berries at harvest. The samples were studied in December and January. At this time, records on 3"x5" cards were made of color, gloss, shape, cup count, ripening or coloring of berries in storage, and relative yield (see below). The steps in the selection were as follows: (1) The cards were arranged from the best color and gloss to the poorest, and the cards that represented the seedlings with poor color or gloss were discarded. (2) The cards were then arranged according to shape, and the cards representing the pointed berries were discarded. (3) Next the cards were arranged according to cup count, and the cards for the very large berries were set aside for a later selection, and the cards for the small berries (over 125 per $\frac{1}{2}$ pint cup),

were discarded. (4) The cards for the seedlings that colored poorly in storage were discarded. (5) As there was considerable variation in the yield in different parts of the bog, the yield in relation to that of the surrounding seedlings was considered, and the cards discarded for the seedlings that had a low relative yield. There was very little rot in the seedling bog in 1944, hence rot was not considered in making these selections. The discarded cards were all checked, and if a seedling was found to be discarded on one undesirable factor yet had two or more very desirable factors, it was reconsidered, and on this basis a few cards were taken out of the discard pile. This method of harvesting and discarding eliminated about 5300 of the 5497 seedlings that fruited. All the remaining seedlings had good or excellent color and gloss, and most of them had good shape and good size, and good to excellent yield in relation to the surrounding plants.

In 1945, the seedlings that were not eliminated the previous year were staked for special observation and harvest. During the season, other seedlings were staked that had not appeared promising the year before. In all, about 300 seedlings were staked and harvested. Before harvesting, the amount of rot and the yield of berries was estimated. A study of the value of the rot estimate showed that the estimate was very reliable.

New cards were made in 1945, independent of 1944, with the same type of information as in the previous year. Discarding was the method again used to arrive at the best seedlings. As rot was bad on nearly all of the seedlings, those having 90% of rotten berries were first eliminated. All of the named varieties (Early Black, Howes, McFarlin, Aviator, Shaw's Success, Centennial, Pride, Prolife, Stanley, Pennett, Paradise Meadow, Searles, Holliston (Mammoth), and Potter) planted in with the seedlings had over 90%, and most of them had 100% rot. The cards for all of the seedlings that had too much false blossom to be used for a second test were discarded, and the

cards representing seedlings with intermediate amounts of infection were kept in a "special group". As before, the cards were sorted and discarded for poor color, poor gloss, and low relative yield, and, in addition, cards indicating that seedlings had twice as much rot as the surrounding seedlings were discarded. Cards indicating that a seedling had only half as much rot as the surrounding seedlings were saved if the other characters were favorable, as such seedlings were considered to be rot-resistant. Notes taken by Bain from the berries harvested in 1943 were studied particularly for rot and yield.

Ripening of the berries after harvest, like other factors, varied greatly for the seedlings studied. One of the seedlings selected for canning ripened very little when picked immature, but ripened on the vines about September 25, and had better than average yield of berries of good shape and color. On the other hand, nearly a third of those that were selected for both fresh fruit and canning might be classed as good for ripening in storage and many may be classed as fair for this characteristic.

The cards that were not discarded in 1944 or 1945 were then put together and studied. These cards represented 140 seedlings that appeared outstanding in 1944 and 1945. In 1945, the "cafeteria test" for susceptibility to false blossom was applied to 362 of the seedling that appeared best in 1944, and those with high susceptibility ratings were discarded. This left 9 seedlings in the general group for the second fruiting test, while a few others were put in the special group.

Each of the 93 seedlings to be tested has been set in three randomized locations in each bog to overcome soil variability. Earl Black, Howes, and Shaw's Success were added as checks. The test are being made in two bogs in New Jersey (Theodore H. Budd & Son and Cutts Bros.) and in two bog in Massachusetts (A. D. Makepeace Co. and J. J. Beaton Co.). The same number of vines were set in each location, so that the rate of spread may be studied. These plots will be observed to see which

seedlings fruit earliest, which have the greatest yield, disease resistance, best season of ripening, keeping quality, etc. It has already been mentioned that these selections are also being tested in Wisconsin.

The "special group" contained 33 seedlings that could not be used in the general test because of insufficient vines of good quality to set the test plots. Two of these seedlings were very outstanding, and the others were exceptionally good. Joseph Palmer of the Pomona Fruit Co., New Jersey, volunteered to test these in addition to about 50 of the 93 selections.

In addition, 26 seedlings have been selected for canning to be set in Massachusetts (Cape Cod Company and United Cape Cod Co. These seedlings have high yield, but do not have all the other characteristics desirable for fresh fruit. With them will be set a number that have good yield and have been included in the general and special groups.

In Wisconsin, selections are being made in a somewhat different manner from that followed in New Jersey; seedlings are being discarded as soon as any undesirable vine or berry characteristics are detected. This greatly reduces the number of plants on which it is necessary to keep records.

(Continued in June)

TOP

Young cranberry seedlings which had been in the seedling nursery for three years. When the plants were young the runners were trained around the center to force fruiting uprights.

CENTER

Old seedlings showing how the runners were trained to fill the square. Runners which developed later were cut off. Weeds which grew in the path were kept mowed with a lawn mower. The New Jersey nursery had over 8½ miles of path.

LOWER

One of the outstanding seedlings in 1944 and 1945. Four of the stakes were painted on the tip, representing four promising characters recorded in 1944. The four white stakes represent four or more favorable characters pecked out by four cranberry growers.



JOHN SHIELDS

Landscape Gardener Built a Bog to Sell, but Became Cranberry Grower Himself Instead—Just Elected to Third Term as President of Upper Cape Cod Cranberry Club.

By

CLARENCE J. HALL

John F. Shields of Osterville, Mass., who has just been elected to his third term as president of Upper Cape Cranberry Club, was (and still is) a landscape gardener, who became a cranberry grower through building a bog which he had intended to sell—and then found he didn't want to part with it. That was in 1941 and the piece was one of three acres on Run Pond in nearby Marstons Mills. In the brief years since, he has built his cranberry holdings to approximately 40 acres, and intends to acquire more acreage, if he finds the sort of bog he wants.

"I built this swamp in my spare time, at the urging of Jesse Murray, Osterville grower, who is treasurer of the Upper club. The location was maple bottom, there was complete and adequate flowage and good sand. I did a lot of work on that little bog myself—it was when my landscape business was slack—I dug and I wheeled and I sanded.

"When it came time to sell and I had an offer at what I considered a good price, I found that I didn't want to sell at all. I felt I had built that bog right, and it was



right. This sounds foolish, but I just didn't want it to fall into anybody's hands who perhaps wouldn't treat it right and keep it the way I had built it."

Although born in suburban Brookline, Shields has been on the Cape, during the summers at least, since he was scarcely more than an infant. His father, James F. Shields, now retired, had been gardener on various estates in the Osterville area. Shields grew up with a fondness for plant life. He had worked on cranberry bogs as a boy for Cornelius A. Driscoll, well known Cape grower, and he had worked at landscaping.

Enjoys "Making Things Grow"

His decision to become a landscape man himself was a perfectly

logical one, and for some years he worked at, and learned, the business, finally being foreman for Robert Cross, landscape gardener, of Osterville. After that he went into business for himself. For the past fifteen years he has been tree superintendent for the town of Barnstable, of which Osterville is a village. He has attended short courses in tree and plant culture at Massachusetts State College.

Shields is a man who enjoys "making things grow". Cranberries are "something which grow out of the soil", and so he really gets fun out of growing.

He recognizes that he is a newcomer to cranberry culture, as compared to the long years of experience many growers have put in. His opening comment and his parting "shot" to this interviewer were, "Don't put me down as trying to tell cranberry growers what they should do, or what they shouldn't." Denying any desire to do that, he does admit that for himself he has "some thoughts at the back of my mind" about cranberry growing that he has tried out, and other theories that he wants to prove or disprove. He believes there are features about cranberry growing which can still stand improvement.

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"Some Bogs Are Starved"

One of the beliefs he is coming to develop, as are some other growers, is that there is strong possibility that too much water is being used in cranberry growing.

"As for myself, whenever possible, I let the winter flood off in March, and if not then, as soon thereafter as I can. I also make a practice of keeping the bogs from being too wet at other times. I am pretty well convinced from my own experience and from what I have observed around is that as little water used as is sufficient, the better off a bog is.

"I think proper water control and the proper 'feeding' of cranberries are two very important factors, and by 'feeding' I mean fertilizing whenever necessary. I am all for a scientific program of fertilization of cranberry bogs. I've looked at some bogs and from my experience with trees and shrubs, I've just known that these vines were slowly starving to death. Any plant has to receive the food it needs to stay healthy and produce."

Shields has made many fertilizer experiments, using "everything from nitrate of soda to potato fertilizers". While all for fertilizing when necessary, he admits he has not arrived at the answers yet, even to his own satisfaction. He isn't even sure he is on the right track toward a really satisfactory fertilization plan. He points out

that so often different results are obtained with the same fertilizer from year to year and on different sections of a bog that he still has a lot of unanswered questions.

"Fertilizing probably isn't necessary on peat bottoms where there is enough plant food, but I certainly think some kind of fertilizer program is necessary on hard bottom. A good many bogs have plenty of rich muck at the centers, but often the peat edges are carried off and into meadows and sand banks, and on these areas added plant food has to be given. He cited one instance of where he had felt a certain small bog looked starved to him, and after fertilizing he had raised production on a piece of two acre extent to 175 barrels in one year.

"More Work, Better Bogs"

Shields would like to be able to grow better cranberries than are now grown generally, and, if he had a "policy", it is to grow more cranberries on less acreage. The chief way to obtain these objectives, he believes, is through more thorough application on the part of the grower.

"I have a suspicion that sounder fruit can be grown, and often the reason is because all growers do not work hard enough at it. They don't take enough pains with their bogs. I am certain the main difference between producing 25 barrels to the acre and 100 barrels to the acre on good bog is often in

the grower's own hands. It seems reasonable that we can expect a consistent yield of between 60 and 100 barrels to the acre here in Massachusetts, and that includes Cape Cod as well as Plymouth County. The people that I know who have the best crops are always those who pay the most attention to their bogs."

In the more effort in cranberry growing, Mr. Shields would include the personal effort of the grower himself, as much as the grower finds possible. "Yes, I mean some real, physical work. I don't know of any better way for a bog owner to learn, than to put in some work himself—he keeps his hand in—he learns his bog. If a grower does some of the work himself, it will at least give him some basis to judge of what he should or should not expect of his men.

"Successful bog operation seems to me to be just about two percent executive ability and 90 percent application to cranberry growing, including some physical effort. I have a lot of respect for the scientific side and I'm always calling up Dr. Franklin at the State Bog, but when all is said, it is the actual work that goes into a bog that grows the cranberries."

Shields is not discouraged with cranberry growing prospects of Barnstable County.

Future for Young Men

Shields considers that cranberry growing has excellent possibilities

for young men. He doesn't think this opportunity all lies in the executive side, either. Considering cranberry work as manual labor, he says the chances of steady work are good. One reason for this would be that a cranberry grower, if he is to be successful, must keep his property up in depression as well as good times, and the reliable cranberry worker would be sure of steady employment.

Keen as he is on the aspect of physical work, Shields feels that whatever can be done most efficiently by modern machinery should be done that way, and that the opportunity of mechanical equipment to save time and money should never be overlooked. Even so, he still thinks some manual labor is best in the finishing touches.

Shields also prefers to harvest his own crop, even though he is a member of the National Cranberry Association. He does not have adequate packing facilities for all his production as yet, but expects to build a screenhouse. He likes to carry his crop through to the point of marketing.

He has liked to "experiment" with marketing, as he calls it, and still expects to dispose of some of his crop in his own fashion. Although having this urge to experiment in marketing, he believes "the two co-ops are responsible for the stabilization of the market and prices, and cooperative effort should have the backing of every grower. As a member of NCA, I feel that more growers should belong to that progressive group."

The bogs which Shields has acquired since building his first small

piece have been bought since 1942, during the uncertainties of the war period. One of ten acres is the Santuit Pond Bog; there is one of about 16 acres at South Mashpee, and one of 12 acres, the Old Colony Farm Bog at Yarmouth.

Shields in his landscape work is to have the assistance now of a younger brother, James Shields, who during the war served in the navy. His brother will also probably eventually work into cranberry growing in some capacity.

Bog Value Will Be Higher

Shields in watching for good value in bogs to acquire has felt certain that good bog value is not going down but is to increase in the future, and in this he is loyal to his county of Barnstable.

Growers Are Interested in Modern Fluming

Cranberry growers today are definitely interested in more efficient and economical methods of cranberry production. This interest extends to all phases, including modern type prefabricated flumes. Two of these flumes (models of which were exhibited at the spring meeting and exhibition of the Cape Cod Cranberry Growers' Association April 30th) are developments by Paul J. Whipple of The Forges Contractors Inc., Plymouth, Mass.

These flumes, which are made either full or half round, range in size from the full round model

shown, which has a riser one foot in diameter with eight-inch inlet and outlet, to risers six feet in diameter, with inlets and outlets up to four feet or larger. The flumes are made of corrugated galvanized iron pipe, bonded with asbestos and covered with heavy asphalt. The flumes have galvanized iron wings to prevent seepage and to make them secure in the dykes. The water is controlled by flashboards inserted in channel irons in the riser; this control is much the same as with the boards in the old-style wood or concrete flumes. There can be one or more outlets as desired, within reason, permitting greater flexibility of action because the flow of water can be controlled in one, two, or three outlets independently.

The full round flumes can be placed either on the pressure side of the dyke or in the middle and a cover put over the top so as not to interfere with travel over the dyke. If it is placed in the middle of the dyke water can be held on either side of the flume as the need may arise. For flooding at night the danger of falling off a high flume is completely done away with, and the flumes can be locked to keep out prowlers and children who might pull the boards and ruin a whole year's crop.

The half round flumes should be placed on the pressure side of the dyke. They control the water much the same as the conventional type flumes do. The flashboards slide in channel irons set on the face of the flume. The half round is a little lower priced than the full round and in some cases a little

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easier to install. Like the full round, the half round flume can have more than one outlet with independent control on each outlet. With this flexibility of outlet control, one flume can in many cases take the place of two or three conventional type flumes.

The advantages of these types of flumes are: permanency; economy in first cost and in installation; the latter being much less than concrete flumes and probably a little less than wooden flumes; they can be placed on a soft bottom with much less danger of settling fast than a concrete flume which is much heavier. If they do settle too much for continued use over a period of years, they aren't a total loss such as would be the case with a concrete flume, because they can be dug out and reset with little expense compared to the cost of installing a new concrete flume.

Whipple is the son of Sherman L. Whipple, Jr. (Cranberries, Dec. 1946). He has installed three of these all metal (full round) flumes at the bog of his father in the Chiltonville section of Plymouth. One has a 30 inch riser and 21 inch inlets and outlet; this flume is for gravity flooding of a four acre bog; one with a four foot diameter riser, 30 inch inlet and outlet to handle the water for about ten acres; the third, also a four foot diameter riser with 30 inch inlet and outlet, is fourteen feet high and is designed to handle all the water from an eleven acre reservoir to take care of the whole 30 acres of Sherman L. Whipple's bogs when they are completed.

George R. Briggs of Manomet is installing six or more of the half round flumes in his bogs at Indian Brook, Manomet. He had originally planned to put concrete leaders on the pipes which he ran under the roads and through the dykes, but he feels that this new type flume will do equally as well at much less expense.

Theodore Budd of Pemberton, N. J., has ordered one of the half round flumes to experiment with and see if they are going to be of any value to the growers in New Jersey.

Preliminary Figures of Mass. Survey Released

The important preliminary report of the Massachusetts cranberry survey has been released by U. S. Department of Agriculture, Bureau of Agricultural Economics and Massachusetts Department of Agriculture, under signatures of C. D. Stevens, N. E. Crop Statistician, and F. E. Cole, Commissioner of Agriculture, revealing some highly interesting facts in the changes in the Massachusetts cranberry picture. Release says in part:

"In 1924 and again in 1934 surveys of cranberry acreages were made to cover needs for data on this important Massachusetts crop. In recent years there has been an insistent demand on the part of organizations connected with the cranberry industry for up-to-date data which would show the progress being made. Through the efforts of the Cape Cod Cranberry Growers' Association, funds to finance such a survey were secured for the Massachusetts Department of Agriculture. This report covers the results of the current survey for items on which tabulations have been completed. Totals are preliminary and may be revised in the final report.

"One of the most important indications of progress in the cranberry industry is data on acreage and the flowage facilities which are available to protect the production of such acreage. In the thirteen years since the previous survey was made the total of Massachusetts cranberry acreage has increased from 13,644 acres to 14,927, an increase of nine per cent. Acreage in Barnstable county has continued to decline to a currently reported total of 3,347 acres, four per cent less than in 1934. In Plymouth county, on the other hand, cranberry acreage increased to a total of 10,409 acres in 1947, fourteen per cent above the total in 1934. Bristol, Dukes, Essex and Middlesex counties also show important increases in cranberry acreage during this period.

6" The improvement in flowage facilities has been more significant

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than the increase in acreage. For the State, acreage with full flowage protection increased 1,951 acres or 30 per cent. Bogs with winter and two spring flows increased 620 acres or 34 per cent. There was a small increase in the acreage of dry bogs while the reduction is indicated in the acreage of bogs depending on winter flowage or on winter flowage and one spring flow. These data indicate clearly that the production capacity of Massachusetts cranberry bogs has been increased in recent years by further improving flowage facilities.

Comparing the trends in flowage protection of Barnstable and Plymouth Counties, we find that in Barnstable county acreage with full flowage protection has increased 22 per cent since 1934 in spite of a decrease of four per cent in total acreage. In Plymouth county an increase of 30 per cent in acreage with full flowage protection was accompanied by a 9 per cent increase in total acreage. Most of the minor counties also show substantial increase in cranberry acreage with full flowage facilities.

Currently 57 per cent of the Massachusetts acreage has full flowage facilities compared with only 48 per cent of the acreage in this category in 1934. In Plymouth county 62 per cent of the acreage now has full flowage protection, while in Barnstable county 59 per cent is similarly protected. In 1934 only 55 per cent of Plymouth county and 31 per cent of the Barnstable county acreage had full flowage protection.

Acreage by Varieties

The change in the varieties of cranberry bogs planted in recent years should be of interest. Currently there are 8,739 acres of Early Blacks, 32 per cent more than the 6,636.4 acres reported in 1931. Early Blacks appear to be gradually replacing other varieties, as the reported acreage for every other variety is now smaller than in 1934. A total of 5,174.6 acres of Howes is reported, four per cent less than in the previous survey. Other varieties show greater decreases. At the present time 59 per cent of the cranberry bog acre-

age is Early Blacks, compared with 49 per cent in 1934, while the acreage of Howes is 36 per cent of the total, compared with 39 per cent reported in previous years.

Currently cranberry growers appear to be planning to plant considerable acreages of new bog. Totals of the survey indicate that 512 growers intend to build 1,799 acres of bog during the next three years. In connection with the survey, records were secured from 1,599 growers.

N. C. A ADVANCES TO \$30 BARREL, SO FAR— DARLINGTON, DIRECTOR

NCA directors, meeting at Hanson Monday, May 5th, voted to pay another advance of \$5.00 a bbl., bringing total to date to \$30, with a still further payment to come, it is announced. Also a 50 cents cash dividend was voted on each share of common stock, which is four per cent interest.

Approval was given to plans for remodeling, enlarging and improving plants of the cooperatives in the various cranberry areas, total expenditures during the coming year to amount to \$400,000. The objective is to speed up production from the present 4,000 bbls. a day to a total of 6,000 a day for all plants.

Editor Praises Attitude of New England Sales

Roy H. Park Guest Speaker at Annual Meeting of Group—Season Past Called Best in History of Organization.

Members of the New England Cranberry Sales Company, meeting in the Carver, Mass., town hall April 17, heard that their organization had just finished the best year in its history, heard it praised as an exemplary cooperative.

NECSCO Manager Arthur D. Benson told members during the morning meeting that 1946 had produced the second largest crop in the industry's history—850,000 barrels, about 20,000 short of the record set in 1937—which sold at the highest average price in the industry's history.

During the afternoon members heard a detailed report on sales by American Cranberry Exchange General Manager, C. M. Chaney.

Said Chaney, the Exchange operated on 2.8 per cent during the season, the lowest on record. The high price was due to the fact that this was the first year cranberries were free of ceiling prices since 1943, he said.

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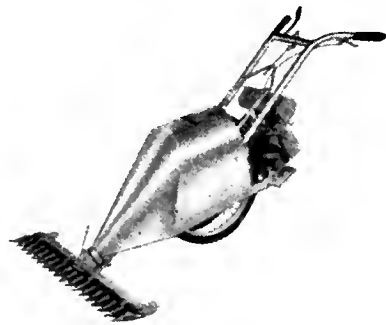
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He predicted that there would be more sugar next year, making for good consumer demand for cranberries, but that much more advertising would also be necessary to keep sales high under more competitive conditions.

The annual meeting of the New England Cranberry Sales Company



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is held in April because the fiscal year ends March 31, the time at which all sales of cranberries from the previous fall's crop are usually completed. Such was the demand last season, however, that all sales were completed in December, 1946, and most made in November.

High praise of the Sales Company was spoken by Roy H. Park, editor of the Cooperative Digest and well-known figure in co-operative circles throughout the nation.

Park asserted: "the Sales Company is the most democratic co-op I have ever seen. It has only the interest of the grower at heart, its operation is open to public inspection, it is highly business-like and confines itself strictly to those services its members really require. It does not have the overly aggressive attitude of looking for extra duties which are not necessarily best performed by a fruit-marketing cooperative.

"I am really impressed by the size of the turnout at this meeting. It indicates the responsibility your members feel, an important fact in a cooperative. Also I am glad to see so many young people here. It shows that your organization, with their interest, will endure."

Benson also announced that NECSCO had handled 134,816 bbls., and the company had operated on 1¼ per cent during the season.

Dues of members were dropped from \$10 a year to \$1 each by vote of the membership. The canning and stock purchase committee was discontinued and its duties given to the executive committee. On the contact committee Arthur Chandler replaced Kenneth Garside, and Robert Hammond replaced C. D. Hammond, Sr. The supplies committee was discontinued. Manager Benson and Garside were dropped from the screening house committee and not replaced. E. L. Bartholomew and Carroll Griffith replaced Russell Trufant and Walter D. Rowley on the membership and publicity committee.

Robert Hammond and E. L. Bartholomew replaced E. S. Atwood and L. B. R. Barker as directors

(Continued on Page 21)

Western Pickers, Inc. Explain Plans for It's New Cranberry Picker

1947 will see a nation-wide test and demonstration of the Western Cranberry Picker, with machines in Massachusetts, New Jersey, Wisconsin, Washington, and Oregon, under the personal supervision of "Rudy" Hillstrom, President of the Western Pickers, Inc.

It has long been a hope that a cranberry picker would eventually be developed that would harvest cranberries efficiently, do no damage to the vines, be inexpensive to operate, have few moving parts to get out of adjustment, be light enough to move from place to place, be weather-proof, and leave no marks on the bog. Western Pickers Inc. believes that it has such a machine.

History records only one perfect machine—the old legendary "one horse shay"—so perfectly designed and proportioned that every spoke and bolt worked perfectly up to the last moment and then all collapsed together.

It was first contemplated to sell these machines outright and more orders for machines were received than could be manufactured because of shortages in engines, bearings, and sponge rubber. However, it was deemed advisable to test and demonstrate the Western Picker under all the different conditions that arise in actual commercial use. There will be variations in bogs, in vines, in berries, in ground conditions, in help, in weather, in materials used. Only scientific observation, accurate cost accounting, and trial and error, can determine what, if any, adjustments are advisable in the Western Pickers before the machine will be allowed to go it alone.

After much consideration, it was decided that a royalty plan sponsored by a nation-wide organization would be the best method of introduction. So therefore, Western Pickers, Inc., has arranged with National Cranberry Association to test and demonstrate its picker during the coming year. In this way the machines will only earn what they actually pick. We hope to see all growers behind the handlebars. (adv.)

CRANBERRY BREEDING PROGRAM

CRANBERRIES Magazine feels deeply privileged to begin, in this issue, the first really comprehensive publication of the story of the cranberry breeding program. The article has been approved for publication by the United States Department of Agriculture and the Massachusetts and New Jersey Agricultural Stations. It represents much work in this summing up of progress from its various angles by the authors, F. B. Chandler, R. B. Wilcox, H. F. Bain, H. F. Bergman and Haig Derman, all of whom have been concerned in differing degrees in the program.

This breeding program is the first scientific attempt to get a cranberry variety, or varieties, better than those which have been produced by the natural developments of Nature. The varieties now "cultivated" are, after all, but the best selections of varieties of the bees, produced as the result of winds and other natural forces.

It is an effort to "pile up", or more exactly to combine the most desirable qualities from a number of the most desirable natural selections. Objectives are to develop varieties less tasteful to the leafhoppers, thereby lessening the menace of false blossom, to develop cranberries more resistant to rot; to produce varieties which have a higher yield, to produce a berry which ripens earlier and therefore has a shorter growing season. Other desirable factors will probably be found. There is the hope a better berry may be grown solely for the fresh market, also a berry which is better for processing than any of the present natural varieties. A whole new book of cranberry growing can be opened up from the inherent possibilities within this program.

The cranberry industry should eventually be the large beneficiary from this program which began 18 years ago and which, it is understood, has already involved the expenditure of more than \$100,000. The general public should also be the beneficiary through the development of better cranberries.

We feel the publication of this comprehensive article is an important contribution to cranberry culture, and if it awakens interest and a true respect for the value of

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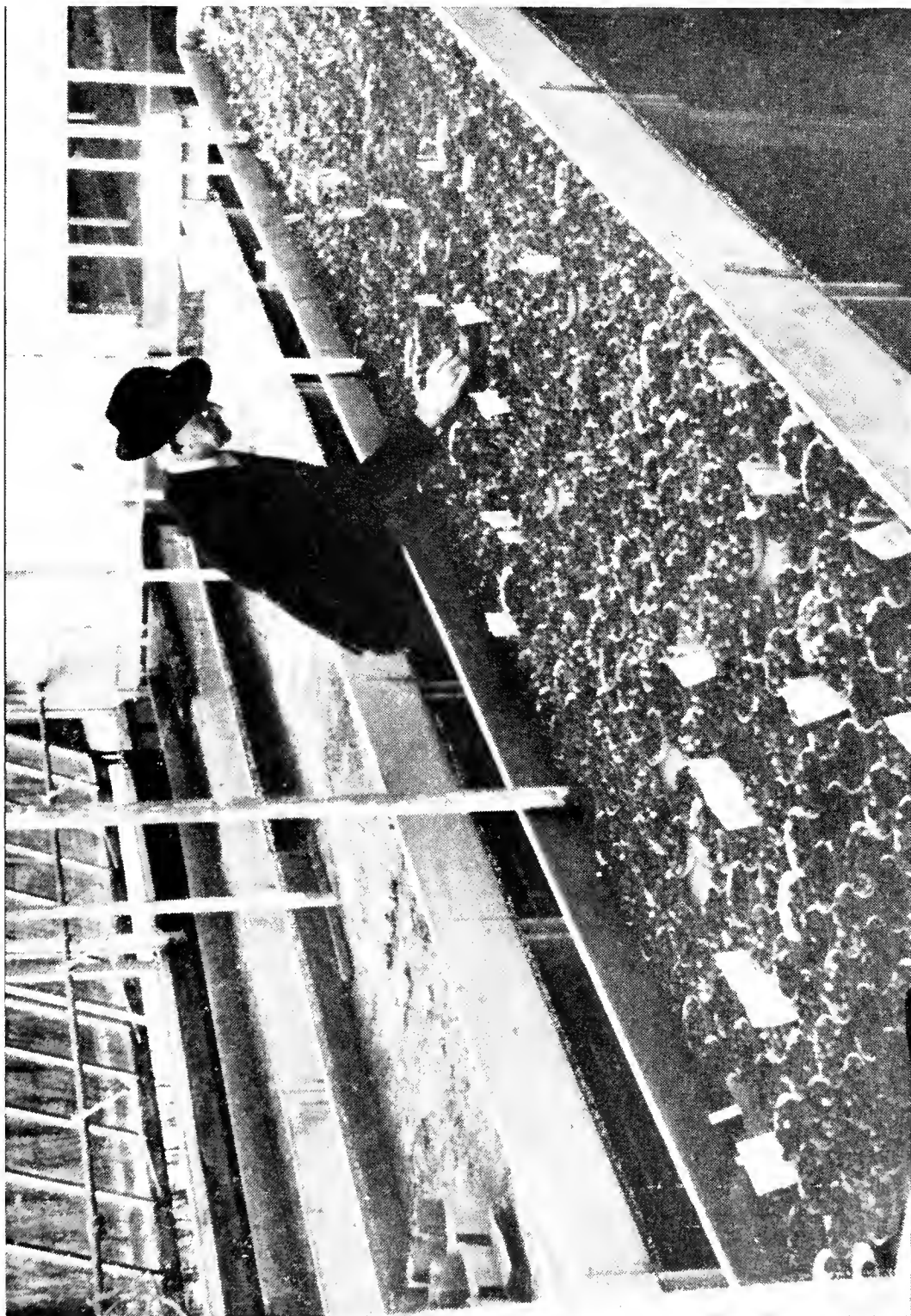
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this program that will be all to the good. The credit for the approaching success belongs to the conscientious work and ability of the scientists working upon it, and, again, to them and to Dr. George M. Darrow, Principal Pomologist, U. S. D. A., our appreciation for being assigned its publication.

THIS issue begins the 12th year of the publication of CRANBERRIES. This number contains 40 pages including covers, the largest yet reached. For 132 consecutive months we have attempted to mirror the happenings and progress of cranberry growing everywhere, in the best interest of ALL growers and those associated with the industry.

Pictorial Section



Part of the 1000 samples taken to Beltsville for study in the selections of "the 40 selections". Mr. Bain is arranging the berries in order of their attractiveness by crosses. (Photo: U. S. Dept. of Agriculture)



President George A. Cowen of Rochester conducts recent meeting of New England Cranberry Sales Company. (Photo American Cranberry Exchange)



Paul Whipple shows comparative sizes of largest and smallest prefabricated flumes being distributed by Forges Contracting Company, Plymouth, Mass. (Cranberries Photo)



A large crowd of cranberry growers of the district visited the displays of equipment of the industry at the Spring meeting of the Cape Cod Cranberry Growers' Association at the Town Hall Wareham. Above, Warren Whiting, representing the Sempos Product Co., East Wareham, explains the operation of a Sempos Float Boat to Robert Whiting (no relation), and his father, H. F. Whiting, of Plympton, and N. Phillips, of Plymouth. (Cranberries Photo)



Left — New ACE Director "Jimmy" Holman and Director Edward Crabbe listen to ACE President Theodore H. Budd, Sr., at New York meeting. (ACE Photo)

N. E. Sales Co.

(Continued from Page 15)

to the Exchange. Mr. Barker declined to serve further as a director and thanked the members for giving him so many years in that position and asked to be allowed to step aside after 26 years and requested that another take over for him. He explained the way the Exchange helps members and told how the directors help set the prices.

He was given a rising ovation by the membership for his long service, a tribute he had earned many times over through his long years of service as an outstanding and faithful leader in the company and the Exchange.

E. C. McGrew gave an interesting talk, referring to the chaos before the days of the Exchange and of the slow, steady evolution of the industry's prosperity since that time.

George A. Cowen of Rochester was reelected president of the Sales Company. Other officers reelected were Homer L. Gibbs, 1st vice president; George E. Short,

2nd vice president; Arthur D. Benson, manager; Sue Pitman, assistant treasurer.

LeBaron R. Barker resigned as director of the American Cranberry Exchange and there was one vacancy. Robert C. Hammond of Plymouth and E. L. Bartholomew of Wareham were reelected to fill the vacancies.

Local directors were chosen as follows:

District 1 (Hanson, Pembroke, Marshfield, Duxbury, Kingston, Plympton)—Fred L. Bailey, Arthur H. Chandler, Paul E. Thompson.

District 2 (Plymouth): L. B. R. Barker, George Briggs, Edward S. Griffith, Robert C. Hammond, Geo. E. Short, Sherman L. Whipple, Jr.

District (3) Middleboro: Wales Andrews, John B. Howes, Alvert A. Thomas.

District 4 (Carver): H. R. Bailey, Frank H. Cole, Homer L. Gibbs, Ruel S. Gibbs, Carroll D. Griffith, Kenneth E. Shaw, Russell A. Trufant, Herbert J. Vaughan, Homer Weston.

District 5 (Assonet, Freetown, Lakeville, Rochester, Taunton and

Marion): Harold R. Allen, George A. Cowen, Herbert E. Dustin, Nahum Morse.

District 6 (Wareham): E. L. Bartholomew, Arthur E. Bullock, Joseph L. Kelley.

District 7 (Barnstable County): J. Foxcroft Carleton, Louis A. Crowell, William Crowell, E. E. Eldredge, Victor E. Leeman.

Attention Cranberry Growers !!

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Large Sized Terra Cotta
Makes a Permanent Installation

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Sandwich Rd., Wareham, Mass.

Tel. Wareham 794

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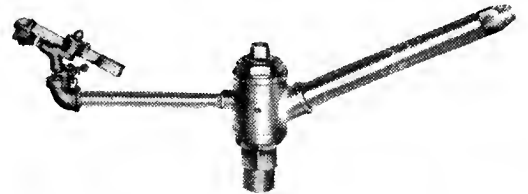
Increase yields with SKINNER controlled irrigation

Waters Large Areas Uniformly

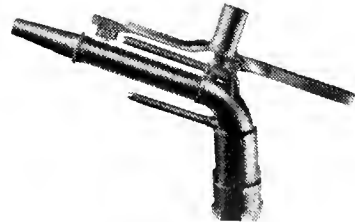
"SKINNER", the pioneer and leader in irrigation for more than half a century, has designed these sprinklers for your specific use—a glance at the table below tells the story better than words. "SKINNER" equipment is quality equipment. Quality means dependability — durability — efficiency. Better write us for complete details today.

THE SKINNER IRRIGATION CO.
150 Water St., TROY, OHIO

Catalog No. Controlled Power	Main Nozzle Inch	G. P. M.	Diam. of Coverage in Feet	
			Uniform	Total
CP-1	5/16	30.00	145	162
		32.30	150	168
		34.50	155	173
		36.80	160	178
		37.50	165	182



Controlled Power Sprinkler



Long Range Utility Sprinkler

Catalog No.	Main Nozzle Size	Lbs. Pressure at Sprinkler	G. P. M.	Diam. of Coverage	Diam. of Uniform Coverage
LR-3 3" Inlet	1"	80	300	325	300
		90	320	330	305
		100	340	340	310

Other sizes available in both Sprinklers. Write.

Southern Oregon Club Meeting

Bandon, Oregon.—An enthusiastic group of some 40 members of the Southwestern Oregon Cranberry club discussed production problems at its current meeting, in Masonic hall, here.

Application and effects of various weed killers were the principal topics, with experiences related by various growers in an exchange of valuable information. Jim Olson stated that the use of a weed-killer combination this year severely "burned" some of his vines. The combination was Cynox and paint thinner. Olson reported that he applied Cynox to his bog, and after waiting more than a week he sprayed the vines with a paint thinner solution. He said new vine growth in several spots of the bog was severely burned after the paint thinner solution.

Discussion of weed eradication brought out that the use of paint thinner as a weed killer seemed to

be most effective while the vines are dormant, and after it has affected the weeds the bog should be flooded to float off the residue and prevent inhibition of later vine growth.

Action was begun by the club to obtain bulletins on weed killers from the experiment station in the State of Washington, and discussed a project to have the Bandon Public Library receive agricultural bulletins for use by growers.

The club is a non-marketing organization whose purpose is the exchange and dissemination of new ideas and useful information to aid all cranberry growers.

Officers elected for the current year are: Ray Bates, president; Frank Pook, vice president; Mrs. Jim Olson, secretary; Charles Ritchey, recording secretary; Sumner Fish, treasurer.

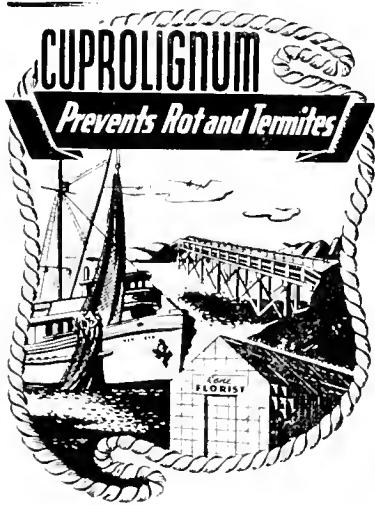
Jack Hansell, assistant County Agricultural Agent, who has been taking an active interest in the development of the cranberry industry in the county, attended the meeting to discuss reimbursement

to cranberry growers by the Federal Government for conservation practices.

Ace Holds 40th Annual Meeting In New York

Directors of American Cranberry Exchange, meeting at the Hotel Pennsylvania, New York, April 23, at their 40th annual meeting, voted to approve the admission of the Oregon Coos Cranberry Co-op and voted the Coos president, Raymond W. Bates, into the board of directors.

The preview day at members' meeting at the New York office of the Exchange directors had been chosen, there being five new faces on the board. These, besides now West Coast Director Bates, were E. L. Bartholomew of Wareham, Massachusetts, and Robert C. Hammond of East Wareham, Mass., Harold DeLong of Mather, Wisconsin, and James D. Holman of Lakewood, New Jersey. Direc-



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THERE IS NO ROT

PROTECTS CANVAS, NETS, ROPES AND WOOD

Protect Your Flumes and Gates

New England Representative

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tors re-elected were: Massachusetts. A. D. Benson, George E. Short, Homer L. Gibbs, George A. Cowen, George Briggs; New Jersey, Theodore H. Budd and Edward Crabbe; Wisconsin, Bernard C. Brazeau, Vernon Goldsworthy, Craig M. Scott.

"Bob" Hammond and Bartholomew in the Massachusetts representation succeeded L. B. R. Barker who had requested retirement after 26 years, and C. D. Hammond, Sr. Wisconsin was accorded one additional director, New Jersey losing one because of the shift in barrelage in those producing areas.

Officers elected were: President, Theodore H. Budd, Sr.; first vice president, Homer L. Gibbs; second vice president, George Briggs; third vice president, Bernard C. Brazeau; executive vice president, C. M. Chaney; secretary, E. C. McGrew; treasurer, E. C. McGrew; assistant treasurer, K. F. Pratt.

Executive committee: B. C. Brazeau, Homer L. Gibbs, A. D. Benson, James D. Holman, George Briggs.

Advertising committee: Gibbs, Benson, Holman.

Addressing the Hotel Pennsylvania meeting, Chaney stated: "with a national crop of more

than 850,000 barrels this has been the greatest year the industry has ever seen. This is the second largest crop on record.

ARE YOU SURE?

Why not let us make a survey of your insurance without charge, to *make sure* that you are fully protected?

For more than 20 years, Mr. Eben A. Thacher, of this firm, has provided specialized insurance service to meet the needs of cranberry growers. He will be glad to discuss a survey of your requirements and present coverage.

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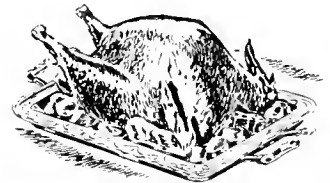
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WHICH ONE

will get your
cranberry crop
this year?



• If you want to be sure that your cranberry crop goes to *market* and not to the bugs, plan on a Kryocide program right *now*. Kryocide has *proved* effective against most of your destructive insect enemies, including the cranberry weevil, gypsy moth caterpillar, cranberry blossom worm, false army worm and fruit worms . . . yet it won't hurt your cranberries.

Consult your local experiment station for information on Kryocide use. Kryocide comes in 4 lb. and 50 lb. bags. Order from your dealer NOW.

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Natural **CRYOLITE**



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Chemicals

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Growers Company Holds Its 52nd Annual Meeting

The fifty-second annual meeting of the Growers' Cranberry Company was held in the office of the company, Pemberton, New Jersey, Tuesday, April 15.

It proved to be one of the most interesting and progressive meetings yet held by the company. The members turned out in goodly numbers to hear the results of what proved to be the most successful season in the history of this, the oldest of Cranberry Cooperatives. The figures disclosed that the company had handled close to sixty-five percent of all the cranberries produced in New Jersey this season, and that the sales had more than doubled the largest previous year. A general feeling of optimism seemed to permeate the meeting. Theodore H. Budd-Sr., president, presided and disposed of a heavy program in good time.

Before proceeding with the business at hand, he asked that all bow their heads in silent respect to the memory of our past president of many years, Franklin S. Chambers, following which the secretary read a beautiful tribute to Mr. Chambers, prepared by Ralph B. Clayberger, his oldest friend, which was made a part of the record, and a copy ordered sent to the family.

C. M. Chaney, general manager of the American Cranberry Exchange, reported on the past season's business by means of lantern slides and charts, which proved

very convincing. Mr. Chaney was quite happy over the results, as were the members.

The meeting authorized President Budd to engage a field man, as early as possible, one capable of contacting present members and bringing in new ones, and rendering real service to the growers. Such a man of necessity must know the cranberry business, and be able to assist growers in their problems.

Members voted to give themselves only 60 days to retire from the company after the annual

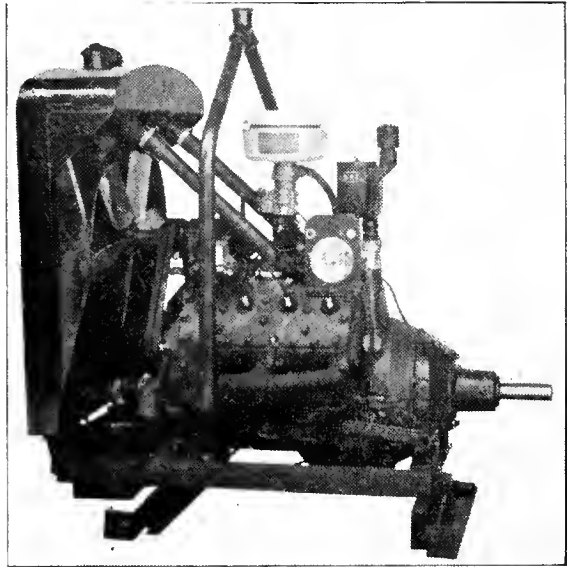
meeting, this period having been voted last year to be four months.

A vote was also taken to renew the processing contract with NCA, but re-affirmed a resolution made at the last meeting that all members' berries must go through the Exchange, growers paying percentage.

Officers elected for the ensuing year are:

President, Theodore H. Budd, Sr.; 1st vice president, Ralph B. Clayberger; 2nd vice president, Edward Crabbe; 3rd vice president, and treasurer, E. C. Becher.

Get the *MOST WATER* from Your Pump



Ford 100 H. P. V-8 Truck Engine with General Power Industrial Conversion.

Produce the most efficient and most economical
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Delivery in approximately 10 days

H. A. SUDDARD, INC.

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Wareham, Mass.

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Registered Architect

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Public, Commercial and
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BAKER BLDG. BUZZARDS BAY
AND POCASSET, MASS.

We Have Listing of
Cranberry Bogs, large or small

FOR SALE

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WILDA HANEY

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Wareham, Massachusetts

Joseph W. Darlington; secretary and treasurer, E. C. Becker.

Delegates to the American Cranberry Exchange: Theodore H. Budd, Sr., Edward Crabbe, James D. Holman.

Directors to fill expiring terms this year: Ralph B. Clayberger, H. B. Scammell, Albert W. Lillie, G. Sterling Otis, Ralph Haines.

Following the meeting, a dinner was served in Wesley Hall by the ladies of Grace Church, rounding out a pleasant and profitable day.

Cape Clubs Conclude Winter Meeting Series

Members Vote Directors Give Consideration to Matter of Proposed Union with CCCGA, Postponing Any Immediate Action.

Cape Cod Cranberry clubs concluded a very successful winter meeting schedule with the April meeting, about 60 attending at both Upper and Lower Cape gatherings.

CONTROL...

*Blunt-Nosed Leafhopper
Gypsy Moth Caterpillar
Blackheaded Fireworm*

with

PYROCIDIC DUST

- **Quick-Kill**
- **Non-Irritating**
- **Non-Poisonous**
- **Economical**

**NON-POISONOUS
PYROCIDIC
DUST**
HIGH IN KILLING POWER
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301 Whitehorse Pike
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Buckner Cranberry sprinklers were designed by Cranberry Bog engineers and are built for economical, trouble-free operation. Choice of models gives you a perfect curtain of water for any size bog. Low installation cost. Proven results in all bog sections of the country. See your Buckner representative now—there's one near you, and Buckner Sprinklers are available on short notice.



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FACTORY OFFICES
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PERFECT WATER
BUCKNER MANUFACTURING CO.
CURTAIN SPRINKLERS

At both clubs votes were passed that the directors give study to the proposed plans for some sort of official affiliation with the Cape Cod Cranberry Growers Association, which, with the action of the CCCGA itself, postpones any prospect of a union for the time being, at least.

Dr. Franklin was a speaker at both, going over the 1947 insect and disease chart, and explained the changes, stressing the point that DDT is recommended for the control of more insects than in 1946, a talk similar to that given before Plymouth County groups and reported in last month's issue.

At Orleans Ferris Waite of NCA displayed new sprinkler heads and portable pipe. He passed around photographs of the sprinklers and answered questions put to him

from the floor concerning the sprinklers and their use and there was much interest shown.

County Agent Bertram Tomlinson showed movies of the Western Picker.

Also at Orleans Dr. A. B. Beaumont, State Soil Conservation, told of the work being done in that field in Massachusetts, the state having been divided into 12 districts, which took in 93% of total

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Industrial Engines**

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BOLENS GARDEN TRACTORS

(WITH SICKLE BAR ATTACHMENT)

ENGINE DRIVEN GENERATORS

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BRIGGS & STRATTON ENGINES

PORTABLE PUMPS

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Complete Mechanical Service

INDUSTRIAL ENGINES—from 1/2 H. P. to 100 H. P.

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- * NEW BOG CONSTRUCTION
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We have Power Shovels (3); Tractor Bulldozers (3); Cranes, Scrapers, 90-Yard Screener; Power Winches, Druggers; Road Grader—30 competent Operators and employes—AND THE NECESSARY EXPERIENCE AND KNOW-HOW.

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Freight Transportation (including cranberries in season). Heavy equipment hauling.

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Water-White Kerosene for Weed Control this spring.

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acreage. Surveys show, he said, that 96 per cent of cultivated land in Massachusetts has been, or is

eroding. He said that besides preventing this waste, the Soil Conservation Service could also assist in drainage and water supply problems for cranberry bogs.

Dr. Beaumont offered to set up a soil conservation district in Barnstable county if growers signed a petition for it. Some of the growers signed at the meeting.

Officers elected at the Upper Club were: John F. Shields, Osterville, president; Robert Handy, Cataumet, vice president; William Foster, East Sandwich, secretary; Alvin Crocker, Forestdale, treasurer. Directors: Malcolm Ryder,

South Sandwich; Roger Burlingame, Cotuit; Loring Jones, Marston's Mills; Myron Ryder, Cotuit.

At the Lower Cape club officers were re-elected as Frederick A. Eldredge, Jr., Dennisport, president; Brant D. Ellis, Dennis, vice president; secretary-treasurer, Calvin Eldredge, Pleasant Lake. Directors: George S. Bearse, Chatham, chairman, Maurice E. Lee, Brewster; Robert W. Chase, West Harwich; Herman S. J. Loud, Dennis; Raymond Syrjala, Hyannis.

C.C.C.G.A. Meeting

(Continued from Page 4)

Hayden Separator Mfg. Company, Wareham; Cranberry Trading Post, Plymouth, South Harwich, Onset; Frost Insecticide Company, Arlington; Eastern Aerial Surveys, 61 Shirley street, Boston; Niagara Sprayer & Chemical Co., Middleport, N. Y.; Forges Construction Company, Plymouth; Clapper Company, 1121 Washington street, West Newton; New England Cranberry Sales Company; Ralph Elliot, Sandwich road, Wareham; Joe Hackett, North Hanover.

Following the business meeting there was the instructive speaking program.

Dr. Fellers

Dr. C. R. Fellers, head of Food Technology at Mass. State College, gave a very complete and interesting story of what cranberries are made of. This was a report on studies made at Amherst by the

CRANBERRY GROWERS WATCH US!

FROM NOW ON WE HAVE
SOMETHING INTERESTING
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Rain When You Want It RAIN BIRD SPRINKLERS



For Cranberry Frost Protection and Irrigation

Rain Bird Sprinkling systems do the job you want them to do, when you want it. All working parts are accessible and fool proof. Oscillator arm breaks up stream to give maximum benefit.

Consult Rain Bird engineering department for advice on your irrigation problems.

For complete information on Rain Bird Sprinkling Systems, write,

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On the Pacific Coast

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*Blunt-Nosed Leafhopper
Gypsy Moth Caterpillar
Blackheaded Fireworm*

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- Quick-Kill
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NON-POISONOUS
**PYROCIDIC
DUST**

HIGH IN KILLING POWER
UNIFORM

CROP-SAVER
CHEMICAL CO., INC.

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CHICAGO 51, ILLINOIS

Experiment Station and by the American Cranberry Exchange Fellowship. Dr. Fellers said the sugar content of fresh cranberries was low, but it was high in cranberry sauce, due to the sugar added. Cranberries are unique in that they contain several acids. Most fruits have only one acid, as citric in citrus fruits, malic in apples, and tartaric in grapes. Cranberries, however, have four acids—citric, malic, benzoic and quinic. Dr. Fellers said the iron content was not high, but it was of excellent nutritional quality.

F. J. Sievers

Director F. J. Sievers of Mass. Agricultural Experiment Station

Attention
Cranberry Growers

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\$5.00 PER HIVE

Experienced Pollination Service

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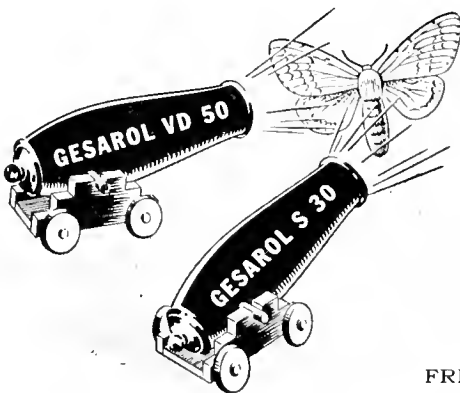
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GESAROL VD 50 — a finely-ground powder containing 50% Geigy DDT. Insist on its being in your dust mixtures.

Take your choice—depending on the method of attack you prefer or are best equipped to use.

FREE folder giving detailed recommendations for application available through your Distributor.

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ORIGINATORS OF
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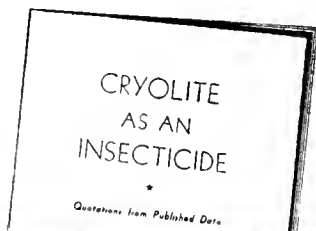
Yes, just one nibble of ALCOA Cryolite, and *cranberry weevils, fruit worms and other chewing insects* are as dead as door nails!

ALCOA Cryolite—the insecticide that has been *time-tested and proved*—is a *chemically controlled* product. This means:

1. Particle size uniformly controlled.
2. Maximum, even coverage.
3. Free dusting . . . free spraying.
4. High suspendability in spray tank.
5. Negligible abrasive effect on equipment.

ALCOA Cryolite . . .

- Is not harmful to predatory insects.
- Does not affect soil balance.
- Is safe on delicate foliage.
- Wets and mixes readily.
- Has good adhesion.
- Active ingredient—90%.
- Compatible with insoluble-type copper compounds, sulphur and other neutral fungicides, insecticides and diluents.



Let us send you a copy of this free booklet. It contains reports of entomologists on the control of cranberry weevil and fruit worm.

ALUMINUM COMPANY OF AMERICA
CHEMICALS DIVISION

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ALCOA CRYOLITE INSECTICIDE

Alcoa Cryolite is manufactured by Aluminum Ore Company. Formerly sold under the trade name "Alorco."

Twenty-nine

said he enjoyed cranberries because of their color, which added attractiveness to a meal. He likened cranberries on the table to a table bouquet, stating that they both added atmosphere to the meal. The improvements at the station were enumerated by Director Sievers, and he explained how they would improve working conditions.

Willard Munson

Willard Munson, Director of Mass. Extension Service, outlined the extension service work in relation to cranberry work.

Commissioner Cole

Fred Cole, Commissioner of Agriculture, gave some of the highlights of the acreage in the survey just completed. He called on his assistant, Walter Piper, who explained how the survey was conducted in the field and presented some information on flowage. Another assistant, C. D. Stevens, presented some of the information on varieties.

Dr. Franklin

With the aid of lantern slides, Dr. Franklin gave a very good re-

view of his recent bulletin on Weather and Cranberry Production. He stated that the crop in New Jersey is greatly influenced by rainfall in the growing season a year before the crop, and in Wisconsin by the March temperatures. In Massachusetts, it is more difficult to estimate the crop, as there are a number of factors contributing to productivity. Dr. Franklin said one of the practical applications of his bulletin was the effect of rainfall on production and that growers would do well to handle the water in the ditches in relation to the rainfall (see italics p. 8 of Bulletin).

The temperatures in March, April and May have a great influence on the keeping quality of the Mass. crop, Dr. Franklin said. When the temperature at Middleboro is above 34 in March, 44 in April and 56 in May the quality will be poor. This is an important contribution, as the quality of the crop may be forecast before the fruit is set, which gives growers an opportunity to spray with fungicides.

CRANBERRY REAL ESTATE APPRAISING	BOG MANAGEMENT
17 Court St. Plymouth, Mass.	Tels: Plymouth 1622 Kingston 319
<p><i>Orrin Colley AND Associates</i></p> <p>If you are buying or selling Cranberry Property it will pay you to see us.</p> <p>A number of properties available, more wanted.</p>	

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Distributor of Cape Cod Cranberries

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Lightweight, 20-nozzle Bean Spray Beams are readily convertible to cranberry spraying. The powerful John Bean sprayer in the background, discharges 35 gallons a minute, at 800 lbs. pressure.

More Cranberry Profits

... with BEAN CRANBERRY SPRAYERS

Only high pressure spraying gives you real protection for your cranberry crops — and cranberry profits. Under high pressure, spray materials reach every surface of every plant—tops and undersides, leaves and vines. John Bean Cranberry Sprayers perform for your profit: deliver a high pressure spray that covers the crop **fast—when** you need it and **where** you need it—without wasting costly spray materials.

They can be used for spraying with 2, 4-D, as well as with other chemicals, because their all-steel tanks do not absorb spray materials, and hence can be cleaned. These economical sprayers—built for years of hard use—are all-

purpose; can be used for spray painting, whitewashing, fire fighting. Bean sprayers can be equipped with refillers for fast refilling from any tank or pond.

Trouble-free Bean Royal pumps are all-enclosed and deliver up to 60 gallons a minute at 800 lbs. pressure in the larger models. Four-wheeled units feature cut-under construction, can follow the tractor down narrow dike roads.

Available in skid-mounted, two-wheeled or four-wheeled models; engine or tractor-powered, with pump capacities ranging from 15 gallons a minute, 600 lbs. pressure, to 60 gallons a minute, 800 lbs. pressure. See your dealer or write for catalog "O".

JOHN BEAN MFG. CO.

DIVISION OF FOOD MACHINERY CORP.

Lansing 4, Michigan Dept. 45

Dr. Franklin also introduced Miss Thelma Laukka, who was recently appointed to the staff of the Experiment Station at East Wareham, where she is doing secretarial work, and he stressed the fact

that she has already had the opportunity to do a good deal of valuable work for the association as well as her regular duties.

The speaking program was in charge of a committee consisting

of Bertram Tomlinson, chairman, Dr. F. B. Chandler, President Short and the exhibition in charge of Ferris Waite, chairman, Raymond Morse and Clarence J. Hall.



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**THIS YEAR'S PROMISE FOR
A
PROFITABLE
CRANBERRY CROP**

Use **Black Leaf 40** in accordance with State recommendations for the control of

Blackheaded Fireworm Blunt-Nosed Leafhopper
Spittle Insect Red-Striped Fireworm

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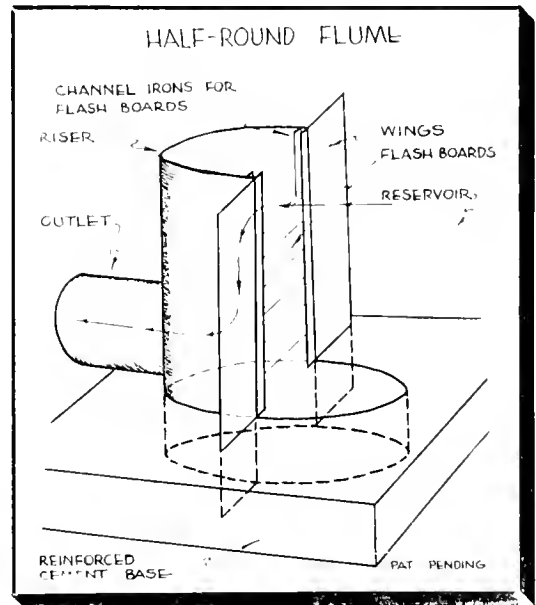
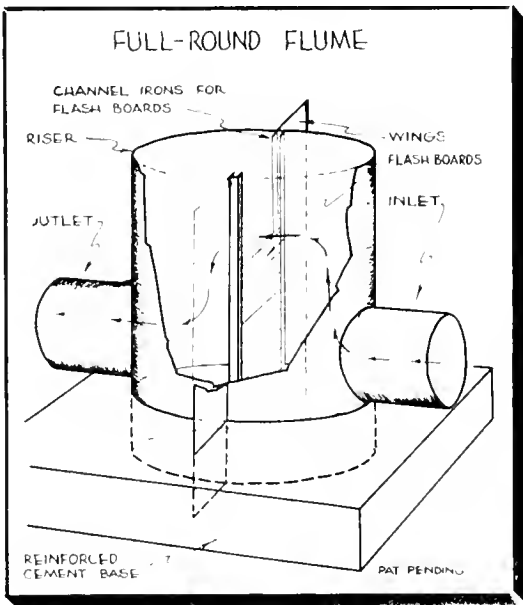
Incorporated
LOUISVILLE, KENTUCKY

**Missed Meeting,
But NCA 'Copter
Now Arrived**

In preliminary announcements for the meeting, it had been confidently expected helicopters would be present to give demonstrations, but delay in delivery prevented this.

However, "Ocean-Sprayer" No. 1 of NCA has arrived since the meeting, being flown unannounced, by Fred W. Soule into Hanson during a meeting of NCA directors May 5th.

Pilot Soule brought the "windmill" machine in on the lawn at the rear of the home of M. L. Urann, and after the meeting, Mr. Urann, the air-minded Charles L. Lewis, J. C. Makepeace, directors, were taken up for flights. Soule demonstrated the maneuverability of



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the machine, stopping in midair, going backwards and sideways. He hovered stationary two feet above the ground.

NCA plans an official demonstration for members of the press the week of May 12, when the 'copter will give a DDT spray exhibi-

tion on a large bog and a small bog at Mayflower Grove, Hanson, to show the extreme versatility of the machine.

No. 2 'copter of NCA is expected to arrive shortly, also.

Colley Cranberry Company

Plymouth, Mass.

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Telephone

Plymouth 1622

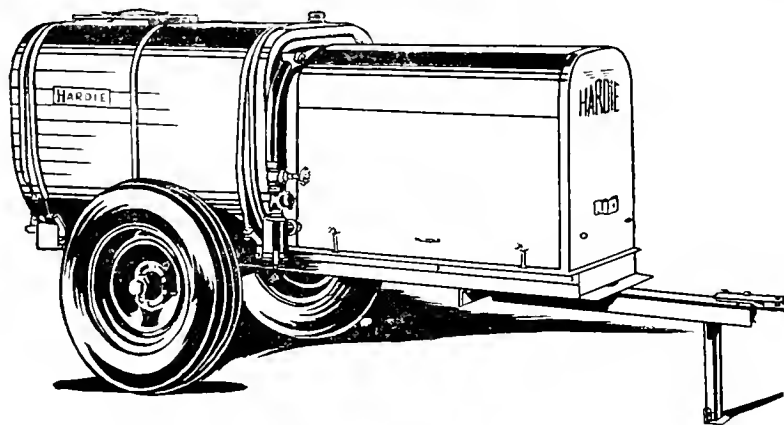
Fresh from the Fields

(Continued from Page 5)

of April 2. R. B. Wilcox discussed rot control; W. E. Tomlinson, Jr., spoke on blunt-nosed leafhopper and other insect control problems, and C. A. Doehlert discussed cranberry drainage problems.

On April 10 blueberry growers were invited to attend a demonstration of a pruning shredder in operation. By the use of such a machine much valuable plant food that is in the prunings and which is ordinarily removed from the field and burned would be retained in the field to work over again for the grower.

On April 18 the Ocean County blueberry growers held a field meeting at the field of Oscar Downs in Lakehurst. Timely topics were discussed by R. S. Wilcox, C. A. Doehlert and W. E. Tomlinson, Jr. Mr. Wilcox spoke



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on mummy berry and its control, Mr. Doehlert discussed fertilizer and drainage and Mr. Tomlinson spoke on the control of the blueberry blossom weevil.

Winter Injury—There has been some winter injury to bogs with high edges exposed and also in some bogs where the water was drawn from under the ice. In the latter instance injury is spotty, being confined to small areas where the ice and snow melted and exposed the vines to the drying effects of the wind, while nearby areas where the vines were not exposed are perfectly normal.

Sanding—Sanding and resanding is becoming a much more common practice in New Jersey. More sanding has been accomplished this past fall and winter than ever before. There is still plenty of acreage still unsanded, but indications are that the trend to sand will continue.

Replanting — Considerable replanting is in progress with a large proportion being set mechanically, as was mentioned last month. Early Black will make up close to 100 per cent of this renewed acreage.

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WASHINGTON

Weather Warm

The weather has been unusually warm during March and April, the temperatures reaching as high as 80 degrees on Saturday, the 25th. The growing season is from two to three weeks earlier than the average, so berries should be quite large and yields proportionately heavy if the weather trend continues. There were several light frosts, but the sprinklers took care of those very nicely and there was no damage to the end of April, at least.

Dr. J. Harold Clarke and D. J. Crowley visited several bogs in Clatsop County, Oregon, April 15th. They found the growers in Clatsop all very busy, since the early season crowded bog work.

Growers put on the first spray for fireworm about April 28. The second spray will be applied three weeks from that time, when it is expected the bogs will be in the brook stage.

Several growers are talking about a trip to Massachusetts in

June, but how many actually will go is not yet determined.

Long Beach Cranberry Club

The Long Beach Cranberry Club met Friday evening, April 11th, in

the N. C. A. Freezer Building. After a short business meeting, presided over by the president, Leonard Morris, the meeting was turned over to D. J. Crowley.

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White Violets • Loosestrife
Poison Ivy

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Mr. Crowley talked on the spray program for 1947, calling the growers' attention to the fact that spray charts are now available. He asked all growers to let him know if they have not received their chart.

He told the growers that the first spray should be applied during the week of April 21st, the second spray to be applied when the blossoms are in the hook stage. He pointed out that the hook stage was the last DDT spray to be used for the season. A dianisyl-trichloroethane spray should be applied when about two-thirds of the blossoms have fallen.

Crowley to Have Assistant

Mr. Crowley announced that

there would be a full-time assistant at the Cranberry Experiment Station by about the middle of

June. A general question and answer discussion was held at the conclusion of the talk.

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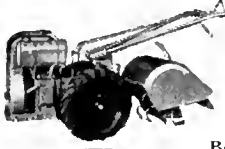
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Good luck. We're off to another season. It will take experienced judgement, hard work and good luck to grow a sound, high quality crop, just like every year.

In selling it takes the same qualities for a successful season - experience, hard work and luck. We've had 40 years of experience working in behalf of our industry, 40 years of hard work, and 40 years of luck - some good, some bad.

We mention experience and hard work before luck because they come first. The Exchange is in a better position now than ever to serve you. What we will do, whatever experience and hard work can do, and whatever fortune brings, we will make the best of it for you.

Now again, as we said before, good luck.

Sincerely,

The Management of the
American Cranberry Exchange



RYING A \$12,000,000 A YEAR INDUSTRY

Cranberries

THE NATIONAL CRANBERRY MAGAZINE



CAPE COD
NEW JERSEY
WISCONSIN
OREGON
WASHINGTON

SEEDLINGS PLANTED—Selections of Breeding Program are set out for further tests on bogs Massachusetts growers contributed for the purpose. Photo shows Dr. Chandler and Foreman O. Norton on Porter bog of Cape Cod Co., Rochester. Vines are set in squares with two foot path.

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WISCONSIN

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George Conroy at Cranberry Trading Post's Onset branch, displays his wares to an interested customer.

Selling cranberries and cranberry products is only part of NCA's job. Growers join this cooperative not only to find a year-round market for all their berries, but also to take advantage of the many services it offers.

NCA's Cranberry Trading Post with branches in Plymouth, Onset, and No. Harwich, Massachusetts; Bordentown, New

Jersey; and on the West Coast, offers members an opportunity to make pool purchases of bog equipment and supplies at marked savings.

The Trading Post is one more reason why progressive growers are turning to NCA — the grower-owned, grower-controlled cooperative with up-to-date facilities for service as well as sales.

National Cranberry Association

The Growers' Cooperative

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Expect Sizeable Delegation from West Coast to NCA Annual Meeting

With Sales of \$17,000,000, Payments of \$30 to Growers and Increased Membership, Large Attendance June 24 is Predicted.

Plans for National Cranberry Association's 17th annual meeting, which promises to be one of the most momentous in the cooperative's history, are nearing completion. A record attendance is expected at the all-day meeting, scheduled for Hanson, Mass., June 24, including some 10 or 15 members from the West Coast who have indicated that they will be present—the first time Washington and Oregon growers have made the cross-country journey for the meeting.

Sales of NCA's Ocean Spray products reached the all-time high of \$17,000,000 during the past fiscal year, by far the largest volume

since Ocean Spray first went on the market. Returns to growers also reached a record high, payments of \$30 having already been mailed to members, with a final payment to come.

NCA's officers are looking forward to the largest attendance ever at the meeting, partly because members are keeping closely in touch with the affairs of their cooperative and partly because the membership itself has grown considerably in the past year. The co-op lists some 230 growers as having joined NCA since June 1, 1946, bringing the total membership to 950.

The agenda will include reports on the year's activities, a forecast for next year, and a lobster salad luncheon at noon. NCA's two helicopters, which will be used for dusting members' crops this summer, will be on exhibit at the Hanson plant.



(Ace Photo)

Growers' Company Has Jersey Man For Field Work

Pemberton, N. J.—It is announced by Theodore H. Budd, Sr., of Pemberton, president Growers' Cranberry Co., that Walter Z. Fort has been chosen to represent the Company in its member contact work.

Fort, a native of the Pemberton area, makes his home at Wrightstown, a few miles north of Pemberton. He attended Pemberton High school, studied botany and biology at Rutgers College, New Brunswick, N. J. After finishing college Fort went into government service, served 44 months in the Navy after the outbreak of war, then returned to government service. While in the Navy he participated in the battle of Guam.

The hiring of Fort is part of the Growers Cranberry Company expansion plan, which includes an extension of service to members as well as a drive for new members. It was voted to hire such a man at the Growers' Cranberry Company annual meeting, held in April at Pemberton.

Fort is president of the alumni association of Pemberton High school, is a member of the Rotary, and adjutant of the Eaton-Stanley Post of the American Legion of Pemberton.

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*Blunt-Nosed Leafhopper
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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of June, 1947—Vol. 12, No. 2

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FRESH FROM THE FIELDS

By C. J. H.

MASSACHUSETTS

Month Began Cold

The cold weather which had moved in from Canada at the close of April continued for the first ten days or so of May, conditions being abnormally cold, with rain and cloud. Weather cleared for the evening of May 8, bringing the first of four successive nights of frost warnings. Lowest temperatures were reached on that night (morning of the 9th), there being 14° reported both in Plymouth and at Cataumet on the Cape. Night of the 9th was also low, but not as low as the previous. Nights of the 10th and 11th were not so bad, particularly the final night with some cloud and winds.

Growers had ample warning, afternoons and evenings, and there was plenty of water for those who had flowage facilities.

Frosts

There followed a couple of warm days, temperatures being in the 80s, and then there was an abrupt turn the night of the 14th and morning of the 15th. Unofficial "Straw Hat Day" brought a frost with temperatures as low as 16° with 18°, and many reports of 20°. The two 16s were in Barnstable County at Santuit and Bay View (Hyannis), the 18° at the Makepeace bog at Pierceville, Wareham. There was tremendous variation in Barnstable County, especially on the outer Cape where the wind blew nearly a gale, but at other places there was calm and the mercury dropped like lead. The following night brought another heavy frost with temperatures of 18° reported.

As the result of these two nights there was some frost injury, par-

ticularly on dry bogs. The first two weeks of May had brought freaky, unseasonal cold, some extreme highs, and about as much rain as normally recorded in the entire month.

Month Ends Cold

May ended with a warning and some frost on the morning of June 1. Temperatures of 29° were recorded and a low of 25° at Carlsisle, in Middlesex County.

Estimate 1° Frost Damage

At end of May Dr. Franklin had tentatively set down the amount of frost damage as 1 per cent, although this might be modified. This damage occurred on bogs which could not be protected with water.

The month, he felt, had provided too much rain to help crop prospects and there had been too little sunshine.

With a March and April warmer than normal and a May a little bit cooler than normal he felt the keeping quality of the prospective crop as of that date would probably be "fair."

Gypsies

A considerable gypsy moth infestation was developing, but in Dr. Franklin's estimation at the month end it was about an average infestation. This infestation was quite general, from the Cape to Halifax.

May as a whole was a month which did nothing to increase crop prospects, except that the frost loss was as moderate as it was.

Rainfall Excessive

Total fall for the month was recorded at the State Bog as 5.22 inches, an amount considerably in excess of normal.

WISCONSIN

Frosts, But No Damage

Although there were several frosty nights during the latter part of April and the first of May there was probably no damage to cranberry fruit buds up to end of the month, it was believed. Temperatures as low as 6 above were reported at northern Haywood and 9 in Cranmoor. There were several nights in the lower twenties and two nights at 16 and 18. Even with the amount of flooding done for frost protection the growers have an adequate supply, and it appears this supply will be sufficient for the entire frost season.

400 New Acres

Several months ago C. D. Hammond, Jr., general manager Wisconsin Cranberry Sales Company, predicted 500 acres of new marsh would be planted this spring, but now he does not expect this figure will be quite reached, although he does expect the new acreage will be around 400. Weather conditions were against the growers, also other factors entered in, such as the high price of vines and in some cases shortages of labor.

Vines Brought High Prices

The tremendous amount of vines mowed this year for sale to growers putting in new marshes might have some effect on crop production for the state as a whole. Probably this will be noticeable. Growers have been getting anywhere from \$190 a ton net weight up to \$350 per ton dry weight. Some growers have taken advantage of the good prices and are moving their vines and then spraying to treat the weeds on the mowed areas.

(Continued on Page 29)

Cranberry Breeding Investigation of the U. S. Dept. of Agriculture

F. B. CHANDLER, R. B. WILCOX, H. F. BAIN, H. F. BERGMAN, and HAIG DERMEN

(Continued from May issue)

The following is a brief summary of the material presented in the first part of the article. The U. S. Department of Agriculture began the Cranberry Breeding Program in 1929. In all, 10,685 seedlings have been grown and observed. The first selections were made in 1940 and later selections in 1945 and 1946. In all, 222 seedlings have been selected for a second test.

Range of Desirable Qualities of Selections

The following paragraphs give some indication of the range of the desirable qualities of the seedlings remaining after eliminations. From the original 10,000 seedlings possibly not more than ten will be saved for introduction as new varieties, and it may be that the number will be even smaller. If it is impossible to obtain a few selections with all of the desired characteristics for all cranberry-growing areas, then different selections will be made for the different states. Particularly this may be necessary in respect to false-blossom resistance, as false blossom is not known to spread on the Pacific Coast and is controlled more easily in Wisconsin and Massachusetts than in New Jersey.

Susceptibility to Leafhopper Feeding

The selections ranged in false-blossom susceptibility from a rating of 8.7 to 15, which means that the least susceptible are apparently as resistant as Shaw's Success (9.5 rating), and the most susceptible are better than Howes (17 rating). Of the general selection group, about three-fourths (74.2%) were not significantly more attractive to the bluntnose leafhopper than are Early Blacks and McFarlin, and one-third were significantly less attractive. See Table 2.

Date of Harvest

The date of harvest of many of the seedlings was late or very late. This was probably inherited from McFarlin, which was used, because of its field resistance to false blossom, as one of the parents for about 60% of the seedlings. Many seed-

lings of the crosses of various varieties with Early Black were not early, but the crosses involving the Early Black and Searles were nearly all harvested before the 20th of September. In selecting seedlings from the first test, many of the seedlings with very good characteristics were discarded because they were late, but in this first test it was impossible to reduce the number of selections harvested from October 11-20. See Table 3.

Size of Fruit

The cup count of berries is a very good measure of size of fruit on bogs or marshes that have been well vined in, but the cup count of berries from the seedlings was less than it will be after the vines become fully established on bogs. However, the selections that pro-

duce large berries as seedlings will always produce relatively large fruit. The available data have been summarized and are presented in Table 4, which shows that over 60% of the selections had cup counts of 90 or less. See Table 4.

Decay

The percentage of rot in some of the seedlings may be very surprising to many growers, but it must be remembered that the named varieties planted for comparison in many locations in the test bog had from 90-100% rot in 1945. Therefore, a selection could have a very high percentage of rot and still be low in relation to the named varieties. The sections of the bog that had little rot in 1943 were not always the same sections as those with little rot in 1945. In view of

TABLE 2

Number of selections classed by degrees of susceptibility to leafhopper feeding. The susceptibility rating of the resistant Shaw's Success is 9.5, of Early Black and McFarlin is 13.0, and of Howes is 17.0.

Rating for Susceptibility	Number of Seedlings Selected from					
	Second Test Selected from "40"			First Tests		
	Mass.	N.J.	Wis.	"General" 93	"Special" 63	"Canning" 26
Not greater than 9.5	0	0	0	2	3	—
10.1 to 11.0	0	0	1	9	5	—
11.1 to 12.0	2	0	1	21	7	1
12.1 to 13.0	3	0	1	19	15	3
13.1 to 14.0	1	2	1	25	22	1
14.1 to 15.0	2	1	0	7	5	2
15.1 to 16.0	2	1	1	0	0	0
No determination	0	0	0	10	6	19*

* The interest in canning berries had not been shown when the cafeteria tests were run, and these 19 seedlings did not have enough fresh-fruit quality to be included in the cafeteria tests.

TABLE 3

Number of selections classed by harvest dates.

Date of Harvest	Number of seedlings Selected from					
	Second Test (1946 harvest in N. J.) 13 Selected from 40			First Tests (1944 & 1945 harvest in N. J.)		
	Mass.	N.J.	Wis.	"General" 93	"Special" 63	"Canning" 26
Before Sept. 10	—	1	—	2	3	1
Sept. 11-20	—	1	1	1	2	3
Sept. 21-30	—	—	—	31	13	2
Oct. 1-10	5	2	2	13	20	8
Oct. 11-20	5	—	1	40	23	7
Oct. 21-31	3	—	1	6	2	2
No record	—	—	—	—	—	3

this, all of the seedlings having little rot in 1943 or 1945 were included, as well as those that had little rot in relation to their location. No table of rot is given because of this variability and lack of sufficient years of observation. The percentage rot of the selections in 1943 varied from 5 to 58, in 1945 from 9-90. The relative rot in 1945 ranged from .13 to 2.2.

Yield

Yield of young seedlings is not always a true index of their yielding ability, as some types of vines may give good yields over a period of years and yet be slow to come

into bearing. Conversely, some of those coming into bearing early may not be consistent bearers over a period of years. Many of the selections did not fruit in 1943, but the yield data for those that fruited are given in Table 5. The relative yield, that is, the yield of a seedling in relation to the surrounding plants may be a better criterion, as it eliminates much of the effect of soil variability. The data for the average relative yields for 1944 and 1945 are presented in Table 6. From the relative yield, it is evident that a few of the seedlings may have a slight ten-

dency to biennial bearing; for example, one selection with a yield at the rate of 94 bbls. per acre (table 5) in 1943 had a relative yield of 1.04 in 1944, and 1.72 in 1945. However, the selection with the highest average yield bore fruit at the rate of 54 bbls. in 1943 and a relative yield of 2.8 in 1944 and 5.0 in 1945.

Shape

Each seedling produced fruit which was a different shape than the adjacent plant. Only berries which would screen well were selected; see Fig. 1.

TABLE 4

Size of fruit of cranberry selections as measured by cup count

Cup Count per 1/2 pint	Number of Seedlings Selected from			
	Second Test Selected from 40	First Tests		
		General 93	Special 63	Canning 26
Less than 50	1	0	0	0
51-60	2	5	0	0
61-70	1	16	11	5
71-80	1	21	19	5
81-90	1	16	12	6
91-100	3	20	13	3
101-110	—	5	5	1
111-120	—	5	2	—
Over 120	—	5	1	—
Not counted	1	—	—	6

TABLE 5

Calculated yield of cranberry selections in 1943 in barrels per acre

Yield in Barrels Per Acre	Number of Seedlings Selected from First Test		
	General 93	Special 63	Canning 26
14-20	3	—	1
21-30	6	7	—
31-40	9	3	4
41-50	9	5	1
51-60	3	4	2
61-70	3	1	—
Over 71	2	—	1**
No record*	58	43	17

* Many of the Seedlings did not fruit in 1943.

** This seedling yielded at the rate of 94 barrels per acre in 1943 and had a relative yield of 1.04 in 1944 and 1.72 in 1945. It was not in the general list, as it had poor color, poor gloss, a susceptibility rating of 13.4 and relative rot of 1.62 in 1945.

TABLE 6

Relative yield of selections
(Yield in relation to the surrounding seedlings)

Relative Yield	Number of Selections from First Tests		
	"General" 93	"Special" 63	"Canning" 26
Average 1944 and 1945			
Less than 1.0	17	8	0
1.0-1.9	68	49	20
2.0-2.9	7	5	6
3.0 and over	1	1	0

FIRST TEST GROUPS


Berry Shape	"General" 93	"Special" 63	"Canning" 26
	9	6	3
	26	15	7
	3	3	0
	33	23	8
	8	5	7
	2	3	0
No Record	12	8	1

Figure 1. Number of Cranberry Seedlings selected according to Berry Shape.

Second Tests

Besides the variability of plant characteristics, the soil variability in the nursery was so great that it would have been unwise to discard to the desired number of ten or less in the first test. Therefore, plans were made to have ninety-three in the second test and to grow these in two bogs in New Jersey, two in Massachusetts, and one in Wisconsin. In each bog in New Jersey and Massachusetts, three plots of each selection were set. In the future, therefore, there will be at least twelve plots of each seedling in the East for observation, which should make it possible to obtain detailed information on all of the factors discussed above.

Second Test of "The 40 Selections"

Some of "the 40 selections" under second test produced a few berries in 1945, but all of them produced a crop in 1946. From the observation of the fruit on the vines, 13 were selected for further test in Massachusetts, 5 were selected for further test in Wisconsin, and 4 were selected for further test in New Jersey. However, none of the selections were common to all three groups. One of the 13 for the Massachusetts tests had to be harvested before full maturity, as the bog was to be flooded. Berries of the 5 selections for Wisconsin tests were not available for the studies made. Some of the records on the selections will be found in Tables 2, 3, 4 and 7, and some of the selections are shown in Fig. 2, 3, P. 14, 15. Processing studies of the selections for strained sauce made at the National Cranberry Association South Hanson plant showed that one had excellent flavor and that the yields of sauce were between those for Early Blacks and Howes. Cranberry Cocktail studies at South Hanson and East Wareham indicated that some of the selections would be suitable for cocktail use. Whole sauce from some of the selections made at East Wareham was excellent.

As is shown in Table 7, yields of the 13 selections in New Jersey were at the rate of 24 to 80 barrels per acre in 1946, and for the 5 selections in Wisconsin at the rate

of 95 to 185 barrels per acre. The cup counts indicate that the selections have average-to-large berries, the selection with the smallest berries having a cup count of 98 in 1946, and that with the largest, 48. The readings for specific gravity (ratio of the weight of berries to the weight of an equal volume of water) show that as compared with standard varieties $\frac{1}{3}$ of the selections are heavy, $\frac{1}{3}$ are average, and $\frac{1}{3}$ are light. The weight of a cup of berries depends on both the specific gravity and the closeness of packing of the berries. The records indicate that a quarter-barrel box of four of the selections will probably weigh as much as or more than Howes. Five of the selections have excellent appearance, and all of the selections have kept well in cellophane bags.

"Cafeteria" Test of Vines for Leafhopper Resistance

The blunt-nosed leafhopper is the vector, or carrier, by which the false blossom virus disease is transmitted from plant to plant in the bog. It was found in 1930* that the preference of the vector for certain varieties of cranberries as food plants was directly correlated with the rate at which false blossom spreads on those varieties in the field. Insofar as has been discovered, "unattractiveness" to the leafhopper is the only type of resistance to false blossom possessed by any variety of cranberry.

In order to determine the probable relative rate of spread of false blossom on seedlings, they were given selective feeding tests. Because the New Jersey growers especially value resistance to false blossom disease, the N. J. Agricultural Experiment Station encouraged and financed the selective feeding tests of 1945 on 362 of the seedlings which were outstanding horticulturally.

Essentially, such a test consists in confining numerous leafhoppers in small cages where they have shoots of several cranberry selections on which to feed at will. At least 2 named varieties are placed in each cage as standards, of which

* 1933. Wilcox, R. B. and C. S. Beckwith. A factor in the varietal resistance of cranberries to the false-blossom disease. Jour. Agric. Res. 47:583-590, fig. 1.

the relative "attractiveness" is already known. Daily counts are made of the numbers of insects on each variety. According to these numbers, the varieties are then rated on a "scale of susceptibility," on which the susceptible Howes has a rating of 17; the somewhat resistant Early Black and McFarlin, 13; and the resistant Shaw's Success, 9.5. Because several varieties of the food plant are displayed for selection by the hoppers, this test is often referred to as the "cafeteria test." It has been applied to more than 500 of the more promising seedlings in the Department's breeding program, and the resulting susceptibility ratings have been one criterion by which the seedlings have been eliminated or preserved for further testing. See Table 2.

There is some evidence to the effect that a high susceptibility rating indicates not merely that a variety "tickles the palate" of the insect, but that the leafhopper recognizes the variety as one particularly well suited to its needs, on which it can grow vigorously and reproduce abundantly; and, conversely, that on a less attractive variety, with a low susceptibility rating, it cannot develop normally or perhaps survive from one season to the next. This point has not been proved experimentally.

Tetraploid Cranberries

Tetraploid forms of several cranberry varieties were obtained in a series of experiments started in 1940 at the Plant Industry Station, Beltsville, Maryland. Details of the experiments have been published in technical journals (1), (2); the present account summarizes the project as an integral part of the cranberry breeding program.

The use of artificially-induced tetraploidy as a tool in plant breeding has been largely a development of the past decade. The principle is founded on the discovery that certain chemical or physical treatments applied to growing plants have the effect of inter-

(1).—Dermen, Haig and Henry F. Bain. 1941. Periclinal and total polyploidy in cranberries induced by colchicine. Proc. Amer. Soc. Hort. Sci. 38:400.

(2).—Ditto, 1944. A general cytological study of a colchicine polyploidy in cranberry. Amer. Journ. Bot. 31:151-163.

fering with normal cell division in such a way that when growth is resumed, the cells have double their former number of chromosomes. When the cells transformed to the tetraploid condition are located in the growing tip of a plant or any of its branches, all structures that develop from the affected cells beyond the region of change have the new chromosome number. Coincident with the doubling of chromosome numbers there is often a doubling in intensity of the original characteristics of the plant, most conspicuously expressed as increase in size or thickness of stems, leaves, flowers and fruits.

The cranberry tetraploids were developed by treating the plants with colchicine. It was found that a higher percentage of tetraploid effects was obtained when the treatments were applied to lateral buds on runners rather than to the tips. The most successful course of treatment among many tried was as follows: 1st day the terminal 4 or 5 inches of rapidly growing runners were cut off and discarded; 3rd day—3 to 5 lateral buds next to the cut ends were wetted

3 times (9.00 a. m., noon, 4 p. m.) with drops of a 1% aqueous solution of colchicine to which Santomerse was added as a spreader; 5th day—buds were again treated as on 3rd day. When runners are cut back as described, the single lateral bud nearest the cut end normally carries forward the growth of the runner, becoming active within a very short time; but when treated with colchicine, the effects were sometimes so severe that the end bud was suppressed and one or two of those farther back on the runner began to grow; this was the reason several were treated.

Branches growing from treated buds were watched for the appearance of tetraploid effects. Entire runners were seldom changed to the tetraploid condition; more often a strip or sector extending along one side of the stem exhibited tetraploidy. When this occurred, a fully tetraploid branch could be obtained by forcing one of the buds on the sector into growth. The tetraploid branches were then separated from the mother plant and propagated on their own roots.

Because of the manner in which plant growth develops, it is possible to tetraploidize certain tissues of the plant independently of others; an outer layer (the epidermis, usually one cell in thickness) or one or more internal layers that give rise to the internal parts that make up most of the volume of the plant. Cranberry plants having three degrees of tetraploidized and normal tissues were obtained: (1) epidermis tetraploid, all internal layers normal (designated **epidermal tetraploids**); (2) epidermis unchanged, internal layers tetraploid (**internal tetraploids**); (3) all tissues tetraploid (**total tetraploids** or merely **tetraploids**). The significance of the different types will become apparent presently. The cranberry material eventually included total tetraploid forms of Centennial, Early Black, McFarlin, and Searles varieties; internal-tetraploid forms of Early Black, Howes, McFarlin, Searles and Vose's Pride; and epidermal-tetraploid forms of all the above varieties. The plants were grown in the greenhouse at Beltsville until material was available for field

TABLE 7

Second test records of 18 cranberry selections from the "40 Selections" grown in New Jersey in 1946

Cross	Selected for Mass., Wis., or N.J.	Vine Cover- age 1946 N.J.	Yield Ebls. per A. in 1946		Cup Count from 1946 Crop		Seed Count from N.J. Crop	Specif- ic Grav- ity from N.J. Crop*	Berry Shape. Letters below refer to Fig. 2	Number of Growers Selecting on Appearance of Berries in Cell. Bags.	Estimated Picking Date in N.J. 1946	
			1=poor 5=good	N.J.	Wis.	N.J.						Wis.
Early Black x Howes	M	5	45		98		10.9	0.704	A	N ²	Oct. 8	
" " x "	M N.J.	H ¹	32		92		19.0	.692	B	43	Sept. 10	
" " x McFarlin	M	5	53		80		14.8	.701	C	36	Oct. 10	
" " x "	M	5	80		79		16.3	.694	D	4	" 1	
" " x Searles	W	H	32	130		85					Sept. 14	
" " x "	M	4	35		79		18.2	.672	E ⁵	21	Oct. 1	
" " x "	M N.J.	5	45		93		14.2	.694	F	21	" 5	
Howes x Searles	M	5	48		70		15.9	.711	G	N	" 21	
McFarlin x Bennett	M W	5	50	175		50					" 31	
" x Early Black	M	5	58		89		14.5	.708	H	24	" 14	
" x " "	N.J.	H	69								Sept. 14	
" x " "	W	4	50	(3)		(4)					Oct. 18	
" x " "	M	5	56		73		14.8	.675	I	0	" 18	
" x Potter	M N.J.	5	27	185		65					" 5	
" x Searles	M	4	47		58		13.7	.707	J	2	" 15	
Prolific x McFarlin	M	1	24		48		19.7	.657	K	24	" 15	
" x " "	M	3	30		58		18.7	.703	L	12	" 15	
" x " "	W	$\frac{1}{2}$	6	95		40					" 1	

*Specific gravity of Early Black is 0.669 and of Howes, 0.699 (grown in Mass. in 1946); therefore, all but one is heavier than Mass. Early Black, and six are heavier than Mass. Howes.

- (1) H under "Coverage 1946" indicates selections harvested before coverage estimate was made.
- (2) N in the next to last column indicates that these berries were not shown to all of the growers.
- (3) In Wisconsin, this selection was mowed for propagation in the spring of 1946.
- (4) Cup count in Wisconsin, 1945, was 57.
- (5) Fruit from this selection was pictured on the cover of the May issue.

tests in New Jersey, Wisconsin, and Massachusetts.

When grown in flats in the greenhouse, all three tetraploid types proved vigorous. The epidermal tetraploids were scarcely distinguishable from normal plants in general appearance, while internal and total tetraploid forms had larger, thicker, and darker green leaves, larger stems, and taller uprights. Flower differences followed the same rule, the epidermals varying little from normal in size and appearance, and the other two forms having larger and broader flowers. All three types proved to be fertile. Berries on the epidermals appeared to be similar to those on normal plants, while those on the other two types were considerably larger, had thicker flesh, and were decidedly heavier. Preliminary observations indicate that the epidermals apparently had no useful characteristics different from normal plants. The internal tetraploids as young plants usually had better color and appearance than the total tetraploids, partly because of superior surface finish and partly because the total tetraploids had a tendency toward coarseness and overgrowth within the calyx lobes at the blossom end of the berry. As grown in the greenhouse, both the internal tetraploid and total tetraploid types appeared to offer distinct promise.

The plants have been growing in the field too short a time to judge their field behavior. As young plants in Wisconsin they appear to be less hardy than normal cranberries, and vine in more slowly. There is a tendency to produce uprights rather than vines, and it is noticeable that the uprights set fruit buds in greater than normal proportions. The relatively small numbers of flowers that have bloomed so far have been left to pollinate by chance, and have not set well; the berries have had few seeds and have been disappointingly small. This fruiting behavior may well have been due to insufficient pollination, a relation that should improve as the number of tetraploid flowers increases.

The first tetraploids planted in New Jersey behaved similarly to those set in Wisconsin. However,

the tetraploids that were well established in the greenhouse at Beltsville and were set later in New Jersey had heavy crops of berries in 1946 which were very well colored and were much larger than the normal berries.

As soon as material became available, hybridization was attempted between the tetraploids and the mossberry (*Vaccinium oxycoccos* L., a cranberry relative having the same chromosome number as the tetraploids). The two species were found to hybridize readily and 240 hybrid seedlings are now growing in the Wisconsin nursery, but have not reached the fruiting stage.

Crosses are also being made between varieties at the tetraploid level. The tetraploid seeds are usually viable and the seedlings are vegetatively vigorous; it remains to be seen if they are fertile. Part of the tetraploid seed was sent to Wisconsin for planting and part planted at Beltsville.

In 1944, all available tetraploid material from Beltsville was sent to the Wisconsin nursery. This consisted of the varietal tetraploids described above, and the first seedlings, 200 in number, were grown from seeds from tetraploid cranberries.

Distribution to Growers

Tentative plans for the distribution of final selections to growers are being made in New Jersey, Massachusetts, and Wisconsin. In New Jersey and Massachusetts it is proposed that the growers' associations handle the distribution of selections for introduction and the allotments to individual growers. This appears to be a good method of insuring a fair distribution of vines, and at the same time it relieves both the growers who have conducted the second test and the research group of handling the matter.

It is hoped that some vines will be available for growers by 1950 and every year after that. The quantity of vines for each grower will be small, but will be enough to permit him to test the selections in his own bog.

Summary

This article has been written to inform the cranberry growers of the Cranberry Breeding Program

of the U. S. Department of Agriculture in cooperation with the New Jersey and Massachusetts State Experiment Stations and the Wisconsin Department of Agriculture. An attempt has been made to show what a large undertaking it has been and will continue to be. Such a large project could not have been accomplished without cooperation such as was given by the growers mentioned in the first part of this paper and the United Cape Cod Co., which was omitted in the acknowledgement.

Though many very good seedlings were discarded when the first test was completed, the remaining selections (about two per cent of the seedlings set) will have still more desirable characters. Some are outstanding in yield, some have a low rot rating, and some have excellent color and gloss. The cup counts and harvest dates cover the range desired by most growers. The false blossom resistance rating of the majority is as good as or better than that of Early Black and McFarlin, and the best are not excelled in resistance by any varieties. The type of vine growth varies, but an attempt has been made to eliminate all undesirable vines.

Each year additional information will be obtained on the selections in the different locations, and on the basis of this information the best are to be introduced for cultivation. It is the hope of the authors that these new varieties will be enough better than present varieties to repay many fold the cost in time and money that is necessary for their development.

HOW CRANBERRIES PLACED IN A SALES SUMMARY

"Food Marketing in New England", monthly publication of First National Stores, in a summary of fruit and vegetable dollar value sales for the past year places cranberries 45th on the list, with the percentage of 0.11 of total. Blueberries were 32 with a percentage of 0.51. Bananas were in No. 1 position in dollar value, oranges second, potatoes third (but first in bulk); apples fifth.

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Control of Poison Ivy on Cape Cod Cranberry Bogs

By CHESTER E. CROSS*

Poison ivy is, perhaps, the best known and most objectionable weed with which cranberry growers in Massachusetts have to contend. Many people are very easily poisoned by contact with this weed, and those who seem to be immune to its poisons can never be sure when their immunity will cease. There are now any number of cases on record where people have for years pulled this weed with no untoward consequences. Then suddenly contact with the ivy vines and leaves produces severe blisters and swellings of the skin, accompanied by the all too familiar, crazing itch. Even for those who have been immune to poisoning since birth, it is best to be wary.

The fact that poison ivy often produces serious skin inflammation is not its only obnoxious quality. Ivy climbs and twines about trees and in time chokes, starves, and distorts them. I have seen an ivy stem twined in a regular spiral around the trunk of an elm tree and completely embedded in the tissues of the tree which had tried unsuccessfully to expand within the tight cord of the ivy vine. Many cranberry growers have seen areas of their bogs completely taken over by an aggressive stand of poison ivy. Its roots do not run deep, but its vine-like stems can grow over ten feet a year, while their numerous upright branches over-top the cranberry vines and shade them out of existence. Sanding on the ivy plants only stimulates their growth and spread.

* Dr. Chester E. Cross holds an associate professorship at the Massachusetts Experiment Station, East Wareham, Massachusetts, where he has specialized in research in weed control.

The time-honored method for destroying weeds is that of pulling them out. With most weeds such a technique is simply onerous and time-taking, but in pulling poison ivy, many people become seriously poisoned despite gloves, long sleeves and sundry other precautions*; and it often seems to those who pull ivy that, since it grows again from roots and underground

* Those who are susceptible to ivy poisoning can pull this weed with comparative safety only when they are well protected. Long-sleeved shirts, ample gloves, and a wrapping of paper at the wrists is safest. Similar protection is necessary for legs and ankles. Care should be used in touching the outer surface of gloves used in pulling ivy. If an immune individual has been pulling ivy with bare hands, he must be careful not to touch the skin of another person, even after his hands have been thoroughly washed. Once the poisoning has been contracted, the writer has found greatest relief from liberal applications of the commercial preparation marketed as "IVY DRY". It has been asserted that a coating of yellow laundry soap to the arms and hands prior to pulling ivy will prevent poisonous action. The writer is skeptical of this precaution, at least with respect to susceptible persons.

stems left in the soil, their efforts have been wasted.

This condition need not be the case. Particularly if a man dares to handle ivy plants with his bare hands, it is possible for him to follow the long trailing stems with his fingers, pulling only slightly and gradually lifting the stems and shallow roots out of the soil. After freeing the roots for a considerable distance, it is usually advisable to break the runner off. If the ivy is growing among cranberry vines, this work of lifting out the long ivy runners can often be done without unduly disturbing the cranberries. Then if the shoot is broken off and gently pulled through, the cranberry vines will not be uprooted. This method is tedious and expensive, but it is reasonably thorough if it is executed carefully. If the ivy puller realizes that his first long effort will not eradicate the stand of ivy, but simply stop the ivy's spread and restrict its stand to the few roots left in the soil, he will not be discouraged when a month later he finds more ivy shoots appearing in the plot. He should then pull it again with the same care as at first, and he will have his ivy problem beaten. The following year in June or July he should search the area carefully again and pull out any ivy that has reappeared.

(Continued on Page 18)

INCREASING PRODUCTION PER ACRE

THE statement in the preliminary report of the 1947 Cranberry Survey by C. D. Stevens, chief agricultural Statistician, New England Crop Reporting Service, and Frederick E. Cole, Massachusetts Commissioner of Agriculture, that even more significant than the increase in acreage is the notable improvement in flowage facilities seems beyond dispute. Bogs with full flowage protection increased 1,951 acres or 30 per cent since the last previous survey in 1934.

In spite of slackened economic conditions of the late 30s, in spite of the war, cranberry growers have forged steadily ahead in improving old bogs, as well as putting in new. A good, small bog is not better than a good, big bog, but good smaller acreage in the long run will be found to be more profitable than larger acreage in poorer condition. That has been proven in New Jersey where growers found to their cost that big acreage not soundly put in (by the bog owners of years ago) was not as profitable as smaller, better built property with adequate water facilities—a condition from which Jersey is now endeavoring to recover.

Production possibilities of Massachusetts and of other areas as well, can be increased to the advantage of the individual growers and of the industry.

And that cranberry production, as well as production per acre, is going up is undoubtedly a good thing. Bumper food crops seem to be almost getting to be a habit with agriculturists of the United States. 1947 reports indicate this country will have bumper production in general for the eleventh consecutive year of good crops. If producers of food stuffs in this country are consistently to produce more successfully each year, it is well the cranberry growers are in line. The prospects are that the United States will eat well this year, even though the picture is a sad one in many parts of the world.

With the markets of the country well stocked with foods of nearly every description, cranberries fresh and processed should be there also in adequate quantities. Increasing production, and especially increasing production per acre, indicate they will be and can be at fair competitive prices with other fruits.

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THIS month, in addition to concluding the major article on the Cranberry breeding investigation, which is the first comprehensive summation of this important project, we believe the article by Dr. Chester Cross on "Poison Ivy Control", and the outline of Dr. Colby's lectures on "Cranberry Soils" are particularly worthy of note. We understand very little scientific attention has been given to poison ivy, this common pest that it is. More articles by the scientists of the industry are planned for the future, and we feel cranberry growers are fortunate in having this material prepared for their study.

Pictorial Section



A group, comprising part of the attendance at a special meeting for GI school and others, is shown listening to Bertram Tomlinson (center, with weed specimens in his hand). This special twilight meeting at 6.30, May 27th, brought forth an excellent attendance despite a frost call.

Meeting was at bog of Charles M. Savery (3rd from right), opposite Tomlinson. This small East Sandwich prop-

erty recently purchased by Savery was selected because it gave a chance for a practical demonstration in bog renovation. Much has been accomplished by Savery since his purchase a year ago, he having deepened ditches, built flumes and dikes, and laying land tile in an effort to provide better drainage. Dr. Chester E. Cross, not shown in group, was on hand to cooperate in weed identification. (Cranberries Photo)

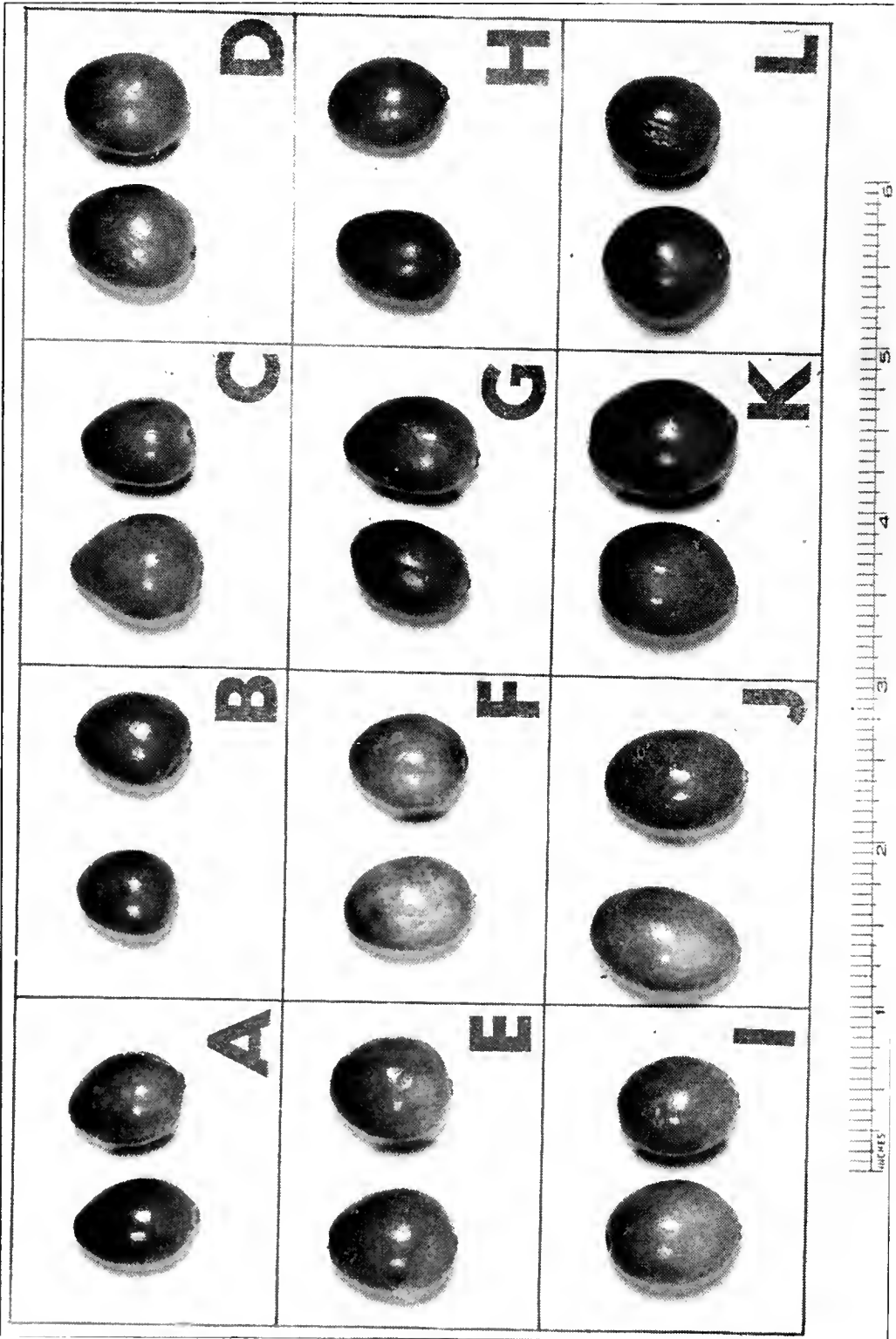


Figure 2. Picture (taken in March) of two typical berries to show their shape. Data on the seedling will be found in Table 7. (Cranberries Photo).



Figure 3. Picture of berries to give some idea of their appearance in a group. The optimum date of picking is in Table 7. (Cranberries Photo)



Associate Assigned to Tomlinson in Barnstable County

An associate county agricultural agent has been named to work with Bertram Tomlinson in Barnstable County, Cape Cod proper. He is Oscar S. Johnson, a native of the Cape. This appointment should provide opportunity for Mr. Tomlinson to provide even more time to cranberry work than he has in the past, although he has always given extremely valuable and intensive attention to cranberry culture in his county.

Mr. Johnson is a resident of Centerville and completed several

years in 4-H work before entering Barnstable High school. After graduating from there, he attended Rhode Island State College, where he specialized in horticulture, graduating in 1941 with a B. S. degree. For nearly a year after leaving college, he worked with his father in landscape gardening and left this work to enter military service. He now holds the rank of captain in the Reserve Corps.

At present, Mr. Johnson is handling all requests for assistance on home gardens and home grounds improvement. He will be available for office conferences, telephone calls, visits to home owners on request, and also for speaking engagements on these two subjects.



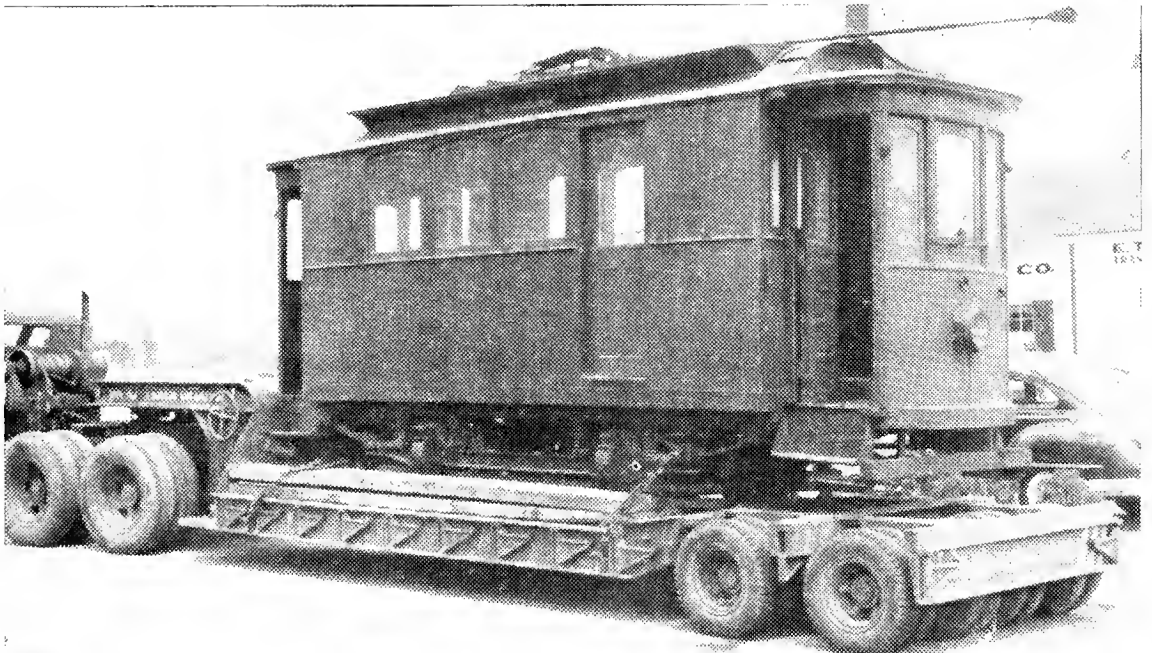
FIRST MASS. ROOT GRUB MEETING

Opening gun of the 1947 Massachusetts Root Grub campaign was fired early, this being a field meeting at the State Bog, East Wareham, April 11, called by County Agent "Dick" Beattie. Root Grub is now Bay State insect pest "No. 1", and Dr. Franklin told the growers assembled that if it was not for Root Grub, Massachusetts might harvest an annual 150,000 barrels more.

The entire State Bog was being cyanided that week, and at 2 p. m. Dr. Franklin, Dr. Chandler, "Joe" Kelley and Beattie held a discussion of the life history of the three types of Root Grubs involved; lantern slides were shown, and specimens had been gathered for identification. The three Grubs are Root Grub, White Grub and Grape Anomata.

The growers watched the cyaniding in progress and then witnessed a demonstration of proper application of PDB flakes, followed

by the application of an inch of sand, this being done by George Rounsville and crew. Demonstrations were similar to two held last season, but it was felt repetition was desirable, particularly because of many younger and new growers, and this group was noticeable in the meeting attendance. Grub is present on some Barnstable County bogs, but not nearly so serious east of the canal, although Barnstable County Agent Tomlinson and some Cape growers were present.



Latest addition to the E. D. Atwood collection at South Carver, Mass., of out-dated rail equipment is No. 34, original mail car used by the now defunct New Bedford & Onset Street Railway.

A real museum piece, this car, built about 1905, shown in transport to Edaville, by the Gault Transportation Company. (Cranberries Photo)

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Ivy Control

(Continued from Page 11)

The above technique for disposing of ivy is actually more practicable than the expense seems to indicate. Before a grower dismisses this idea, he would do well to consider what the ivy is costing him in terms of reduced crop and increased picking costs. Also, he would do well to think twice before rebuilding an infested area at a time when labor costs are high. Rebuilding now will throw that area out of production while berries are selling at a high price, and possibly keep it out of production until berries are selling for much less. If he considers the matter carefully, and if he still has a fair number of cranberry vines intermingled with the ivy, I think this hand-weeding method will not ap-

pear so impractical. Of course, the chief difficulty is to find people who will handle the ivy and be willing to do the thorough and careful work outlined above.

If the stand of ivy is too dense and extensive, or if the cranberry

grower cannot find careful weeders for the job, he is forced to hope for chemical control measures. We have, to date, found only one treatment for ivy on cranberry bogs which kills the ivy without injuring the cranberry vines. This

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treatment consists of scattering 7½ lbs. of para-dichlorobenzene (PDB) evenly over the infested area and covering it immediately with an inch of sand. If the vines are thin, only four or five wheelbarrow loads of sand will be needed per square rod, but if the vines are thick and dense it may require as many as eight or nine wheelbarrow loads to cover the PDB adequately. In judging how much should be used, it is better to put on too much than too little. If the sand is scattered skillfully, it is surprising how much can be spread without actually burying an appreciable number of cranberry uprights.

The PDB method for killing poison ivy is most effective in June and July. If the bog is not to be flooded for frost, the treatment can be used well during the last half of May. Nothing is as yet known of the value of PDB under sand in the fall.

The PDB treatment will often kill nearly 100% of the ivy plants. It is least effective near the bog

ditches where apparently the heavy vapors escape laterally from under the sand. This treatment is expensive, but during these days of high valuations both on property and fruit, it is also a heavy expense to the grower to have areas out of production; and it should not be forgotten that the presence of ivy in cranberry vines cuts down the crop in the area, the efficiency of picking that crop, and reduces the value of the bog. Then, too, the grower is liable for his pickers. If they are poisoned they may be unable to work, and they may even bring suit for damages.

Where poison ivy has actually choked out a large proportion of the cranberry vines, or where it has established itself on shores or uplands surrounding the bog, it is not necessary to go to the expense of pulling the ivy or treating it with PDB. Here the ivy should be killed with some chemical which will not poison the soil for too long. Probably the best choice is ammonium sulphamate, better known in the trade as "ammate".

Western Picker Is Light—Made of Cast Magnesium

The new Western Picker which will be in use this harvest season is made entirely of magnesium. Cast Magnesium is one of the lightest metals, being over one-third lighter than cast aluminum, is tough, stiff and strong, can be bent without breaking, and withstands abrasion and corrosion.

Several interesting things happen when magnesium is cast into molds. First, air must be excluded lest the metal catches fire. This is accomplished by covering the molten metal with a flux composed of sulphur, borax and chlorine. This, of course, imparts an "etheral" odor around the operation. Another peculiarity of the casting process is that the two separate streams of the molten metal will not fuse when they meet so that all castings must be poured through one gate. The metal rolls in the mold rather than flows.

It melts at 1204 degrees as against 2768 degrees for iron. Magnesium is "mined" in the ocean, sea water is made slightly alkaline, and the resultant magnesium hydroxide is filtered out.

Many new and novel ideas are centered around the Western Picker: The machine itself is novel because of its speed, picking over an acre a day; the use of magnesium reduces its weight; the use of Neoprene grips the vines with a firm but elastic hold; the use of stainless steel in the pruning knives and sickles ends dulling due to rust.

The most novel idea of the Western Picker is in the economics of cranberry growing—when harvesting the crop ceases to be one of the major worries of the cranberry grower.

After August 15th two of these pickers will be demonstrated in each cranberry state with twenty pickers operating in Massachusetts. They are all sponsored by the National Cranberry Association and will be under the personal observation of "Rudy" Hillstrom, President of Western Pickers, Inc., and "Joe" Stankavich, one of the three brothers who invented the machine. (Advt.)

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Gypsy Moth Caterpillar
Blackheaded Fireworm*

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This chemical is best sprayed in June or July, 75 lbs. in 100 gals. of water at 200 to 250 gals. per acre, depending upon the density of the stand of ivy. This first spray will kill a great deal of the ivy, but in five or six weeks some spindly and weak growth will probably be observed near the ground.

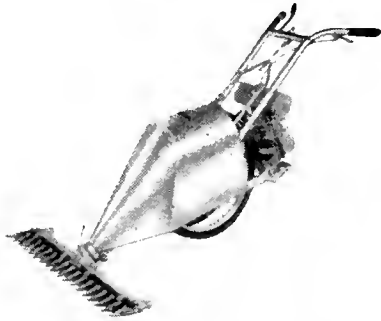
If this regrowth ivy is again sprayed with the above solution some time in August, the grower can be reasonably sure that his ivy is dead. The area can now be cleared for rebuilding, but because of the toxic qualities of ammate left in the soil, must not be planted until the following spring after winter rains and flood have leached the poisons from the soil.

Repeated applications do not seem to kill the ivy plants, at least soon enough to be of value to cranberry growers. However, if 7½ lbs. of dry sodium chlorate is scattered evenly on a square rod infested with ivy, it will kill all plants included in the area, ivy as well as cranberry vines. This chemical will poison the soil for a longer period than the ammate, but we believe that one winter flood after the dry application of chlorate is sufficient to leach the soil for spring planting. Sodium chlorate is very inflammable and must be handled with great caution.

Ammate is as corrosive to spraying equipment as salt or copper sulphate, so that after each spraying, the equipment must be carefully cleaned. The best method for cleaning is repeated rinsing with water. Ammate is not poisonous to human beings or animals. It resists flame and so actually reduces the fire hazard on or about the bog. It can be used on the shores and uplands in place of mowing, but if it is applied repeatedly, the turf is quickly destroyed and the shore bank rapidly washes into the ditch.

Many chemicals that are poisonous to other plants do not kill poison ivy. Iron sulphate (ferrous sulphate) scattered dry at four tons per acre will not injure ivy plants. Ferric sulphate (Ferrisul) at one and a half tons per acre will cause it no injury. Common salt (sodium chloride) at four tons per acre will not give a satisfactory kill, though this treatment will kill all cranberry vines and many other weeds. Solutions of ammonium thiocyanide are far more toxic to cranberry vines than they are to poison ivy. Borax acts quickly on poison ivy, but, while the ivy recovers and produces a new set of leaves, cranberry vines slowly but surely die. Poison ivy readily survives applications of kerosene in

Prior to the discovery of the killing power of ammate on poison ivy, sodium chlorate was the best known killer. Even very weak solutions of sodium chlorate (1½ lbs. in 100 gals. of water) when sprayed on ivy will completely defoliate it (and the cranberry vines as well). But new ivy leaves are quickly formed, even when the solutions are much stronger. Re-



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excess of 1000 gals. per acre. Solutions of 2,4D strong enough to kill poison ivy also kill cranberry vines.

Various solutions can be used to burn the foliage of poison ivy: sodium arsenate 1½ lbs. in 100 gals. of water @ 200 gals. per acre, sodium arsenite at 1 lb. in 100 gals. of water @ 200 gals. per acre, and common salt (sodium chloride) at 100 lbs. in 100 gals. of water @ 200 gals. per acre, but only the last named can be used throughout the growing season without injuring cranberry vines. This defoliation of ivy plants is of questionable value because a new set of leaves is formed so quickly. To cause permanent injury to the poison ivy plants, they would have to be defoliated four times a season, and even then the stand would not be dead.

Cranberry Soils

(Editor's Note: The following is the outline of the talks upon soil at the Massachusetts "Cranberry Schools", by Dr. William G. Colby, agronomist, Massachusetts State College. It is printed

to get these valuable notes from Dr. Colby "into the record" for cranberry growers.)

I. Role of Soil in Crop Production

A. As mechanical support for crop plants.

B. As a reservoir for certain plant nutrient elements. The substances used by living plants may be called plant nutrients or plant nutrient elements. The nutrient elements generally recognized as essential to normal plant growth for most plants are as follows: carbon, oxygen, hydrogen, phosphorus, calcium, potassium, magnesium, sulfur, iron, nitrogen, copper, manganese, boron, zinc, and perhaps two or three more so-called "minor elements." In soil culture all of these nutrient elements, with the exception of carbon, oxygen and hydrogen, are supplied to the plant through the medium of the soil.

II. Soil Development—Upland vs. Bog Soils

Well drained upland soils in New England have developed under a heavy forest cover. Rainfall has been moderately heavy and

soils which develop under these conditions regardless of the parent materials from which they were derived acquire certain similar chemical properties. Organic matter accumulates as a layer on the ground surface as a result of the annual fall of leaves and accumulation of the remains of dead parts of trees and other forms of vegetation. This layer of organic matter or "raw" humus, often reached a depth of a foot or more. The layer did not build up indefinitely because rapid processes of breakdown or decomposition were going on in these well aerated soils at the same time fresh material was being added to the surface. A point was reached at which the rate of accumulation was evenly balanced by the rate of decomposition or destruction. When this point was reached the depth of the organic matter layer became constant.

Decomposing organic matter released plant nutrient elements which were then taken up by the roots of living plants to again be built up with plant tissue. Thus a continuous cycle was set up

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which under natural conditions could have operated almost indefinitely.

Some products of organic matter decomposition when carried down through the mineral horizons of the soil by rain water exerted a strong leaching action on soil minerals. Much of the calcium, magnesium, potassium, as well as other elements were brought into solution and if they were not taken up by deep rooted plants were lost from the soil in the drainage water. Note, therefore, that the accumulated layer of organic matter and not the mineral soil represented the accumulated reserve or store of fertility. When the forests were cut down and the land was brought under cultivation, the soils re-

mained fertile and productive just so long as the reserve of organic matter lasted. When that was gone, supplementary application of manures of one kind or another became necessary.

Bog land soils, the soils which support the growth of cranberries either developed under water or under conditions of very poor drainage. The type of vegetation was different from that of upland soils and the conditions under which these plants grew were different. A similar process of organic matter accumulation took place and also organic matter decomposition, but because of the absence of air or quantities of free oxygen the accumulative processes greatly over-balanced the destructive processes. The result was that great quantities of organic matter in form of peat and muck accumulated in the ponds and lowlands. Gradually the ponds disappeared, leaving behind these vast deposits of "stored up" fertility. It is these deposits which constitute the "soils" which supplied most of the fertility to the cranberry grower.

III. The mechanism of base exchange or how plants feed.

The fine colloidal clay particles and the fine colloidal particles of humus of an organic soil are negatively charged. The negatively charged particles have an affinity for positively charged elements such as hydrogen, calcium, magnesium, potassium and other elements. A single particle of clay or humus may have several of these different elements "attached" to its surface at the same time. When a plant root hair comes in contact with a clay or humus particle an "exchange" can take place whereby a positive hydrogen (produced by living processes within the root) from the root hair can be traded for a positive calcium or magnesium or potassium on the clay or humus particle. In this way the reserve of these elements on the soil colloids is gradually reduced and the reserve of "replaceable" hydrogen is increased. When the supply of calcium, magnesium or potassium in the soil is replenished, hydrogen on the clay and

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humus particles can again be replaced and the reserve of "replaceable" hydrogen reduced.

The base exchange mechanism not only explains how certain elements are taken up by the plant but also explains why many of these same elements in the soil are not easily leached or washed away. It explains why the fertility of cranberry bog soils is not rapidly lost as a result of frequent flooding.

IV. Base Exchange Capacity or why cranberry plants grow on "acid" humus.

The base exchange capacity or the total quantity of positively charged elements which can be absorbed, depends upon the total quantity of colloidal clay or organic matter present in a given quantity of soil. Soils with high content of colloidal material can "store" much larger quantities than soils with low colloidal content. Since cranberry "soils" are mostly organic matter, their "storage" or exchange capacity is very large.

The total exchange capacity for cranberry mucks and peats is ten to thirty times greater than for many productive upland soils. Because of this very large "storage"

capacity, it is possible to have a large amount of "exchangeable" hydrogen present which makes the "soil" acid and also to have a large quantity of calcium, mag-

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nesium, potassium, and other positively charged elements present which the cranberry plant can utilize. A cranberry soil with a pH of 4.0 may actually have much more available calcium than an upland soil with a pH of 7.0.

I. The Nitrogen Cycle and the Cranberry Plant

In upland soils the natural source of nitrogen is from the decomposition of organic matter. Complex proteins are broken down to give simpler amino acids. These acids in turn yield ammonia and ammonia in turn is changed to nitrite nitrogen and finally to nitrate nitrogen. In a productive upland soil the most important form of nitrogen is the nitrate form.

In the cranberry "soil", because of the lack of aeration or free oxygen, it is difficult to explain how much nitrate nitrogen would ever be formed. New Jersey experiments indicate that the cranberry plant can use nitrogen in the amino acid form and also in the ammonium form. Hence it would appear that the complete nitrogen cycle is not essential to the normal

functioning of the cranberry plant.

VI. Possible Functions of Sand in Bog Construction

A. Sand layer lowers level of fertility. Past experience has shown that growing cranberry vines in muck directly results in heavy vine growth with sparse setting of fruit. Weeds are more troublesome.

B. Sand layer aids in temperature relationships.

C. Sand promotes rapid drainage and aids aeration.

Late News

COPTERS ARE HERE

Dusting-spraying helicopters have arrived in Massachusetts. "Ocean-Sprayer, No. 1", holding U. S. agricultural dusting license No. 1, began work on some bogs the first of June and was welcomed at a press demonstration at the 100-acre Pembroke bog of United Cape Cod Cranberry Company June 5. A considerable crowd gathered to see this "flying wild-mill", purchased by National Cranberry Service Corporation, a sub-

siary of National Cranberry Association, which inaugurated this type of air service.

Oilot Rowland C. Roelofs, under the direction of chief pilot and president Fred W. Soule, brought the Bell 'copter to the bog side in vertical landings and take-offs; he dusted a few inches above the vines, hovered, flew it backwards and sideways as well as forward.

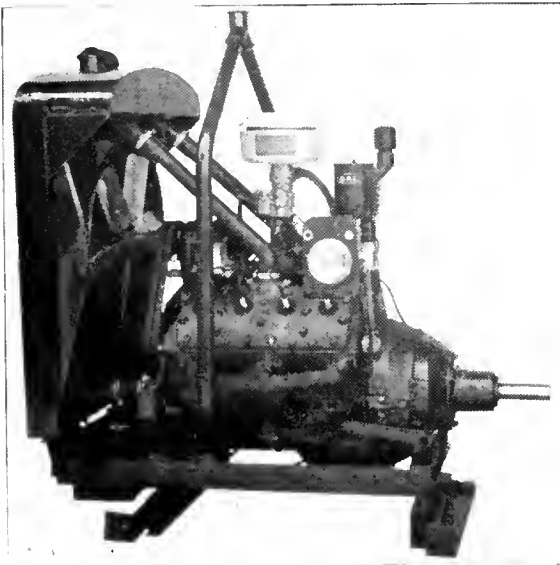
On June 6th a second Bell 'copter was flown to Middleboro from Niagara Falls, New York, where it will be placed at the disposal of members of New England Cranberry Sales Company, being leased through Wiggins Airways of Norwood. This ship was brought in to a field across from the Sales Company office, shortly after noon, where directors had gathered for a meeting.

MASS. JUNE FROST

An early June frost occurred on the morning of June 5th on Massachusetts bogs, Dr. Franklin having sent out a warning, "moderate, general frost, minimum temperature 26 degrees." That point was widely reached and also 26 and 27,

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the former on the Pierceville bog of Makepeace Company at Pierceville, West Wareham; Malcolm Ry-
cer, Cotuit; and Rogers bog, East Wareham. Dr. Franklin did not believe there had been much damage, in view of the warning and generally adequate water supplies. Night before similar temperatures had been reached, but there was considerable wind.

New Blueberry Paper

"Blossom Weevil on Cultivated Blueberries" is the title of Circular 504 published by the New Jersey Agricultural Experiment Station, Rutgers University, New Brunswick, New Jersey, by C. A. Doehlert and W. E. Tomlinson, Jr., of the Cranberry-Blueberry Station at Pemberton.

The cranberry weevil frequently destroys half to three-quarters of the crop in the infested parts of blueberry fields in New Jersey, the authors state at the beginning, but by applying the control methods

described in the circular, growers of cultivated blueberries can save themselves much of the loss caused by the pest.

The authors describe the pest, warn of three types of injury to

watch for, gives its life history and habits and then the control method, and ends with the warning to growers of cultivated blueberries not to wait until their whole field is infested.

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A "Cranberry" Institute Is Proposed

The proposal of an impartial "cranberry institute" has been made by C. M. Chaney in his an-

nual report to American Cranberry Exchange directors. A principal function of such an organization, if it should be formed, would be to promote increased use of cranberries through advertising campaigns which would be paid for by all growers.

Mr. Chaney's proposal, which was voted to be given study by the directors, would propose an advertising fund, perhaps of ten cents a barrel, to be used for general advertising of cranberries, with the mention of no trade name or brands.

This would not necessarily mean, Mr. Chaney says, that ACE or others who advertise cranberries under nationally known trade names and brands would discontinue this advertising. But his proposal would have every grower contribute to the general advertising of cranberries. He points out that for the past 30 years, ACE has spent a considerable sum of money to advertise and publicize cranberries.

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South Carver

Atwood "Hobby" Article Refers to Publicity Value

"His Hobby Works for Him", is the title of an illustrated page article in May issue of "Nation's Business", concerning Ellis D. Atwood, South Carver, Massachusetts, and his bog railroad.

The writer, R. E. Murray, states that through Mr. Atwood's interest in railroading, the last of the two-foot gauge railroads in America, instead of dying in the obscurity of the Maine woods, is now recreated "in all its former glory" at South Carver. By this action, Mr. Atwood not only satisfied a strong hobby, the article continues, but found a means of simplifying his cranberry growing problems.

Today the hobby is a paying proposition, the writer asserts,

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They can be used for spraying with 2, 4-D, as well as with other chemicals, because their all-steel tanks do not absorb spray materials, and hence can be cleaned. These economical sprayers—built for years of hard use—are all-

purpose; can be used for spray painting, whitewashing, fire fighting. Bean sprayers can be equipped with refillers for fast refilling from any tank or pond.

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"an effective unit in his cranberry business." He tells briefly how it was used for sanding, to distribute workers throughout the bogs, and tank cars will carry kerosene for weed control.

Some 25,000 tourists stopped by at the South Carver bog last year, the article points out, and more than 100,000 visitors are expected during 1947. This is just what Mr. Atwood wants, the writer further says, as he sees in the railroad an excellent opportunity to promote good will and a cranberry appetite, and that the "ever-growing" cranberry industry hopes to get a mighty publicity boost from the Edaville Railroad. (This was a major factor pointed out in the first stories in CRANBERRIES concerning "Atwood's Hobby".)

Bandon Notes

Bandon—Wide, modern roadways will give access to individual cranberry bogs in a new area now under development west of the Seven Devils road about seven miles north of Bandon along the coast, where William H. F. Ziedrich of Coquille is clearing land and building roads for new owners of bog land who have their places in the initial stages of construction.

Ziedrich during the past few years acquired several sections of land containing natural peat bogs. The land was divided into farms and planned so that each would have water supply, road accessibility and maximum fire protection. In order to assure good roads, he engaged heavy equipment and is spending several thousand dollars in clearing the grading. At least two of the new roads will extend from the Seven Devils road westward to Whiskey Run beach.

It is estimated that the new north-of-the-river area will eventually add several hundred acres of producing bogs to the Coos-Curry counties district of southern Oregon.

A large double-faced neon sign, "Bandon, Cranberry Center of Oregon", is to be erected in the center of Bandon's business district on U. S. Highway 101, according to a project adopted by the Bandon Active Club which now has a committee raising funds for the erection and maintenance of such a sign.

Solicitation includes all the cranberry growers in the area and it is reported they are responding to a letter directed to them by the Active club, which says in part:

"Realizing that the Cranberry industry in and around Bandon has

Colley Cranberry Company

Plymouth, Mass.

Office
17 Court Street

Telephone
Plymouth 1622

become an increasingly important asset to the entire area and that the many new residents who have come to put in bogs are just the beginning of a greater influx of population, we of the Bandon Active club are going to do what we can to hasten this migration."

Estimated cost of the sign project is \$1,500.00.

Fresh from the Fields

(Continued from Page 5)

Stoddard Solvent

One of the greatest points of interest this spring has been in the Stoddard Solvent, so called, for weed control. It has been estimated that from figures of the various suppliers, 90,000 gallons of this particular petroleum product will be used on the marshes here this spring. There are reports of varying degrees of success in control, some growers being very impressed with the new product, while some others feel the contrary. It is pointed out that one year is not a fair trial for this product and it may take two or three years with various experimentation before a real determination can be made as to how it should be handled, the

CONTROL...

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Gypsy Moth Caterpillar
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DUST**

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UNIFORM**

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PARKHURST, JR.**

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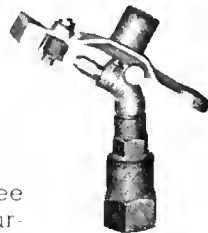


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Buckner Cranberry sprinklers were designed by Cranberry Bog engineers and are built for economical, trouble-free operation. Choice of models gives you a perfect curtain of water for any size bog. Low installation cost. Proven results in all bog sections of the country. See your Buckner representative now—there's one near you, and Buckner Sprinklers are available on short notice.



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BUCKNER MANUFACTURING CO.
CURTAIN SPRINKLERS

time of spraying, and various grasses and weeds upon which it is effective determined.

New Insect Chart

Wisconsin Cranberry Sales Company has issued a new chart with recommendations for the control of insects. This is the first for several years.

New Frost Warnings System

"Del" Hammond, Jr., has also been working upon a new frost warning system for Wisconsin cranberry growers. He has been visited by Howard Kenney of the United States Weather Bureau, Chicago office, and the Sales company is taking the lead in developing the system, although the whole industry is to benefit from it. There is planned as close a system to that used in Massachusetts as possible. It is hoped the new system will be inaugurated for fall frosts.

Airplanes

Dan Rezin, director and vice-president of Wisconsin Cranberry Sales, has purchased a new airplane. He makes two flying directors, the other being Newell Jasperson. Charles L. Lewis of Mid-

West Cranberry Association and his sons have flying licenses, as well as others. A number of Wisconsin marshes now have landing strips beside the marshes. Growers are becoming pretty air-minded on the whole.

NEW JERSEY

Precipitation

The most noteworthy feature for May has been the amount of rain at Pemberton. The total through May 26 was 7.19 inches compared to the normal for May of 3.25 inches. According to these figures New Jersey's crop prospects for 1948 look dubious.

Temperature

In spite of all this rain and cloudy weather temperatures have

averaged 56.2, which is 5° above normal. Early drawn bogs are making rapid growth under the influence of this warm, wet weather.

Insects

The blunt-nosed cranberry leafhopper started to hatch on early drawn and dry bogs on May 23 around Pemberton. This is only a day or two later than in 1946, which is somewhat surprising considering that vegetation is a week or two behind 1946.

Blossom worms are hatching in number after mid-May and could be found up to ½ inch long on the 21st, though most were smaller.

Frosts

Severe frosts occurred on the mornings of May 9, 10 and 11, with temperatures dropping the

BUILDING A FEW ACRES?

THEN RENT A RAILROAD!

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New England Cranberry Sales Co.

Organized in 1907

A Co-operative with a conscientious Board of Directors working for the interests of its members; a trained personnel, loyal and alert to give all types of service.

Packers of

**Eatmor
Cranberries**

9 Station Street

Middleboro, Mass.

lowest on the morning of the 10th. The temperatures on cranberries ranged from 16° to 19°, and blueberry temperatures ranged from 18° to 25°. As far as we ascertained, cranberries in most instances were protected. The effects will probably be noted on marginal bogs, but the main New Jersey crop-producing acreages came through pretty well.

It was a gloomy morning on the 10th for the blueberry growers. You could have had more than one field for a song. As the week progressed the gloom was dispelled when it became apparent that damage was not great. Early varieties such as Cabot, June and Rancocas were cut some, but the later varieties that had not begun to bloom apparently came through unharmed.

Mummy Berry

Mummy berry has appeared in serious proportions in several blueberry fields, attacking the new growth and blossom clusters. Evidently the warm, moist weather has been extremely favorable for this fungus this season.

CONTROL...

*Blunt-Nosed Leafhopper
Gypsy Moth Caterpillar
Blackheaded Fireworm*

with

PYROCIDIE DUST

- Quick-Kill
- Non-Irritating
- Non-Poisonous
- Economical

**NON-POISONOUS
PYROCIDIE
DUST**

HIGH IN KILLING POWER
UNIFORM

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Increase yields *with* SKINNER controlled irrigation

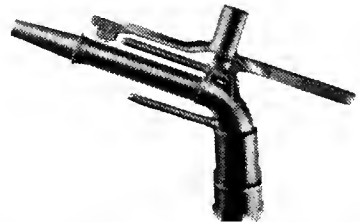
Waters Large Areas Uniformly

“SKINNER”, the pioneer and leader in irrigation for more than half a century, has designed these sprinklers for your specific use—a glance at the table below tells the story better than words. “SKINNER” equipment is quality equipment. Quality means dependability — durability — efficiency. Better write us for complete details today.

THE SKINNER IRRIGATION CO.
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Controlled Power Sprinkler



Long Range Utility Sprinkler

Catalog No. Controlled Power	Main Nozzle Inch	G. P. M.	Diam. of Coverage in Feet	
			Uniform	Total
CP-1	5/16	30.00	145	162
		32.30	150	168
		34.50	155	173
		36.80	160	178
		37.50	165	182

Catalog No.	Main Nozzle Size	Lbs. Pressure at Sprinkler	G. P. M.	Diam. of Coverage	Diam. of Uniform Coverage
LR-3 3" Inlet	1"	80	300	325	300
		90	320	330	305
		100	340	340	310

Other sizes available in both Sprinklers. Write.

OREGON

Bandon—President Ray W. Bates of the Coos Cranberry Co-op, returning from New York city where he met with other directors of the American Cranberry Exchange, gave an enthusiastic account of the organization with which the local cooperative has become affiliated.

Bates explained that the exchange is a marketing organization composed of several sales companies and independent canners, which allow the parent organization to handle fresh, canned and frozen berries, thereby enabling growers to harvest berries by hand picking, dry scooping, water scoop-

ing or machine picking methods.

Mr. and Mrs. Elis E. Einarsson have sold their grocery business in Bandon to Mr. and Mrs. George

Wolverton and are preparing to devote their entire time to the construction of a new cranberry bog in the Prosper district.

TAKE ADVANTAGE

of the **BETTER** things of life.

The efficient **USE OF ELECTRICITY** is one of these better things—efficient use in power for cranberry bog operations, and in the home.

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PACITIES 14 IN TO
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Business Is Good With Us

Frankly we need additional supplies of Cranberries to take care of our orders for the 1947 season.

We have good outlets for your entire crop for both fresh fruit and processing.

**WE HAVE SERVED THE GROWERS FOR
OVER A QUARTER CENTURY**

DON'T WORRY. CONTACT

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Cape Cod Cranberries

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"A NEW
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CRANBERRIES!"

WE ARE
ENCOURAGING
THROUGH
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ADVERTISING
THE USE OF
CRANBERRIES
THE YEAR
AROUND ...

Have you tried...

Conway's Whole Berry
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Sauce
on **VANILLA**
ICE CREAM



A NEW taste thrill!

A delightful treat because of the distinctive tart-sweet flavor of cranberries.

Also a delicious sauce to use with puddings, custards, etc. . . . the sauce with that old-fashioned goodness.

Surprise Your Family!



READY TO SERVE... BUY IT TODAY!

Reproduction of advertisement which will appear in newspapers at intervals during the summer months.

MIN-OT FOOD PACKERS INC.

BRIDGETON

NEW JERSEY

Represented by

BEATON'S DISTRIBUTING AGENCY

WAREHAM, MASS.

Forty Years Old This Month!

We're forty years old this month, but don't congratulate us. Let us congratulate you! If you were not careful growers and fine cooperators we would not have been going strong at the end of ten years, much less forty.

Our Exchange was born June 19, 1907, in a room in the Prince George Hotel, New York City. It was like creating a new nation out of separate states. Today of course it seems obvious that a basic nationwide organization is necessary. But at that time it took foresight and good straight thinking to see the need for the Exchange.

Now a new generation of growers is taking over. It, too, is thoughtful and straight-thinking. Under its leadership the Exchange and the whole industry will surely continue to progress.

THE AMERICAN CRANBERRY EXCHANGE, INC.

U. S. DEPT OF AGRICULTURE

LICENSE NO. 1

The Cranberry Growers Cooperative

SERVING A \$12,000,000 A YEAR INDUSTRY

Cranberries



CAPE COD
NEW JERSEY
WISCONSIN
OREGON
WASHINGTON



HELICOPTERS in Massachusetts — they land vertically on the bogsides. CRANBERRIES PI

This Company . . .

founded by ten pioneers in the growing of Cranberries, is fully and efficiently serving many growers whose names were among the first in our records in 1895—52 years ago.

Wouldn't you like to associate yourself with a Co-operative with such an enviable record—the oldest Co-operative in the Cranberry industry—and the oldest agricultural Co-operative in the state of New Jersey?

GROWERS CRANBERRY COMPANY, INC.

PEMBERTON, NEW JERSEY

Congratulations . . .

To Henry F. Bain for the fine work he is doing in developing new varieties of cranberries.

This work is sponsored in Wisconsin by the Wisconsin Cranberry Sales Company.

Wisconsin Cranberry Sales Company

WISCONSIN RAPIDS

- . . -

WISCONSIN

248 Growers



became members of the National Cranberry Association during the fiscal year ending May 31, 1947.

We asked many of them what prompted them to join this cooperative. Their answers can be summed up in three sentences:

1. Because they are looking for security, and they feel that the National is building for the future as well as the present.
2. Because they believe in grower control of cranberry marketing which membership in NCA assures.
3. Because they want fair prices to consumers, and fair returns to growers, and they feel that NCA will give them both.

Greater teamwork among more growers will make these worth-while objectives still more certain.

NATIONAL CRANBERRY ASSOCIATION

The Growers' Cooperative

Branches at:

Hanson, Massachusetts
Onset, Massachusetts
Plymouth, Massachusetts

North Harwich, Massachusetts
Dennis, Massachusetts
Bordentown, New Jersey
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Call
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Hardware—Locksmiths
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USE DYNAMITE

The modern way to remove stumps, excavate rocks, DIG CORES FOR DIKES, and other blasting work in cranberry growing. Speeds up work—reduces costs. CONSULT WITH US ON ANY WORK YOU ARE PLANNING. Trained by Hercules Powder Co.

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Extensive Experience in ELECTRICAL WORK

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Serving Western Cranberry Growers

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High Quality Products

Rotenone
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DDT Sprays & Dusts
Nicotine
Copper Sprays
Oil Sprays
Lime Sulphur Solution



Attention Cranberry Growers !!

We have Drain Pipe

Large Sized Terra Cotta
Makes a Permanent Installation

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WISCONSIN AIR COOLED MOTORS

6 and 8 H. P.
in stock

Cranberry Growers:
WE ARE IN POSITION TO
SUPPLY YOU WITH YOUR
1947 CRANBERRY CON-
TAINERS

also
Good Quality
Wheeling Plank
Quotations on Request

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WOODEN BOX MFR.

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Lumber Dealers

"Everything Under Cover"

East Wareham, Mass.

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Building Material for Bog,
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Paints - Hardware

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On Cape Cod

"EVERYTHING TO
BUILD WITH"

Opposite R. R. Station

Sagamore, Mass.

778
Tels. Sagamore 779

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Established 1848

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BOSTON, MASS.

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Car Lot Receivers

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GOOD
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Cranberry Growers
Order Harvest and
Shipping Boxes

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New Bedford, Mass.

Est. 1865

Wood County National Bank

Wisconsin Rapids,
Wisconsin

MEMBER FEDERAL DEPOSIT
INSURANCE CORPORATION

The National Bank of Wareham

Conveniently located for Cranberry men

—

Funds always available for sound loans

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Complete Banking Service

—

Member Federal Deposit Insurance Corp.

NCA Has Large and Enthusiastic Annual Meeting, June 24th

Speakers Report Year of Progress, But Need Larger Percentage of Total Crop for "Grower Control"—Increase Advertising Appropriation—To Increase Capital Stock—Figuring Now on 700,000 '47 Production

Honorary Degree Conferred Upon M. L. Urann

The following is the citation to Marcus L. Urann at conferring of honorary degree by the University of Maine, Orono, Maine, June 15, 1947. It was read at the conclusion of the NCA meeting by John C. Makepeace.

"Born in Sullivan, Maine; a graduate of this university in the class of 1897; a founder of Phi Kappa Phi honorary society; lawyer, able business executive whose vision and courage have contributed immeasurably to the growth and development of the cranberry industry;

President of the National Cranberry Association; leader in state and national business associations; Director of the Farm Credit Administration for the First District.

"In 1942, you received the Medal of the Massachusetts Society for the Promotion of Agriculture. Today, in recognition of your contributions to the advancement of New England agriculture and industry, the Trustees of your alma mater are happy and proud to confer upon you the degree of Doctor of Laws."

A large attendance of National Cranberry Association at annual meeting, Hanson, Massachusetts, June 24th, heard its efforts and results of the past year appraised and found good. But throughout the meeting stress was laid that for the good of the industry a larger proportion of the total crop than the 43 per cent obtained by the National last year was necessary.

President M. L. Urann stated that 248 new members had been obtained and the membership is now 950 with a gain having taken place every month for more than five years. "These new members are growers who have seen the light and wisdom of grower control", Mr. Urann said. "Last year with 43 and 25-100th of the crop it was possible for us to 'steer' the market so that we earned \$32.00 a barrel, a pretty satisfactory year." Directors from every one of the five cranberry districts were called upon for remarks and reported much progress during the past 12 months.

In the financial statement of the corporation read by Auditor Miller it was shown that during the last fiscal year sale of products amounted to \$16,550,645. The total amount of berries handled was given as 366,054. Advances to members participating in this pool have already amounted to 30.00, in addition to dividends of 4 per cent on both preferred and common stock.

700,000 Barrel Crop?

Referring to the 1947 crop, Mr. Urann said it was hoped the National would control 50 per cent, but that it needed 60, 70, or more per cent and that 400,000 barrels were needed this fall. He proceeded to give the probably first announced "estimate" of what the

coming production might be as indicated as of that date. The total might be about 700,000 barrels "as indicated by reports at this time", he said. The West Coast had a good crop and was expected to produce about 60,000 barrels.

He continued the National had a demand for 200,000 barrels fresh and 2,000,000 cases of canned sauce.

"NCA is ready for next year's crop", Mr. Urann said. We can process 6,000 barrels in an eight hour day in all our plants. There must be one co-op to handle the crop, both fresh and canned. We have the record of 17 years of progress. We have gone onward and upward without failure and we feel confident we are ready for whatever crop may be produced this year." This came after he had said he did not believe the two major co-ops could ever get together as long as the other co-ops have their present leadership. Mr. Urann pointed out that a goal was eventually to have all growers owning stock on a patronage basis, "as fast as you are able." He urged National members to talk with their neighbors who were not members of NCA, telling of their satisfaction with NCA results.

M. S. Anderson, western sales manager, said Ocean Spray sauce was turning over, while the products of "other brands" are not.

H. Gordon Mann, sales manager, gave a discussion on marketing in which he said other brands can't be sold, as consumers demand Ocean Spray and this fact holds up the sales of Ocean Spray while retailers attempt to move other brands first. He said this was despite the fact Ocean Spray was at a premium price. He said Ocean Spray was wholesaled at \$2.45 a case while some brands were offered as low as \$1.50 a case.

He pointed to the fact which should be given concern by the growers, which is there is a large carry-over of canned sauces in the country today. He said disposal of the growers' berries was not a "selling" but a "marketing" problem, and that in the distribution of the cranberry crop Ocean Spray has "the confidence of the trade and the demand of Mrs. Consumer."

Heavy 1947 Advertising

Miss Ellen Stillman, advertising director, said NCA proposed to advertise cranberries in the largest budget ever set up for this purpose, \$200,000. In canned sauce this would place stress upon "Ready to Serve" slogan, the jelly cutters, and featuring chicken with cranberry sauce as "six times as many chickens are sold annually as turkeys."

(Continued on Page 25)

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of July, 1947—Vol. 12, No. 3

Published monthly at The Courier Print Shop, Main St., Wareham, Massachusetts. Subscription, \$3.00 per year. Entered as second-class matter January 26, 1943, at the post-office at Wareham, Massachusetts, under the Act of March 3, 1879.

FRESH FROM THE FIELDS

By C. J. H.

MASSACHUSETTS

Prospects "Looking Up"

With the month of June behind, prospects in Massachusetts, in the opinion of some, were definitely "looking up." Dr. Franklin was saying the crop might be an "average" one. Average is now around 500,000 bbls. Many growers said their bogs looked better than last year, and these included some large growers, among whom were those who did not have especially large production last year.

Rainfall was substantial during the month, 3.52 inches as recorded at the State Experiment Station. Frost losses were set down by Dr. Franklin as three per cent, relatively light. Insect damage had been light. Gypsy moth damage, which some years is substantial in Barnstable County, was at a bare minimum this year.

Dr. Cross, who went against popular opinion in March by saying he expected a crop of "at least average", this due chiefly to the extremely favorable sunshine factor all last year, was more than ever encouraged in his anticipation of a very satisfactory production this fall. He points to not only the excessive sunshine factor, but to other favorable climatic conditions—the beautiful weather last fall, the mild winter, the light frost losses, ample rain in June, and (so far) light insect injury. It wouldn't surprise Dr. Cross any if Massachusetts has a big crop this year, in spite of the abnormal lack of terminal bud reported so generally last fall. The amount of bloom which develops in early July will tell an interesting story this year.

At end of June bogs were perhaps a week later than normal, but they can catch up fast with some days of hot sun; in fact, June 30th was the hottest day of the month, 85, and July 1st 87, State Bog readings.

Frosts

There was a general frost on the morning of June 21, but probably little, if any damage. No warning was sent out, as bogs were in the borderline where flooding might have caused an amount of damage equal to the moderate cold expected. Temperatures as low as one 25, a couple at 26, and several at 30, 31 and 32 were reported.

A frost which caused some damage occurred on the morning of June 6th. This cold was widespread.

Good Insect Control

Blackheaded fireworm was more troublesome this year than it has been in several years. Well-timed and adequate control of insects by growers this year undoubtedly kept insect losses down. In this control the helicopters played a part, as did control by straight-wing planes. The alertness and readiness of growers to go after insects will be a factor in production this year, whatever it may turn out to be.

Hailstorm

A very extensive hailstorm, one of the most general in several years, extending from Barnstable and Sandwich on the Cape well into northern Plymouth County, occurred on the afternoon of June 19th. There was a good deal of damage to some bogs and an estimate of 10,000 barrels or more loss has been made. Bogs were mostly in the hook stage at that time, and it was felt if berries had been

formed losses would have been greater. Hail was moderately large in size.

NEW JERSEY

Rainfall Favorable

Rainfall through June 26 at Pemberton amounted to 3.10 inches. This is 1.53 inches below the normal June total and should be favorable for both the crop of this year and 1948.

Temperatures have been on the cool side most of June, with the average daily mean temperature 66.8 degrees, or 5.2 degrees below normal through the 26th.

A number of bogs have been planted by the method of broadcasting vines and cutting them in with a regular farm disc or specially built discs for planting. Among others, a bog planted by Rogers Brick with a farm disc and a larger planting by Jos. J. White, Inc., with their specially built planter are showing up very well right now.

Blueberries

Wet, cloudy weather in May and cool weather in June have retarded blueberry ripening at least a week and picking did not start generally until June 28. Size of the early fruit has benefited from the abundant moisture and anything like an adequate amount from now on should affect late varieties similarly.

Blueberry Stunt Disease identification meetings were held in Burlington, Ocean and Atlantic Counties during the week of June 16-21 to familiarize growers with symptoms of this disease in order that they may take prompt steps in removing infected bushes from their fields.

(Continued on Page 23)

Initial' Copter Dusting On Bogs of Massachusetts Gets Keen Approval

Despite Accidents, Other Troubles, Job Done by Rotor Ships Called Highly Satisfactory—Intensive Straight-Wing Program Also in Progress.

"Hottest news" in the Massachusetts cranberry industry during the past month has undoubtedly been the helicopters, their successes and mishaps, plus a much more intensive straight-wind plane insecticide control program than was used last year. The idea of dusting, spraying, fertilizing, and even eventually possibly sanding from helicopters was suggested first by M. L. Urann during the war. This was called "visionary", but now after preliminary experience, the application of dusts by 'copter is hailed as being highly successful and offering great possibilities to the industry in increased crops.

There have been plenty of difficulties, but growers, the researchers at the Massachusetts State Bog, including Dr. H. J. Franklin, are high in praise for results obtained in kill of dusts applied by 'copter, and the expectation that elimination of mechanical injury to the vines in insect control may account for a substantial increase in production potential.

The 'copters at the service of NCA members through National Cranberry Service Corp., with headquarters at Wareham as previously reported, are the first to be specially built for crop dusting. One ship bears Civil Aeronautics Board License "No. 1" on its side along with "Ocean Sprayer No. 1", while the other has CAB license 3 and is designated "Ocean Sprayer No. 2". In 1946 the Bell Aircraft Corporation of Niagara, N. Y., conducted numerous experiments as to the utility of 'copters in agricultural work, using orchards and hop fields in the State of Washington. As the result of these experiments the machines were designed, one for NCA members being the first off the production line.

A feature of 'copters as against the advantages of small, straight-wing planes is stressed as the ability of the craft to hover, go backward as well as forward, and also

sidewise, making it capable to cover "pockets" and bays of bogs. Another expected asset is that the rotor blade above the machine creates a powerful down-draft which forces the dust down to the floor of the bog so that it covers even the underside of the leaves as it bounces back. As "a 'copter can land on a dime", replenishment of hoppers at the bogside is easy.

Although the 'copters had done some cranberry dusting previously the first public demonstration of the "NCA machine" so called, came June 5, at the 100-acre Pembroke bog of United Cape Cod Cranberry Company, a demonstration to which the press had been invited, and which was followed by refreshments.

To the sizeable crowd which gathered and saw the 'copter circle the property a couple of times and then drop to the bogshore close beside them, the demonstration proved highly instructive. Many, including your editor, had never seen a 'copter at close quarters before. Then Pilot Rowland C. Roelofs, who spent the war years with Army Air Forces, both as civilian flying instructor and pilot and as a flight officer regularly assigned on scheduled runs between Cairo, Egypt, and Abadan, Iran, put the machine through its paces. Fred W. Soule, president of the NCA subsidiary, who holds the record of having piloted rotary-wing aircraft longer than anyone else in the United States, directed the show.

This dusting on June 5th was for control of gypsy moth caterpillars. The 'copter laid down a five percent mixture of DDT, which was in accordance with the latest recommendations of Massachusetts Experiment Station.

First look growers had of the 'copter for use of NECSCO was a day later, June 6, when a brand new machine whirred over Middleboro to drop down in Depot Grove,

a small field across the street from the office, where directors had been holding a meeting. The machine had just come from the Bell factory at Niagara, having been flown in by Col. Frank McMahon, stopping at Westover Field, near Springfield and then at Norwood, headquarters of Wiggins Airways Inc., from which the Sales Company is leasing the use of the machine.

Directors looked over the 'copter, posed for photographs, and then Col. McMahon offered rides to a few who cared to go aloft. President George H. Cowen showed no hesitation at accepting the opportunity and he was followed by General Manager Arthur D. Benson, Stanley Benson, your cranberry editor and Edgar L. Parks, Wareham Courier.

Following this formal acceptance of the machine as in service by the directors, it was flown to the former U. S. Navy airport in Carver, which has been leased by "Ted" Griffith of the Sales Company and from which it was placed in service to the growers.

Accidents

On June 11 there was the first of three accidents to befall the 'copters. At the North Carver bog of the United Cape Cod, Alton Belknap, 45, of Bryantville, a member of the ground crew loading dust, walked into the rear rotor of a National machine and suffered lacerations to right temple, right shoulder, and about the body. He was taken to St. Luke's hospital, Middleboro, where it was found the injuries were not too serious.

On Friday, June 13th, the New England Sales 'copter, after having applied dust to about 150 acres since its arrival, cracked up on the bog of Kenneth Shaw at Rochester. This accident occurred when the pilot, Col. Frank McMahon, struck a telephone wire strung across the end of the bog. The rear rotor fouled this wire, was broken off, and the machine made "unsteerable". He was about 15 feet in the air and attempted a landing, but being unable to control the direction, he landed with part of the ship in a ditch. This snapped off the main rotor and caused other damage, all estimated

at \$5,000. McMahon was not injured. The ship was immediately sent to the factory at Niagara for repairs, which were not completed and the machine returned until the end of June. In the meantime ground dusters and conventional-wing planes were used to service bogs of NECSCO.

Sunday afternoon, June 22, a 'copter of the National crashed and burned at the bog of Robert Handy, Cataumet, Pilot Roland C. Roelofs, crawling clear after the plane struck on its side, falling from a height of about 15 feet. He was uninjured. This accident is reported as having occurred through failure of the rear rotor as he was engaged in making a bank. The machine, uncontrolled, made a 180 degree spin and then crashed. By-standers attempted to put out the fire with sand and shovels, and apparatus from Buzzards Bay Fire Departments, including a "foam" truck, responded. Machine was called a total loss and damage to the bog was estimated at \$1,000. Insurance covered both losses.

A new machine was immediately ordered and obtained by the National Service Corporation, arriving in the Massachusetts cranberry area June 27th and going into operation the following day. NCA operations at the start of the season began from Burrage, near the main plant at Hanson and as the service buildings and fields were completed beside the Onset cannery headquarters operations were moved there.

Fertilizer Air-Spread

When the Cataumet crash occurred, a group including Mr. Urann, Drs. Franklin, Chandler and others was waiting at the State bog where the 'copter was scheduled to give a trial application of fertilizer from the air. It had been planned to fertilize about an acre. This would presumably have been the first attempt to fertilize a bog from the air.

As it developed, fertilizer was spread from the air that same afternoon, hut from a straight-wing plane of the New England Croo Dusting Company at the Mary's Pond bog of Deas Brothers. About three acres were covered, using straight commercial fertilizer, with

a considerable degree of success, it was said, although the fertilizer was found to be a little too coarse for the hoppers.

Fermate—DDT Experiment

The early applications were made with DDT, five per cent. Kill of gypsies on some bogs was reported as 100 per cent. All seemed to consider the job done as extremely satisfactory. One experiment with DDT mixed with Fermate was made on the small bog of Mrs. Chester E. Cross at East Sandwich, the first air application of Fermate by 'copter in Massachusetts.

NCA Report

A report to members of NCA at the annual meeting by Keith Work in general charge of 'copter operations, was that "like anything new, we have had troubles, but we have established the fact that we can dust successfully by helicopter." He had previously frankly stated that this year's work would of necessity have to be experimental in nature. To June 20, in 22 days of flying, Work said 1,459 acres of bog had been dusted and also 189 acres of woodland. The woodland control had included 125 acres of 12½ per cent of DDT spray. The machines are equipped for either spray or dust. "The growers tell us 'copter dusting is 100 per cent successful", Mr. Work told the meeting. "We have established our first objective, which was: 'Is dusting by 'copter sound'?"

We are not entirely successful with our service as yet. When the bugs are ironed ou we feel we are going to be 100 per cent satisfied."

Fatalities

Aside from these 'copter accidents there was a fatality in fixed-wing dusting. Pilot Joseph P. Cullen, 29, of North Easton, Massachusetts, operating a Cub owned by the Brockton Airport, was killed at the Siasconsett bog of the Nantucket Cranberry Company when the plane fell from a height of about 50 feet. Report was that the pilot, after completing a dusting run over the bog, was making a turn and climb, when the ship was stalled and then crashed.

As a matter of fact, June in Massachusetts brought more accidents to the cranberry industry than probably ever before in a few weeks. Besides the death of Pilot Cullen and the three 'copter accidents, two men were suffocated in a sand cave-in at the Waterville Cranberry Company bog near Middleboro. On June 20th Merton C. Howes, 28, a well-known West Wareham GI, was killed by a power shovel in a bog sandpit at Blackmore Pond, South Wareham. He was believed to have been greasing the machine operated by his brother, Irving, when the machine backed up and the wheels passed over him.

How It Feels To Ride In A 'Copter

By
CLARENCE J. HALL

How does it feel to ride in a helicopter? Your cranberry editor had the chance of enjoying this experience twice—first at the Pembroke demonstration, through courtesy of NCA and again the next day through courtesy of New England Sales.

Well, it doesn't feel like sinking back in the comparative luxury of a seat in such a "flying railroad coach" as a 60-passenger Skymaster on the Boston-New York run, nor going over to the airport and being buzzed around in a Cub, and it doesn't too closely resemble tak-

ing off in an amphibian from a field and then to a "splashy landing" in Buzzards Bay.

One very distinct difference to the timid passenger is that these machines are stripped for work, and pilot and passenger sit out on a sort of shelf; there is no side, nothing overhead, and in front only the fragile-seeming plexiglass windshield. They make sure you are strapped in tight, take off your hat and maybe your glasses—it's apt to be breezy up there on that flying shelf.

The pilot glues his eyes to a flock of meters and gauges in the center of the windshield, while the whirling rotor overhead picks up speed. Before you are aware, you are lifting straight up, as in an elevator, but without the rush and sometimes the funny feeling at the pit of your stomach. There is none of the tingling exhilaration of the speedy take-off of a straight-wing plane into the air from the runway, but nevertheless you find yourself sitting up there and you are gliding forward. Your pilot is as busy with both hands and his feet on the controls as the proverbial one-armed paper-hanger with the hives.

The open cockpit does, however, give a sporty sensation, something akin to the fun of riding in a convertible auto with the top down, as against a conservative sedan. When the motor was roaring and the rotor blade whirling with the ship on the ground, and the down-draft flattening the blades of grass like a hurricane, you anticipated a good deal more noise and breeze than you actually experience when you are aloft. It's not very noisy flying. The view, so unobstructed, is glorious.

It is a queer feeling to look down between your feet resting in front of the plexi-glass and see a cranberry bog directly beneath or the Middleboro railroad station and the houses of the town. Your pilot is much more concerned with watching his gauges intently and doesn't seem to show as much respect for the nearness of trees, telephone poles or the tops of buildings as the pilot of a conventional plane. But then you recall the wizardry you have read concerning the maneuverability of a helicopter and you decide you'll have complete faith in your pilot (as a matter of fact, what else can you do?) and you'll simply enjoy the ride.

In coming in for the landing you feel sure the pilot is not going to make the designated spot, as you do not go into the familiar glide for the field, but come in over it and just float down to earth so gently the landing wouldn't break an egg.

At Pembroke Chief Pilot Soule, standing like the attendant at a

parking lot, frequently directed the landings. He used signals in about the same way. "Slow", his hands said. "Just a bit to the left—now a little to the right. Back up. Thatta boy. Hold it." Pilot McMahon came in guided by a small red marker.

Oh, yes, it should be mentioned that while up there you asked the

pilot to stop while you snapped the shutter of your camera—you missed the shot, so you asked him to back up while you took it over again. He most obligingly did. It may not be hair-raisingly thrilling, but it's a remarkably interesting experience, riding in a cranberry 'copter.

STRAIGHT-WING PLANE DUSTING

Just how much acreage has been and will be dusted by straight-wing plane in Massachusetts this season, in addition to the dusting and spraying by the helicopters, cannot be determined as this goes to press. The acreage, however, will be really impressive and by far the largest ever.

Makepeace, who pioneered in air insect control by fixed-wing plane last year, will probably have done the largest individual amount and by the first of July had applied 100,000 pounds by plane. J. J. Beaton Company had done about 150 acres by the end of June. Decas Brothers had done their Mary's Pond bog, Mattapoisett, and some in Rochester. Cape Cod Company was another doing a large amount of dusting.

A base of operations has been the Cape Islands Airport, route 28, Wareham, and most of the dusting has been by Brockton Airport as operators and by Crop Dusters, Inc. The dusting has been mainly confined to growers with relatively large acreages or on bogs which were sufficiently "open" and regular in shape for effective fixed-wing operation.

Airstrips Building

A great deal of satisfaction has been expressed with the results obtained, and it is very likely that airstrips will become a part of a number of Massachusetts bogs in the near future. In fact, Decas Brothers are building an air strip at Mary's Pond bog and plan to put in a dike 50 feet wide, rather than 25, at their Mattapoisett property. This dike, 500 feet long, would be a suitable airstrip under most conditions, it is said. It is considered economical to operate Cubs for dusting on bogs which are not more than five miles from

a loading base. Makepeace has very nearly achieved that now, as he can land at Wankinquoah, Swan Holt, Wareham Airport and at Hyannis, giving good operation over many of the bogs. Planes have landed on the dike at the South Carver bog of Ellis D. Atwood. This development of landing strips at Massachusetts bogs promises to be a new wrinkle in Massachusetts cranberry growing.

The spreading of fertilizer from planes is a feature growers are hopeful of, and the possibilities of spray from the air is under experimentation, especially by the Makepeace Company, and may be proven to have advantages. If extensive air spray for cranberry bogs is worked out, it is felt this will probably be by bi-planes or ships larger than the Cub type.

Plane Duster Wrecked July 7th

Since the accidents reported previously, a plane of Crop Dusters, Inc., operated out of Cape & Islands Airport crashed at Howard Hiller's bog, Marion-Rochester line, July 7. This ship was piloted by Russell (Dusty) Colonell, a dusting pilot of extensive experience in many states. The plane was damaged too extensively for repairs, but Colonell received only slight injuries to his right forehead and a cut left leg. He was treated at Tobey hospital, Wareham.

This accident occurred after he had made four or five runs over the bog and was attempting a zoom over trees on the shore when the wing of the Cub-type ship he was operating struck the top of a tree about 30 feet high. The plane was spun around and nose-dived into the bog side. Another ship was available, and the program was resumed.

Bud, Flower, and Fruit Production By Cranberry Vines In Relation To Depth of Winter Flooding

H. F. BERGMAN*

Cranberry growers are all familiar with the fact that the crop on a cranberry bog is apt not to be uniform, but is better on some parts of the bog than it is on others. Usually, the better crop is found along the shore where the bog is more shallowly flooded than in the central parts where the water is deeper.

During the summer of 1943, samples of uprights were taken from various bogs and counts were made of the number of buds formed, of buds killed, of the number of blossoms and of mature berries. This was done to follow up the work of growers last winter on the determination of the oxygen content of winter flooding water and to show the relation between winter flooding conditions and the size of the crop on specific bogs in the following season. The following table summarizes the results of observations and shows what happens under certain conditions to make the crop less than it is under others.

have the next lowest percentages of buds killed. These are followed by bogs No. 3 and No. 6. The percentage of buds killed is much greater on bog No. 5 and in one location on No. 4 (4-a), is still greater in the other location on bog No. 4, and is greatest in two locations on bog No. 2 (2-b and 2-c) where all but 13 and 5 per cent, respectively, of the buds were killed.

Besides dead buds, some of the bogs that were shallowly flooded show rather high percentages of flowers that died immediately after flowering. It is to be noted that in such cases the percentage of "buds killed" is low. These differences in the stage of development at which buds or flowers are killed represent a difference in the degree of injury. If the injury is very severe the buds are killed at an early stage. If the injury is slightly less severe the buds may continue their development up to flowering but die immediately thereafter. Such in-

jury after blossoming. Loss in fruit production from injury of this degree is always less than that from flowers that die immediately after blossoming but in some instances may cause a loss of considerable proportion as on bogs 1 and 2 (see columns 1-a and 2).

The number of mature berries formed (see last line of table), however, is the final and most important consideration in determining the extent of injury or the absence of injury. Figures given in the table show that the percentage of berries produced from the total number of buds formed was lowest on the most deeply flooded bogs or parts thereof (columns 2-b and 2-c). The depth of water in these two locations on bog No. 2 was 2½ feet, and on No. 4, about 2 feet. In two locations, one on bog No. 1 (1st column) and the other on bog 2 (1st column of No. 2) where the percentage of berries produced from the total number of buds formed was among the highest found, the vines were very shallowly flooded and probably were frozen into the ice as long as ice was present. In other locations on these bogs (1-a and 2-a) where the winter flood was about a foot deep the percentage of berries produced out of the total number of buds formed was considerably less. Bogs No. 3 and No. 6 were flooded to a depth of 15-16 inches but are among the best of the bogs listed in the percentage of berries produced from the total of buds formed.

It is evident from these facts that depth of flooding alone does not determine the yield obtained from a bog. This is determined to a very great extent by the dissolved oxygen content of the flooding water and by any condition which operates to reduce the dissolved oxygen content of the water is an unfavorable factor for fruit production. On winter-flooded bogs under ice, the dissolved oxygen content of the water can be maintained at a satisfactorily high level only when the vines re-

Table 1. Bud, flower, and fruit production by cranberry vines in relation to depth of winter flooding.

Bog Number	1	1-a	2	2-a	2-b	2-c	3	4	4-a	5	6
Depth of water, inches	6	12	6	10-12	30	30	15-16	24	24	10-12	15-16
% uprights flowering	76.5	-	62.0	66.6	43.7	53.2	56.7	50.0	68.4	37.0	70.0
Total number of flower buds	493	402	173	207	256	464	284	194	285	105	107
% buds killed	13.6	4.0	4.0	12.6	95.3	87.3	25.7	78.0	61.0	57.1	23.3
% buds flowering	86.4	96.0	96.0	87.4	4.7	12.7	74.3	22.0	39.0	42.9	76.7
% buds flowering, but not "setting"	42.2	51.7	40.0	58.0	1.7	11.9	38.7	12.9	18.6	8.6	37.4
% buds producing stunted berries	9.1	15.0	23.7	6.2	-	-	2.8	4.6	6.7	2.0	2.0
% buds producing mature berries	31.0	22.9	31.8	23.2	0	0.2	32.0	4.1	13.3	29.5	36.4

Two locations, one on bog No. 1-a and the other on bog No. 2, are outstanding for the low percentage of buds killed. A second location on bog No. 1 (column 1) and another location on bog No. 2 (2-a)

jury, of course, interferes with fruit production just as much as does injury where the buds are killed at an early stage.

Sometimes also, berries apparently set but after making a very limited growth fail to develop further. These undeveloped or stunted berries are the result of injury a little less severe than that causing the death of flowers immediate-

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ceive sufficient light from day to day. The amount of light received depends primarily on weather conditions which determine the degree and duration of cloudiness or its absence, the thickness and kind of ice, and the presence or absence of snow. Winter flooding conditions, also, such as the depth of flooding, and the kind of flooding water may operate to reduce the dissolved oxygen content of the water by reducing the amount of light received by the vines. A snow cover is particularly effective in cutting off light and thus causes a rapid reduction in oxygen content and may result in the complete disappearance of dissolved oxygen within a few days. Except when the snowfall is light, snow on the ice usually becomes the controlling factor in determining the dissolved oxygen content of the water on winter-flooded bogs covered with ice.

Most of the bogs were flooded by the middle of December and remained under water until the first of April and one or two of the bogs even later. Bogs that were flooded by the middle of December last year were frozen over at the time of the heavy snowfall of December 21 so that they were not only ice-covered but for about a week had an additional cover of snow which at first was a foot deep. It is very possible that much of the injury resulting in the death of buds and of flowers immediately after blossoming occurred during this period. However, it is known that the dissolved oxygen content was low enough at other times to cause severe injury. As evidence of this, bog No. 4 was not flooded until Dec. 26 when much of the snow that fell on the 21st had melted, yet a very large proportion of the buds were killed and in one location (1st column of bog No. 4) there was severe leaf drop. Such injuries, on winter-flooded bogs, so far as is known, occur only as a result of oxygen deficiency.

Evidence indicates that there was severe oxygen deficiency injury on bog No. 5. It may be noted that the percentage of flowering uprights was the lowest found on any of the bogs and is comparable to the deep-water location, 2-b, of

bog No. 2, where there were no berries. The percentage of buds killed out of the total number formed is high also; on 8 per cent of the total number of uprights, all the flower buds were killed. Moreover, the terminal buds on 16 per cent of the total number of uprights were killed, thus reducing the potential number of flowering uprights. In addition, 32 per cent of the total number of uprights that might have produced flowers were recorded as sterile. This may mean that some of these at least were potentially flowering uprights on which the buds were killed at a very early stage when too small to be recorded as buds killed.

A dissolved oxygen content of 2 cc. per liter was found on this bog on January 29. It is not known how long this may have lasted but such a low oxygen content could have caused severe injury even if of not more than one or two days' duration. As there was no snow on the ice at that time, it is not only possible but very probable that the dissolved oxygen content of the water reached an equally low level or perhaps lower and that the deficiency was of longer duration following the snow storm of December 21st. No determinations of the

dissolved oxygen content of the water on any of the bogs were made at that time since it was not possible to start the work until January. However, figures given in Table I show that oxygen deficiency injury occurred on all the flooded bogs examined and that on some bogs the injury was severe.

Since the dissolved oxygen content of the water is an intergration or summation of the effect of all factors either favorable or adverse an increase in production may be expected only by maintaining flooding conditions under which the dissolved oxygen content is more likely to remain above a certain minimum level which is now placed at 4 cc. per liter. Observations in the past indicate that if the dissolved oxygen content does not fall below this level no severe injury is to be expected. Very shallow flooding so that the vines are frozen into the ice appears to be a very satisfactory solution. Where this is not possible, oxygen deficiency injury is very apt to occur after a snowfall, except when very light, when vines are in water under the ice. In such cases the only remedial measure appears to be to draw the water out from under the ice.

COMMUNICATION

AN OPEN LETTER TO MARCUS L. URANN

Wisconsin Rapids,
Wisconsin
May 29, 1947.

Dear Mr. Urann:

I have recently read the text of your radio address of May 3, 1947 as it was published in the May issue of the CRANBERRY CO-OPERATIVE NEWS. In this speech you were apparently searching for the reasons for cooperatively minded cranberry growers selling to commercial processors. You suggested several possibilities and answered them, ending your discussion of the problem by stating: "Frankly, I don't know the answer to that 'Why'." You further suggested: "The answer to that question must be offered by the grow-

ers who supported independent packers."

Now, as an individual, I should like to answer your question for you. To make the record absolutely clear, I wish to aver that I am a cooperatively minded grower. I have been a member of the American Cranberry Exchange during my entire cranberry experience, and I have remained loyal to my cooperative. I have stood by it during attacks from within and without. I have consistently acquiesced to the will of the majority on issues, even though I did not agree, with no thought of severing my allegiance because I could not have my way. I should be very slow to forsake the cooper-

ative that for four decades has been the bulwark of our industry for any silken Elysium. Yes, I believe that I am truly "cooperatively minded." Yet, all the processing which I was in a position to direct during the 1946 season went to so-called commercial processors through the American Cranberry Exchange, which is a true co-operative. Now, I shall tell you "why"

First, I shall take up a point mentioned by you in your broadcast. Speaking of commercial operations you state: "The canner is in business to make money too, and he gives the grower only a part of the canning profits.....and it is the canner who determines what part the grower gets. Only in a cooperative cannery does the grower get all the earnings." Now, Mr. Urann, you did not go fully into this point. You did not explain that while growers get all the profits, they do not get all of them as growers or contributors in NCA. Any one grower may not get "all the earnings" from his cranberries. Some of the profits are distributed as dividends on stock. This is perfectly proper in a corporate structure, which NCA is. It follows, however, that if the stock is not held exactly in proportion to patronage, which in NCA it is not and probably never can be, the grower who has a disproportionately large stock holding gets all the profits on his cranberries plus part of the profits on OTHER patrons' cranberries. An operation of this nature is not consistent with the conception of true cooperative practice.

Secondly, a reason for selling to commercial canners is that we are not thereby legally nor morally bound to make a sizeable investment in an industrial enterprise that is foreign to us. It is not that we are shirking a responsibility to the industry. We simply do not believe that it is necessary for us to carry our product into the consumer's mouth. If we were to carry that philosophy to its logical conclusion, we should have to own railroads, truck lines, and the retail outlets, as well as the processing plants.

Thirdly, in our contracts with commercial processors we know pretty well where we stand. We have a substantial guarantee, which we get in cash at the time of delivery. We have a cooperative contract in most instances which very clearly defines what we are to get over and above that in CASH. When we are paid, our product is sold; we have not borrowed money to pay ourselves. We get no part of our returns in "preferred sock" which may or may not be marketable, nor as the final settlement approaches are we asked to authorize a withholding of part of our returns for stock purchase to finance plant expansions or what-not.

Fourthly, many of us believe that in the long run we shall average better returns from cooperative contracts with large packers who process a wide variety of products than in any other way. The large pack results in a smaller overhead being allocated to cranberries, and the cranberries under a well-known commercial label enjoy the benefits of the advertising and popularity of many other products bearing that label. Furthermore, some of these large processors have world-wide distribution already established, which facilities should accrue to the benefit of the cranberry industry.

Fifthly, we believe that it is a healthy situation for cranberry growers to have as many buyers as possible bidding for our product.

Sixthly, some of us do not care to become enmeshed in a "cooperative" organized and operating on a stockholding, dividend-paying basis. In the light of the widespread agitation to make cooperatives subject to the income tax laws and in the light of current political trends, it appears not unlikely that cooperatives showing a profit will be compelled to pay income taxes. Now, this would not affect the American Cranberry Exchange, for it is a non-profit organization; it does not even have any retains. It would mean, however, that in order to continue to pay dividends on its stock, a corporation such as NCA would have to take still more money from

the returns of its patrons to pay the taxes on the money retained for dividends or undistributed surplus.

Seventhly, by selling to independent processors rather than to NCA, we are able to make an impartial allocation of our fruit between the fresh market and the processing market with the sole consideration of deriving the maximum benefit for the grower. We are not compelled to process a certain barrelage in order to maintain a fixed overhead, nor do we have to show the slightest concern over earning dividends for any stockholders, or meeting interest on loans, or replacing plant facilities.

In conclusion, one can become a member of NCA by contracting to deliver only ten per cent of his crop to that organization. The other ninety per cent is permitted to drift around, making or breaking the market, as the case may be, which will in turn govern the returns from NCA. It seems apparent that a concern as loose as this, which even allows members to compete against their own organization, cannot be expected to be the salvation of the cranberry industry, and hence does not deserve support on the basis.

The foregoing constitutes nine substantial answers to the "Why" in your late broadcast.

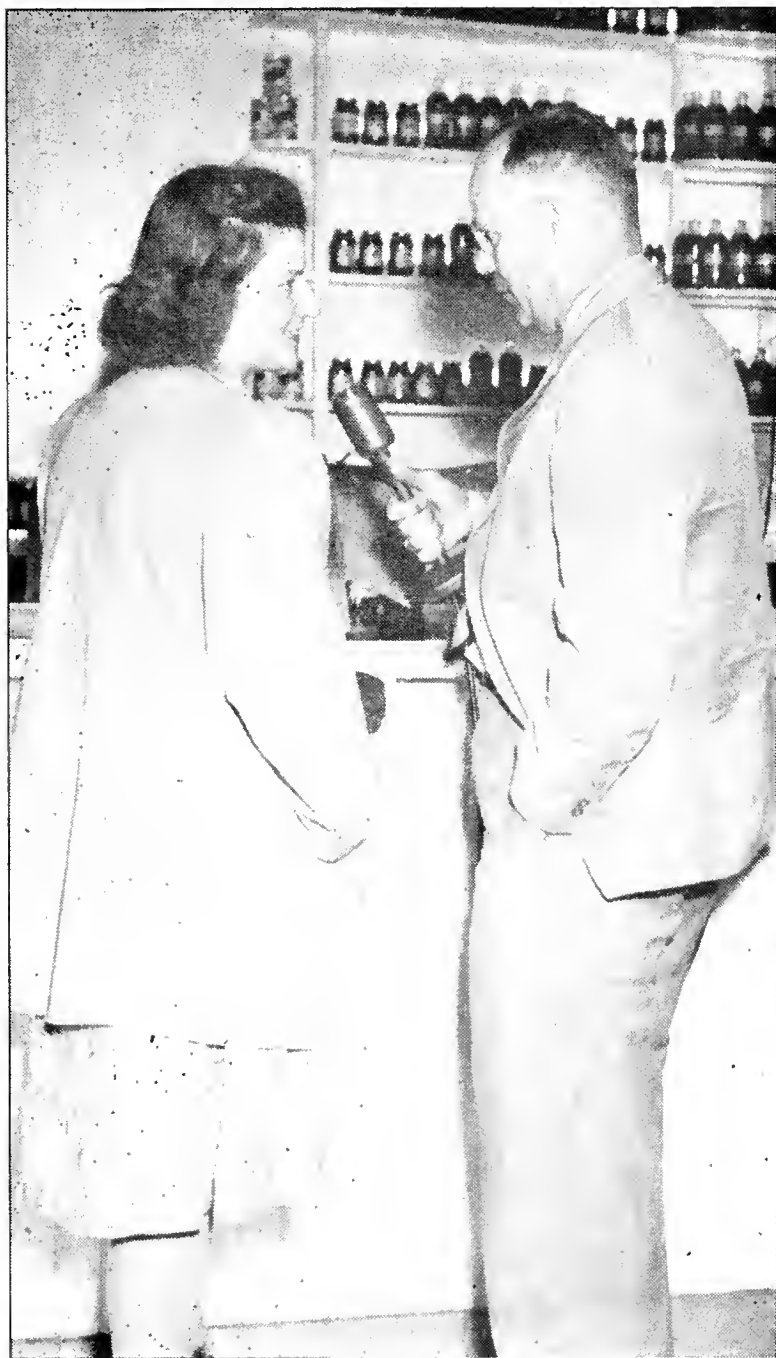
Very truly yours,

B. C. Brazeau

WASHINGTON GROWERS VISIT SWEDEN

A number of growers of Grayland, Washington, have already left for a visit to Sweden. These include Mr. and Mrs. Victor Lindgren, Mr. and Mrs. A. V. Anderson, Mr. and Mrs. Martin Hendrickson. According to Mr. Anderson they hope to hold a cranberry meeting in Stockholm about July 4th. The Andersons and Hendricksons went the whole distance by plane. They plan to return via Massachusetts about the end of August.

Keep Informed by
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Ocean Spray Broadcast from Onset Plant

Massachusetts cranberry growers have come to know Ferris C. Waite of National Cranberry Association in a number of capacities, but the above photo shows him in a new one. Here, his role is that of radio interviewer, who gets the spontaneous comments of some of the visitors who stop at the Ocean Spray cranberry products stand, Onset, Massachusetts, on route 28, the main road to Cape Cod.

The interviewee, whom Mr. Waite holding the microphone "caught" on this occasion is Miss Helma Karjola. Since she is from Alaska she was quizzed about her homeland, how she liked her visit to Cape Cod, with, of course, ample mention of cranberries. This unrehearsed program, with the purpose of "plugging" cranberries over the air, goes out every Saturday noon over Stations WNBH, New Bedford, and WOCB, Yarmouth, Massachusetts.

(CRANBERRIES Photo)

"Sidewalk" Cranberry Interview

Summer Bog Tools—Pumps are now in good season.

ALMOST LAST Call for screenhouse equipment or that pump you will need for Fall frost.

HAYDEN SEPARATOR MANUFACTURING CO.

E. C. St. Jacques

WAREHAM, MASS.

Frosts in 1945-46, With Some Observations on the Use of Irrigation

CHARLES A. DOEHLERT
N. J. Agri. Exp. Station

Note: The following paper concerning frosts and blueberries was given at the 15th Annual Blueberry Open House in New Jersey).

The spring of 1945 and the spring of 1946 were both frosty seasons. There were seven outstanding frosts in 1945 and six outstanding frosts in 1946.

The first three frosts came on exactly the same nights in both years, those of April 5, 6, and 7.

It is a rather striking coincidence that this followed the two warmest March months in New Jersey since 1903. Why was severe damage experienced in this period in 1945 and not in 1946? Why was irrigation a good frost protection in 1945 and not needed in 1946?

1945 Season More Advanced Than 1946

The opening of bloom was unusually early in both years. In New Jersey the month of March for both years was the warmest we had had since 1903. In 1945, March had an average temperature 10 degrees warmer than normal and by the end of March tree foliage and vegetation were at a stage normal for the end of April. By April 5 a good many blueberry blossoms had opened,

In 1946, March had an average temperature 4 degrees warmer than normal. By April 5 the most advanced Cabot flowers were about half full size and white, with Rancoas flowers just beginning to stick out beyond the bud scales. Rubel buds were in the stage when the bud scales still stick out beyond the flower buds.

It is evident that when the first heavy frost came on the night of April 5, blueberry blossoms were definitely further advanced in 1945 than in 1946.

Warm Weather Preceding Frost

It is a well-known fact that the preceding weather largely determines a plant's sensitivity to frost. The first severe frost was preceded in 1945 by ten nights with an average minimum temperature of 50 degrees and ten days with an average maximum of 78 degrees. This was a rather long period of very warm weather. In 1946, on the contrary, there were six cool nights just before the frost of April 5 with an average minimum of 40 degrees and six days with an average maximum of only 62 degrees.

After this there was cool weather in the frost period of both years until late May in 1945, when a period of four warm days and nights preceded the frost of May 24. Thus in 1945 there were two

periods when plant growth was softened by warm weather preceding the frost.

Length of Time that Minimum Temperature Occurred

The first frost of each season occurred with almost exactly the same temperature. It is conspicuous, however, that the low temperature in the night of April 5, 1945, continued for about an hour longer than in 1946. Time of exposure to low temperature is an important factor in causing injury. It would also be more important on the first night of a series of frosts than during the following nights, by which time a hardening process had set in.

Sunshine Following Frost

The damaging effect of bright sunshine on frosted flowers and fruit has many times been easy to observe. A cloudy morning has enabled many a frosted blueberry bloom or crop of green berries to thaw out gradually without damage. In 1945 there was full sunshine following the first five frosts. On June 1 there was cloudiness, but it came at the wrong time to help. Green berries were damaged May 24 and 31.

In 1946 there was slight cloudiness the morning of April 6 and considerable cloudiness April 8. These were the two most critical mornings, one being the first of the series of frosts and the other, the coldest. It may be that this cloudiness was a real help in averting

(Continued on Page 20)

AIR DUSTING IS HERE!

WHEN the dusts of the present Massachusetts insect air-control program have settled and the air is clear enough to evaluate the work done, and checks are completed, the industry should be considerably ahead in knowledge. The experimental dusting, by helicopter in particular, and also by small, fixed-wing plane, has been intensive and absorbing in interest to the growers. From the work already done it is practically a certainty that dusting from the air—and possibly some spraying—in the future will be an important factor in the cranberry program.

'Copter dusting, inaugurated by NCA, is admittedly experimental this season, and considerable straight-wing dusting by "cub type" plane was done last year, chiefly by A. D. Makepeace Company. Right now there are extremely enthusiastic "fans" of dusting by 'copter. This enthusiasm extends to research workers at the Massachusetts Experiment Station, ordinarily extremely cautious in their comments.

There have been accidents, mechanical mishaps and troubles, especially in the operation of the hoppers of the machines. But 'copter dusting is doing a job in killing the insects. It is bringing the owners of the small bogs into the orbit of air insect control. It is being borne in mind that this is the first year—that this is an experimental year.

The use of 'copters versus conventional-wing planes is not really being considered as a "contest" between the two methods. 'Copters admittedly have great advantages in covering bogs with areas difficult of access. The ability of the machine to move in all directions and to hover, and its forcing of the dusts to the bog floors and in coverage of the under side of leaves is highly satisfactory. The "Cubs" are doing a fine job economically on large bogs and "open" bogs where they can make the runs easily.

At the moment, opinion is the likeliest bet is that both will find an increasingly important place in cranberry insect control—at least in Massachusetts. In Wisconsin to date it has been found that air dusting has not been too efficient, due to high winds and wet weather, and there is some doubt as to how important a factor air insect control might become there. It also seems un-

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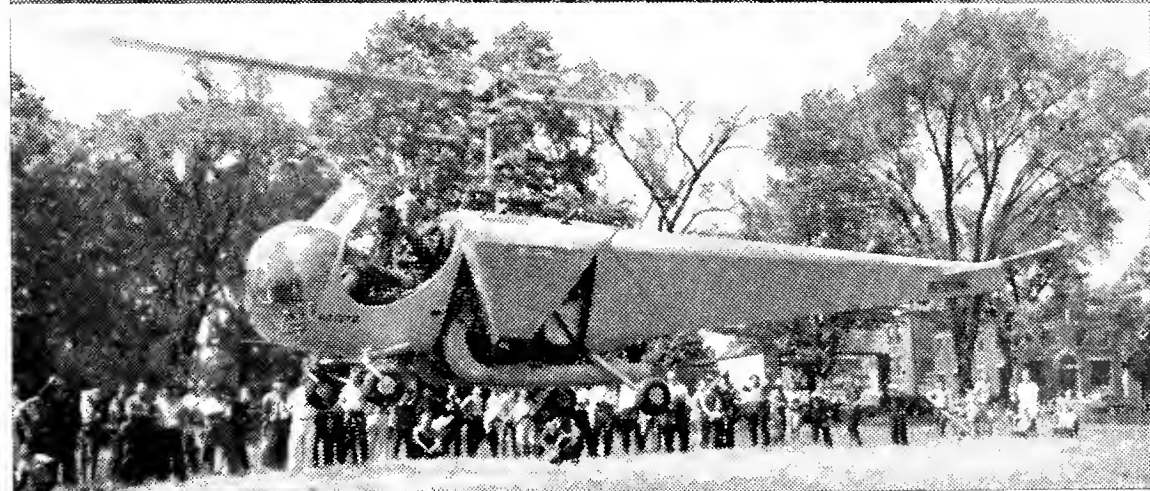
CHARLES A. DOEHLERT,
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likely that ground dusting will become a thing of the past, either.

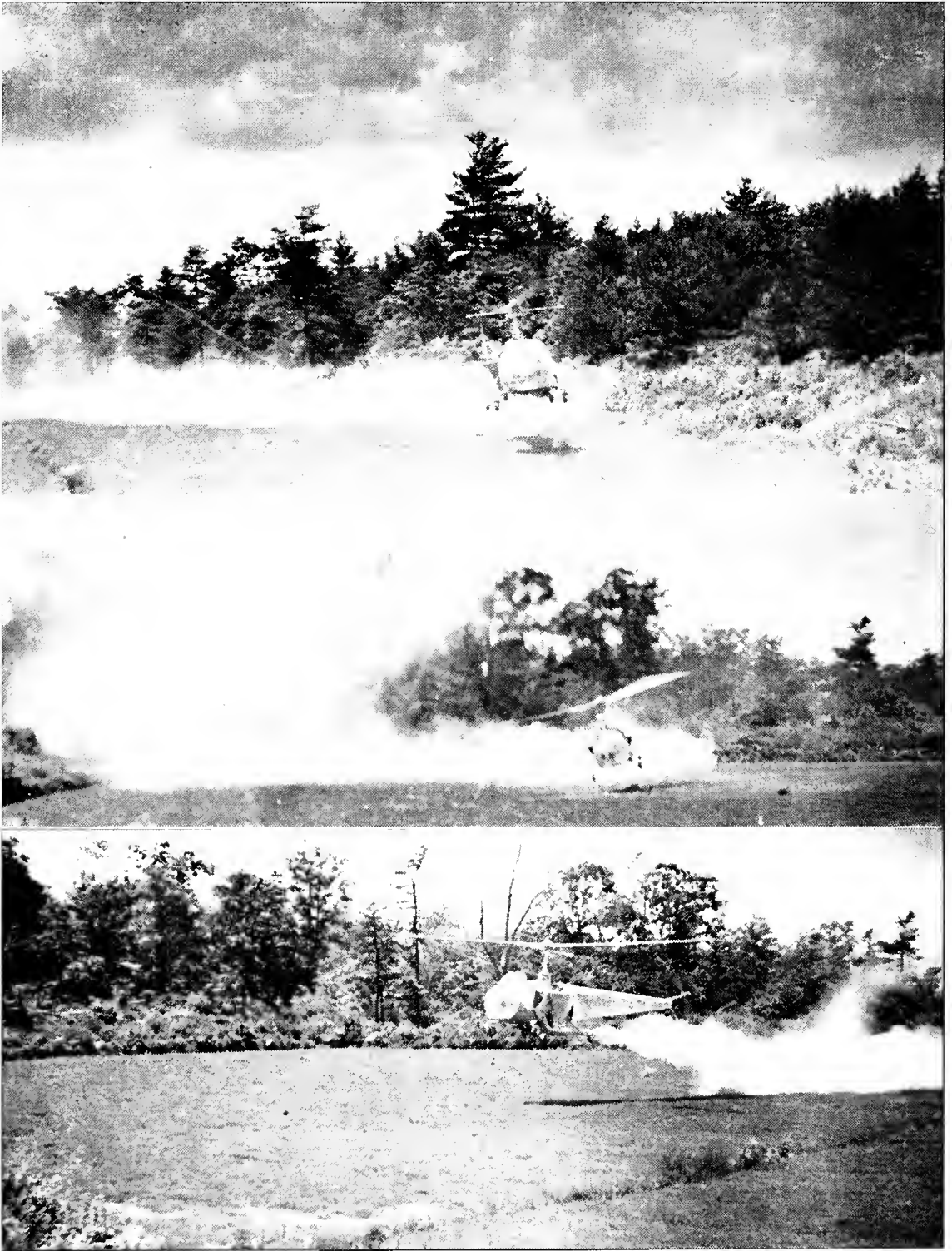
Rather it seems more probable now that the growers have found two more powerful mechanical allies in the 'copter and the small fixed-wing plane for crop dusting—and the idea of even more economical air-spray should not be overlooked. It looks as if a new era in insect control is at hand. If the elimination of most mechanical injury to bogs is to increase production by ten per cent and more, as Dr. Franklin feels may be in the cards, there are going to be bigger annual crops.

Increased production, now being forced by continuing progress in mechanical and other cultural improvements, will bring the industry up against a sharper selling problem in the very near future. The industry must consider how this is to be done. It is already being given thought. Industry-wide advertising of cranberries as cranberries is one aspect coming under consideration.

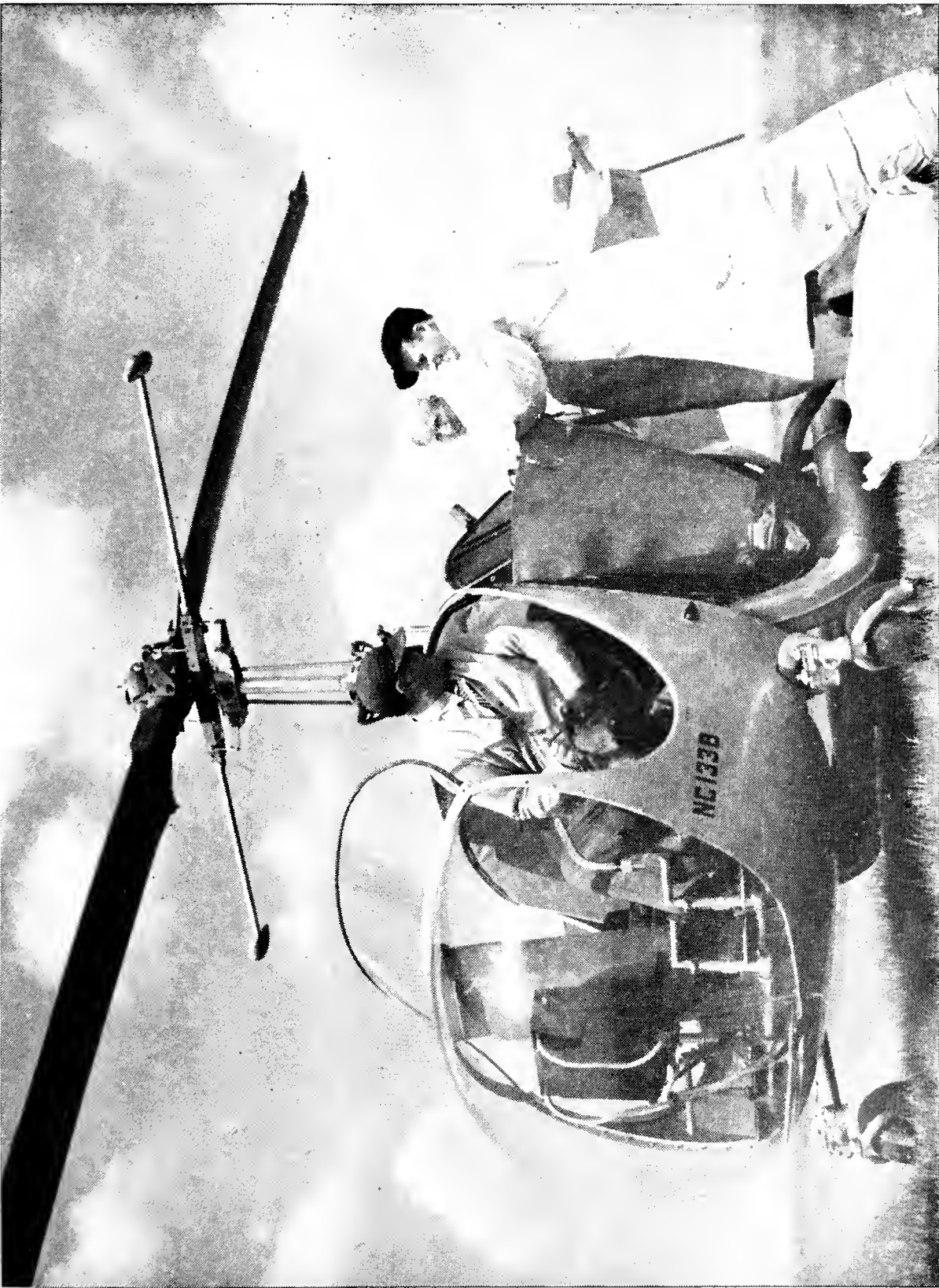
Pictorial Section



Upper photo shows NCA 'copter, Roelofs piloting, as it hovers just above the ground at press demonstration, June 5th. In the lower, Co. Pilot McMahon is shown giving President George H. Cowen a ride June 6th when this machine was delivered for service to New England Cranberry Sales Company. (Cranberries Photos)

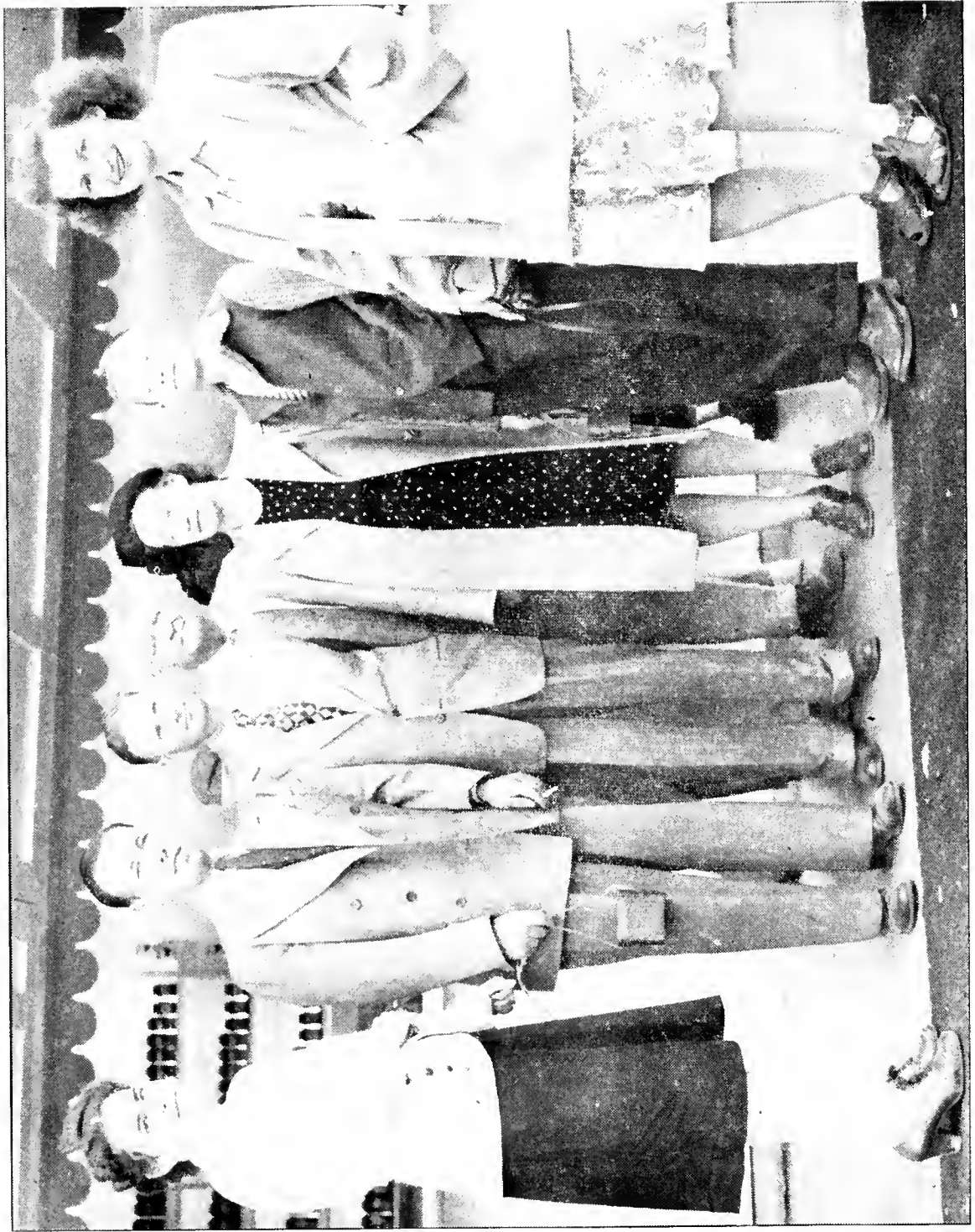


An NCA 'copter, piloted by "Slim" Soule, is shown in three action "shots" over the small bog of Everett Niemi at South Wareham. The pictures show how the machine curves along the bank of a bog and lays the dust in corners and bays regardless of the nearness of trees on shore. (Cranberries Photo)



This fine close-up of the 'Copter Duster' from Bell Aircraft Corporation, Buffalo, New York, shows dust loading. Electrically-operated dust gates are controlled from cockpit. Ejector tubes

through which dust is applied with air from engine fan are clearly visible at bottom of the hopper. This picture not taken in cranberry work.



Visitors from the West Coast are shown at Ocean Spray's refreshment stand, Onset, Massachusetts, one of the many points of interest they visited while in the eastern cranberry areas. Left to right are: Mrs. Urann, Olson, Gray, and, Washington, Mrs. Waara's sister, Helma Karjala, of Sitka, Alaska, Mr. Urann stands behind them. The Olsons flew East, Wisconsin and New Jersey as well as Massachusetts, while the Waaras came by automobile.

Left to right are: Mrs. Urann, Olson, Gray, and, Washington, Mrs. Waara's sister, Helma Karjala, of Sitka, Alaska, Mr. Urann stands behind them. The Olsons flew East, Wisconsin and New Jersey as well as Massachusetts, while the Waaras came by automobile.

Sprinklers Shown at Cape Bogs

Field meetings to "brush up" on insect identification and to see new type rotary sprinklers in operation were held by Barnstable County Agent Bertram Tomlinson June 16 and 17, both at 7 in the evening. The first was at the Quaker Run bog, Gifford avenue, Cotuit, owned by Wallace and Myron Ryder. The Ryders had recently installed their system. The second meeting was at the bog of Marshall Siebermann, Great Western road, North Harwich. The latter bog was the first in the state to be equipped with the rotary sprinkler system, this being done in 1939, and it has been used to save crops from frost damage every year.

There were good attendances each evening, Dr. Franklin conducting the identification of insects and then growers watched the water turned on and saw a practical demonstration of how the systems worked. There was much interest and several more systems are being installed on the Cape.

At the Ryder bog the Ryders give full credit to the system for saving their bog from frost this spring. Small sections of the bog which were not covered by sprinklers were, as Myron Ryder said, "as black as your hat."

The property is one of eight acres and previously there had been no flowage for frost protection. Sacrificing one section to be used as a reservoir, the Ryders installed one of the war surplus engines from NCA and set out nine small sprinklers and one Buckner Giant in the largest area. Others were Buckners, except one Rain Bird.

On the night of the frost the sprinklers were on from midnight until 8 o'clock in the morning.

So pleased are the Ryders by this protection that they plan to drive wells in the attempt to get sufficient water to give frost protection more nights than is now possible. The limited water supply is only from springs, and they hope to build up a reservoir of 100,000 gallons. This was a typical bog of many on the Cape which had previously to hold the winter flood until May 25 against frosts.

Mass. Blueberry Growers Hold Their Summer Meeting

Summer meeting of the Blueberry Growers' Association of Massachusetts was scheduled to be held at Massachusetts University, Amherst, July 16th. Individual cars were used for the trip for these growers from Southeastern Massachusetts, the meeting place being the Rotary Circle at Middleboro.

A lunch was to be held at noon at Draper hall. This was to be followed by a business meeting and tour showing blueberry varieties, named and unnamed, spacing, mulching, weed control, blueberry stunt and other interesting features.

Demonstration of Huge Cranguyma Sprinkler System

The more than 1100 sprinkler heads at the Cranguyma Farm, near Long Beach, Washington, were recently turned on for the inspection of the owner, Guy C. Myers. Dr. J. Harold Clarke expressed himself as especially pleased when an undiminished effect was sustained after one of the two big diesels operating the pump at 5,200 gallons per minute was turned off, the other proving equal to doing the job.

An estimated 3,000 boxes (quarters) of cranberries are expected to be produced this season, this being the first cropping of any consequence from the plantings which were made in the spring of 1944.

A group of distinguished workers in the field of horticulture were visitors a short time ago at Cranguyma, these including Dr. George N. Darrow, chief pomologist, U. S. Department of Agriculture, Beltsville, Maryland. Raspbrry plantings at the Farm are reported looking fine and producing heavily. The transplanting of thousands of rhododendron plants is still going on and some of the larger plants have almost reached the stage where the wild plants may receive grafts from domesticated stock accumulated from English and Canadian importations.

Western Pickers, Inc. Suggests an Innovation

"Logistics" was a widely used military term during the war. It meant having the right materials at the right place at the right time. "Logistics" in cranberry harvesting will have an increasingly important meaning when the use of mechanical pickers comes in wider use.

Take, for example, the picking of a typical 20 acre bog. If the yield on this bog were 100 barrels per acre, that would mean the handling of 8000 quarter barrels. If four WESTERN PICKERS were used to pick this acreage it would probably be done in four days. That means that 2000 boxes would have to be handled per day or 167 per hour, or nearly 3 per minute. Since it is not desirable to walk on the bog prior to picking, distribution of boxes must start after the picking. To do this efficiently would require a goodly number of men just to keep ahead of the machines.

To get around this it has been suggested that the first collection from the machines be done in sacks. One man could carry 50 sacks in a bale any reasonable distance quickly. Because the WESTERN PICKER prunes the vines as it picks, a large amount of the volume is taken up by vines, hence abrasion and heating is cut to a minimum. (Incidentally, the vines and berries are separated by pouring over a chicken wire screen similar to a small gravel bunker. The dry separated berries still retain the bloom they had in the field.)

Foreseeable objections to sacks would be overripe, tender and soft berries, but these are not insurmountable. To offset these objections are greater speed, less preparations, more volume, less burning, more mobility, less units, and less worry and less costs.

This is only one of the many new ideas that will be tried out by the NCA and WESTERN PICKERS this fall with their new picker, and a grower can choose for himself whether he wants sacks or boxes. (Advt.)

Frosts in 1945-46

(Continued from Page 13)

ing injury. With full sunshine, however, after the other four frosts of 1946 and no damage, the importance of cool weather preceding the frost is emphasized strongly.

Summary of Factors Contributing to Frost Injury

With frost temperatures practically the same on the nights of April 5, 6 and 7, in both years, the following conditions helped to induce injury in 1945 which did not occur in 1946:

1. Blossoms were somewhat more advanced in 1945. Considering the successful survival of the bloom on April 17, 1946, this does not seem to be as important a factor as item No. 2.

2. Blossoms and buds were in a more tender state in 1945 because of ten particularly warm days and nights just preceding these frosts. This is probably the

most important factor contributing to damage.

3. During the first frost of the series, the temperature remained at the low point for about 1½

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hours in 1945 as compared with only a half hour in 1946. Due to the hardening process, the differences in time of exposure during later frosts would probably not be of the same importance.

4. There was full sunshine following the first five frosts in 1945. In 1946, the coldest frost was followed by cloudiness up to 10 a. m.

Conclusion

With previous weather favorable to "hardening" the plant tissues, blueberry flower buds in the white stage and just before the white stage were able to withstand temperatures of 24 degrees and in some fields less, even though full sunshine occurred in the following morning hours.

Use of Irrigation

In 1945 rotary sprinkler irrigation run on the nights of April 5, 6, 7, 22, May 24 and 31, resulted in saving the crop, while adjacent fields had a 50 per cent loss. In 1946 similar temperatures in April indicated the need of irrigation

which was run on six nights. So far as our observations go, nothing was accomplished by this 1946 irrigation.

In order to have protection when needed, irrigation must usually be run some nights when it is not needed.

The decision to irrigate must be made according to the expected drop in temperature. It must be started around 31°F. rather than waiting until the lower temperature of actual damage is reached. Applying the water when the temperature of damage is reached can

cause more damage than leaving the plants dry.

If the plants are coated with ice, injury will not occur so long as water in the liquid state keeps falling upon the ice. Then the temperature is maintained at 32°F. If the irrigation stops and the temperature is low enough to injure the plant tissues, such ice-coated plants will be injured more quickly than if they had remained dry and were free of ice.

Frequent irrigation in April and May can increase mummy berry infection.

THANK YOU, FELLOW GROWERS

In the few months that I have been offering prefabricated flumes, gates and corrugated iron pipe, you have ordered ten thousand dollars' worth of this material. This is in spite of the fact that I have been so busy with my own bog work that I have not been able to do a real selling job, and despite my cranberry politics which many of you find obnoxious. For this I thank you. Not that it will make me rich—my on-the-spot consultation and analysis of your needs cost me time and money—but because it confirms my opinion that we growers need an economical, easily installed flume. Incidentally, it is time to order for Fall use.

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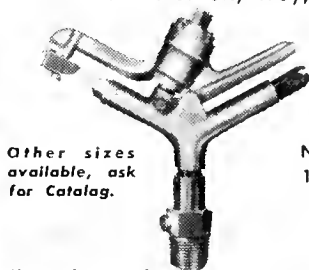
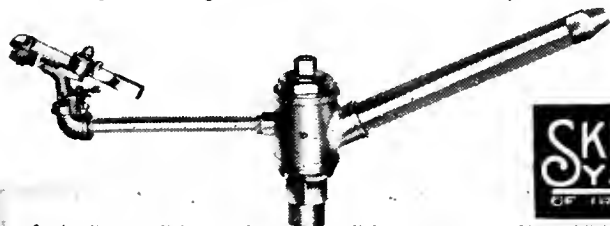
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		80		28.50	145			45	125	106	18.
		100		32.30	155			60	135	115	21.
CP-1 1/4	1 1/4"	85	1/2	64.00	180	9/32"	7/32"	40	130	110	21.5
		100		72.00	190			50	135	115	23.5
		125				70	145	123	28.2

Fruitworm Meeting

Cranberry fruitworm meetings were scheduled for July 14 at 7 a. m. by J. Richard Beattie, County Agent, Plymouth County Extension Service, these to be at the Cape Cod Company Long Pond bog off Neck road, Rochester, and at the State Experiment Station, East Wareham; also July 15 at 7 p. m. at the Nicholas Phillips bog, Wapping road, Kingston. The schedule included identification and control of the cranberry fruitworm. Dr. Franklin and Joseph Kelley were to aid in the discussion and identification of insects.

With the notice of the meeting sent to growers, July 7, was the following special message from Dr. Franklin: "Those who are drawing off the summer flood in connection with Root Grub control should remember that the flooded bogs are liable to be attacked by cutworms within a few days. This should be looked for by sweeping with an insect net. Any necessary control measures for cutworms should be attended to promptly. See the cranberry chart for particulars."

Repaired N. E. 'Copter Is Back

The "New England Cranberry Sales Company" 'copter, owned and operated by Wiggins Airways, was returned from the Bell Corporation at Buffalo July 5th after repairs had been made following the accident. Dusting operations were begun immediately from Sherman Airport, Plymouth.

New gates have been installed and the flanges of the distributor tubes have been flattened and flared out to give more even distribution and wider coverage of the dust.

A new pilot is operating, John F. Connelly, a native of Illinois, who recently has been operating out of Camden for Helicopter Air Transport. The pilot has also recently been engaged in helicopter oil exploration work in Louisiana.

During the repair interim, New England Sales members were serviced by a Cub plane of Crop Duster, Inc., and more than 150 acres were covered. Ground dusting also filled in the immediate needs of members.

Cranberry School For Veterans In Oregon

Sixteen GIs in Bandon, Port Orford and North Bend of Oregon are interested in the establishment of a veterans' agricultural training school in cranberries, according to Jack Hansell, assistant county agricultural agent of Coos County.

The possibility of establishing such a school in Coos county was discussed by Ted Kirsch at a meeting of the Southwestern Oregon Cranberry association. Kirsch will contact a veterans' representative in Salem, then call a meeting of all persons interested in the training, according to Hansell. At such time it is determined a school can be established, an instructor approved by the Veterans' Administration must be secured.

Kirsch explained that under agricultural training regulations, a veteran must attend 200 hours of classwork per year in addition to 100 hours individual instruction on the farm. Subsistence of a maximum of \$90 per month for mar-

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ried veterans and a maximum of \$65 per month for single men will be allowed, but a veteran must not realize a total income of more than \$200 monthly including regular wages and subsistence. An allotment for supplies will be included if the school is established.



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Any veterans interested in training in cranberries are asked to contact Hansell at the county agricultural agent's office in the Coos County court house.

Art King, extension expert in soils, spoke during the meeting on fertilizing and irrigation of cranberry bogs.

OCEAN SPRAY OPENING "CRANBERRY CENTER" AT LONG BEACH, WASH.

"Cranberry Center" is opening at Long Beach, Washington, to feature cranberries, Ocean Spray sauces, marmalade and juices, cranberry sundaes and cranberry milkshakes. The new shop is located in the NCA building. Long Beach is a summer resort as well

as a cranberry center, as is Onset and Wareham in Massachusetts where the Ocean Spray products store is located on Route 28.

M. L. Urann and Miss Ellen Stillman of National Cranberry Association looked over the possibilities for the store when they visited the West Coast in March. Most of the arrangements were made by Dr. J. Harold Clarke and his West Coast NCA committee composed of Al Sunberg and Rolla Parrish. During the past month quarters were constructed for "Cranberry Center". The Center is finished in plywood and decorated in red and white. A large front window is used to display various products. Donella Crowley is to manage the store under the direction of the committee.

N. E. SALES HAS CAPE CONTACT MAN

New England Cranberry Sales Company has a new member on its staff who is acting as contact and field man in Massachusetts, chiefly in the Barnstable County area. He is Ralph Thatcher, located at Hyannis. Previously experienced in cranberry work, and especially in flume-building, he more recently spent five years in the Army, four of them in the Pacific area.

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Deer Herds Cause Much Damage in Wisconsin

State Cranberry Growers' Association Draws Resolution for "One-Deer Season."

Wisconsin State Cranberry Growers' Association meeting at Wisconsin Rapids June 17th, President Henry Duckart appointed a committee to draw up a resolution to be presented to the State Conservation Commission that the deer

herd in Wisconsin should be made smaller by having a "one-deer season in that state. Deer have become so large in numbers, discussion brought out, that a large number of persons, including the cranberry growers, would like to see the deer population cut down.

On several marshes in the state they have done very serious damage, such as beating down the vines, knocking berries off, and even digging up new plantings. Many of the growers have also planted seedling trees as part of the State Conservation League tree planting program and the deer have done untold damage to these.

The situation was considered serious. Guest speaker at the meeting at Hotel Witter was Mr. Bues of the Wisconsin Conservation Department.

Bandon Notes

Bandon, Oregon—Shortage of rainfall in early June, with all indications pointing to one of the driest years in history, is having definite effect upon the cranberry crop of Coos and Curry counties, according to some of the principal growers in the Bandon area.

While prospects are favorable for an extra good crop, the berries will be matured and ready for harvest at least three weeks earlier than usual. Early blooming of the cranberry vines was pointed out by growers. L. M. Kranick, one of the larger growers, whose bog is usually earlier than most of them, reports that the blooms were a whole month ahead this year.

While the month of May is usually considered a moderately wet month in the Bandon area, some years netting several inches of rain, the rainfall during that month this year amounted to about three-tenths of an inch. There is general concern over prospective domestic water shortages on the part of cities and communities, as well as by farmers who rely on overhead irrigation systems.

Martin Kranick, son of Mr. and Mrs. L. M. Kranick, who has been employed with the U. S. Engineers on the Central Valley project at Antioch, California, has arrived home to resume construction of his cranberry bog south of Bandon. He has completed sanding his first acre which is now ready for planting.

Dr. D. D. Hill, Oregon State College Extension specialist, was guest speaker at a recent meeting of the Southwestern Oregon Cranberry club, held in Bandon. His topic was "Weed Control". He suggested the use of soil fumigant in the preparation of new cranberry bogs and highly recommended the use of borax on bog dikes. He also explained the uses and actions of some of the new 2-4-D compounds.

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Dr. Hill is in charge of a vast experimental gorse control project

which is sponsored and financed jointly by the state of Oregon and Coos, Curry, Douglas and Lane counties of western Oregon and which is now going into its third year. Various chemical treatments are under observation and chemicals are being combined with burning, clearing, seeding, goating and tree shading. Most of the experiments are being carried out on the W. J. Sweet dairy ranch on Elk river in northern Curry county.

Director J. W. Darlington said Jersey was working hard to increase production. He said from 1938 to 1945 the trend had been down, but in '46 Jersey production more than doubled. "The question is, are we going to stay on the 100,000 bbl. level or are we going to fall back? We in New Jersey feel our upward trend is to continue." He then cited the hard work being done, improvements in cultural methods, and the amounts of old acreage which are being replanted. "Applying New Jersey standards to New Jersey we are on the climb. Of course our record in the next few years will determine this, but I personally feel we are going on up."

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NCA Meeting

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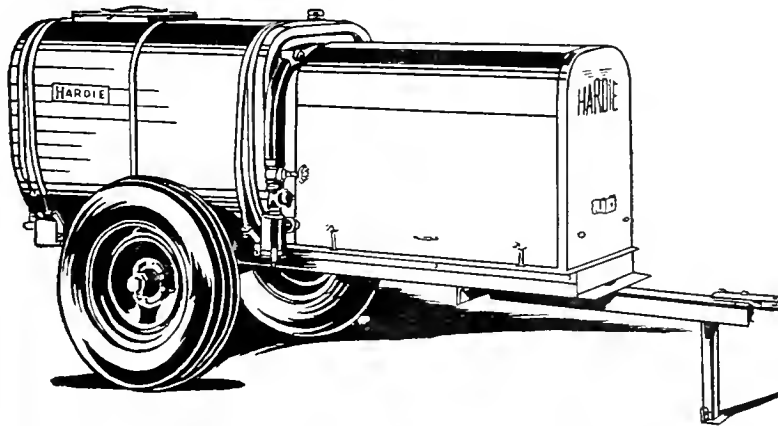
New Jersey

In commenting upon the increase in membership, Director Isaac Harrison of New Jersey spoke of the swing to NCA in that state. He said over half of the members of the Growers' Cranberry Company would not support the selling of cranberries to independent packers. He said it was the younger growers who were contributing most to this "movement to our organization."

Edward Lipman, NCA Jersey fieldman, said he felt the increase in New Jersey membership would continue. He referred to the organization of cranberry clubs and to aerial maps which have been made showing the entire Jersey cranberry area. He had several of these to show the growers.

Wisconsin

Concerning Wisconsin Guy Potter said it was expected four inde-



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pendents would shortly join NCA, and the outlook in that state was encouraging. He said he regretted the break with ACE, however. C. L. Lewis said many of the members of the Wisconsin Cranberry Sales company were not satisfied at the present time. He said he did not think growers needed to

worry too much about commercial canners, as with the fine NCA organization a few years would see NCA having the necessary membership to maintain "grower control." He said he might suggest there is stormy weather ahead, as to him the fact that there is such a large carry-over in sauce is indicative that the 1946 prices were too high. "I feel we have got to face the prospect of perhaps considerably lower prices in 1947."

Oregon

Director "Jimmy" Olson of Bandon declared the Bandon area was going to keep on growing and that there was a cranberry "boom" on there. He said he knew of only two bogs which were for sale and those at very high prices. He said that every bit of raw cranberry land was being taken up. He said he never knew of any grower in Bandon who had lost money on cranberries. He said the Bandon growers were mostly little family groups who worked hard, that the Bandon industry is "young", and "we are going into a new business for us." He praised the role of

NCA in the progress made in Bandon and said the success was due largely to Mr. Urann having gone there and asking growers to join with the national organization.

Washington

Director Einar Waara of Grayland said the 250 growers in that area with 33,500 barrels of berries last year were all members of the National and he "was satisfied with the National from the bottom of my heart" and so were the other growers.

Urged Larger Participation

Director Harrison Goddard of Massachusetts said not enough of the members gave 100 per cent of their crop to the National, and urged them to give 100 per cent of their production to their co-operative.

The program was a long and enthusiastic one, with interruption for a lobster lunch, until late afternoon. Many speakers were heard, including the reading of records by J. C. Makepeace, a brief report upon fresh fruit marketing by Russell Makepeace. George Lamb, president of the Springfield

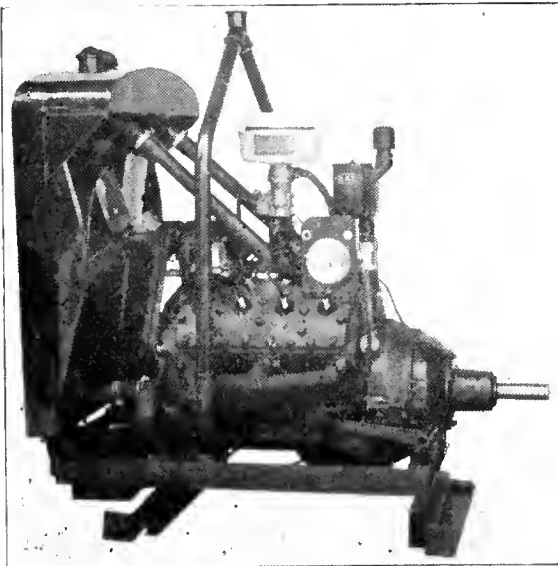
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Bank for Co-operatives, extended unbounded praise for NCA, asserting it was as successful and truly as cooperative as any co-op in the country. He said the Springfield bank was ready to extend any credits necessary to finance NCA operations through the year. He said it was eventually desirable that members own the stock on a direct patronage basis. Director Albert Hedler of Wisconsin was another speaker, who said he felt Wisconsin was on the way toward increased membership, "although as a matter of fact it may be a good thing if we do not get 100 per cent membership of the industry in NCA." Commenting upon this, John Quarles, attorney for NCA, said he believed farmers can unit 100 per cent for the marketing of their crop.

Comptroller John F. Harriot, Nathaniel Ryder of Cranberry Credit Corporation, and Ferris C. Waite of growers' supplies were among others making reports.

Members voted to alter the association's Articles of Incorporation to permit the issuance of more capital stock. Voluntary

purchases of stock by the association's members have now approached the limit which the association is authorized to sell, and the change is necessary to permit members to purchase shares of

stock in proportion to their patronage, it was explained. Up until the time of the vote, the association was authorized to sell only 60,000 shares of common voting stock and 40,000 shares of pre-

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ferred stock, but the vote has increased the quantities to 120,000 and 80,000 respectively. Both classes of stock have a par value of \$25 a share. Members also voted to eliminate the class of non-voting common stock, of which 20,000 shares are now outstanding. This class of stock, which is held by some of the larger growers and is no longer necessary, will be converted to preferred stock, it was said.

Many of the shares of stock now authorized are already spoken for. Members in the past few months have shown an increased interest in the affairs of the cooperative and have placed orders for \$288,000 worth of stock. Although a grower is required to purchase only one share in order to become a member, the association's officers it was pointed out, are aiming at the time when each grower will own shares of stock in direct proportion to the number of berries he delivers to the cooperative.

Members of the National also voted to increase the size of their board of directors to 15, that the increased membership may be more adequately represented. The board of directors elected at the meeting includes Marcus L. Urann of Hanson, Ellis D. Atwood of Carver, John C. Makepeace of Wareham, Harrison F. Goddard of Plymouth, Robert S. Handy of Cataumet, Russell Makepeace of Wareham, Carl B. Urann of Middleboro, Albert Hedler of Minneapolis, Minn., Charles L. Lewis of Shell Lake, Wis., Guy N. Potter of Camp Douglas, Wis., Enoch F. Bills of Bordentown, N. J., Joseph W. Darlington of Whitesbog, N. J., Isaac Harrison of Crosswicks, N. J., Einar Waara of Grayland, Wash-

ington, and James Olson of Bandon, Oregon.

Immediately following the annual meeting, the newly-elected board of directors held an organization meeting and elected the following officers of NCA for the coming year: Marcus L. Urann, president; Carl B. Urann, first vice-president; John C. Makepeace, secretary and treasurer; Joseph W. Darlington, second vice-president; Charles L. Lewis, third vice-president; Marcus M. Havey, vice-president Western Division; William S. Jacobson, vice president Pacific Division; H. Gordon Mann, vice president in charge of sales; and Ferris C. Waite, vice president in charge of Growers' Services.

Fresh from the Fields

(Continued from Page 5)

On June 18 and 19 meetings for the sweeping and identification of blunt-nosed cranberry leafhopper were held at the bogs of William H. Reeves under the direction of Ocean County Agent Richard Hartman and Burlington County Agent Daniel Kensler. Messrs. Doehlert, Marucci and Tomlinson of the Cranberry and Blueberry Research Laboratory served as instructors at the meeting.

Blueberry Fruit Fly commenced to emerge in cages at Pemberton on June 9. The first dust was applied June 25 and the second will be applied July 5th.

Blueberry Bud Mite has occurred in serious proportions over most of the blueberry growing regions of the state. No satisfactory control has been developed for this pest. Weather and predators apparently keep it under control some years, but do not do so at other times such as this season.

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WISCONSIN

Average Crop or Less?

There seems to be a split of opinion among growers as to whether Wisconsin is to have an average crop or one which will be below average. Many of the

marshes look exceedingly good, and barring frost damage later and proper climatic conditions, there should be a fairly good crop produced in 1947.

Frost Damage

On the night of June 15th and morning of the 16th growers were hit by frost, and on some marshes there was considerable damage.

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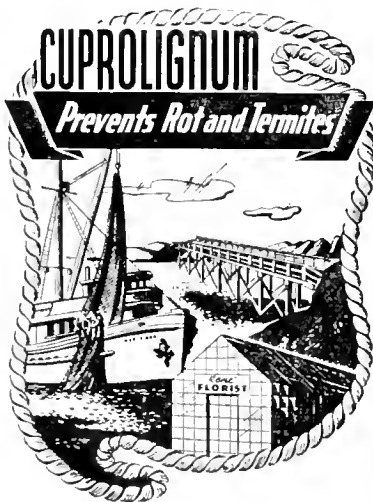
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It seems probable that the damage caused that night will have a definite effect on the crop prospects. It was a spotty frost with a variety of temperatures in various localities among growers that a more ade-

quate frost warning system should be developed, as in this particular instance a cold front moved in rapidly and a lot of the growers were unable to protect in time.

Fireworm Troublesome

Fireworm infestation proved to be a troublesome factor in the first brood. The infestation ran from medium on some marshes to heavy on others. Weather was poor for spraying. In many instances growers sprayed in the morning and there was rain before night. Those that used DDT and pyrethrum spray have reported from adequate to excellent control for fireworm. Most Wisconsin marshes had to be treated for this pest at least twice in the first brood.

A larger amount of Stoddard Solvent was applied on the marshes than was indicated last month, and the figure at end of June was nearer 120,000-125,000 gallons. There is an opinion among a lot of the growers that they applied this too early in the season.

WASHINGTON

By mid-June bogs were in full bloom. Mr. Crowley estimates crop prospects as "at least as good as last year." May was unusually dry, but much rain first week of June.



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THIS YEAR'S PROMISE FOR A PROFITABLE CRANBERRY CROP

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Provides complete service for its members—on actual cost basis—in the production, packing and marketing of their cranberry crops.

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The Fresh Cranberry Cooperative

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The few old bogs which were abandoned years ago continue to be gradually picked up and reclaimed. Charles V. Blaylock recently purchased the old J. B. Woods place and has begun oiling out the weeds on McFarlins and Howes. He plans to replant all other varieties. The Blair Brothers, who purchased the Pugh bog from George Lillegaard, now have all their bog under sprinklers. The system includes two of the giant heads that throw more than 200 gallons a minute. It is noted this type of sprinkler appears very satisfactory for cranberry irrigation.

Annual field day is to be held at the Experiment Station Aug. 8th. Oregon growers are holding field day July 21, and many Washington growers expect to attend.

Nolan Servoss, assistant county agent, has begun a survey of the cranberry industry in the State of

Washington. He expects to have a report ready within a few weeks.

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Our business is the distribution of CAPE COD CRANBERRIES, and "Business Is Good With Us." For over a **quarter of a century** we have served cranberry growers, anticipating changes and adapting our methods to new trends.

That is why we need additional supplies for 1947—because we have good outlets for your entire crop for both fresh fruit and processing.

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$C_{12}H_{22}O_{11}$ is sugar. It's back and the housewives have it. With rationing dead as a smoked salmon the housewife can again step up to the grocer's counter and say:

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THIS IS ABOUT AS GOOD NEWS AS CRANBERRY GROWERS COULD HEAR! We have all seen the revived interest in cars since the end of gas rationing. Cranberries are relatively a luxury food—and a luxury is hard to sell when it is hard to use.

The "Packer", national fresh fruit and vegetable weekly, editorialized June 21: "Reports of increased sugar purchases by housewives since the end of rationing are believed to indicate that home canning will again be an important factor in absorbing fruit supplies, and growers, shippers and dealers have good reason to feel encouraged over the outlook."

As the world's foremost fresh cranberry sales agency we do feel encouraged—and you should too.

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You Can't Beat Experience!

For over half a century the Growers' Cranberry Company has been rendering super-efficient service to its members, which comprise the majority of the Cranberry growers in New Jersey. You can't beat experience. Wouldn't you like to join us?

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WELCOME!

**TWENTY-SEVEN new members have joined the
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Our Very Best Wishes to them for a successful future and we extend to them our complete cranberry services—marketing, purchasing of supplies at actual cost, technical and practical advice on cranberry culture.

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33,000,000 Women

will read about Ocean Spray every month in national magazines this fall.

Ocean Spray's 1947 advertising campaign—largest in its history—will start with September issues . . . opening the season earlier than ever before.

The more customers for Ocean Spray, the better the earnings for members. NCA continues to build demand and make new customers by investing in national advertising that boosts sales.

First advertisement in Ocean Spray's \$200,000 campaign, appearing in color in September issues of Ladies' Home Journal, Better Homes and Gardens, Woman's Home Companion and This Week; and in black and white in Good Housekeeping, Parents, and American Weekly.



Chicken 'n Cranberry are flavor mates!

And when cranberry sauce comes to the table as "cranberry chicks" you can be sure of squeals from the youngsters and smiles from the old-ters. These plump little chicks are easy to make . . . just cut them from slices of Ocean Spray Cranberry Sauce and use dots of cream cheese for the eyes.

Chick Changes!

Perch cranberry chicks around a roast chicken . . . or on a chicken-salad plate . . . serve them on lettuce with a chicken sandwich . . . or bring on a plateful with fried chicken. You can snip them in a jiffy, but they'll be talked about for days!



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FOR YOUR**



3¢ & 1 Ocean Spray label brings you this "cranberry chick" cutter, designed exclusively for Ocean Spray. (Coin only, please . . . no stamps) Sent to "Ocean Spray," Dept 1947, Hanson, Mass.

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Complete Banking Service

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Member Federal Deposit Insurance Corp.

Annual Meeting of Massachusetts Growers, Tues., August 19

D. J. Crowley of Washington State to be a Featured Speaker—Other Talks on Hail Insurance, Gypsy Moth Control—Machinery and Equipment, Including Western Picker.

The annual meeting of the Cape Cod Cranberry Growers' Association Tuesday, August 19th, at the Massachusetts State Experiment Station, as usual, promises to be an extremely interesting one. Meeting will begin promptly at 9.30, with the usual business meeting, followed by a speaking program. Dinner is to be at 12 noon, served by the ladies of the Wareham M. E. church, who put on such a fine luncheon last year. During the noon recess and after the speaking program, there will be a demonstration of cranberry equipment, including, it is expected, the Western Picker.

A featured speaker will be D. J. Crowley, director of Washington

Experimental Cranberry Plot In Finland

Cultivated cranberries from the United States are now growing in Finland, on a strictly experimental scale, according to a letter received by CRANBERRIES Magazine. The letter is from L. O. Ervi of Meehelinink, Helsinki. Mr. Ervi is secretary of the Committee of Bogberries, the Culture fund of Finland.

Mr. Ervi writes:

"As to the natural cranberries in Finland, the ordinary cranberries, *Oxycoccus quadripetalus* Gil *Vaccinium oxycoccus* L. and the small cranberry, *Oxycoccus micro-*

State Experiment Station at Long Beach, who is making his first trip East since 1923. Mr. Crowley, a native of Boston, Mass., is now recognized as foremost authority on West Coast cranberry growing. It is expected Mr. Crowley will have much to tell Eastern growers of cranberry conditions in the West.

Other invited speakers include: experts on hail insurance for cranberry growers, aerial mapping of bogs and bog areas, and J. M. Corliss of the Gypsy Moth Laboratory of Greenfield, Mass. The business meeting will include election of officers, and, of course, the highlight of every meeting, the official pre-harvest crop estimate by C. D. Stevens, New England Crop Reporting Service.

As there will be interesting demonstrations this year, visiting growers have been requested by the Station Staff not to walk on the vined areas of the State Bog.

carpus Tuross (*Vaccinium microcarpum*), are both very common here, and the former is very much liked at table. The picking usually takes place during the first chilly days in the fall, or early in the spring.

"The cranberry cultivation was started here only one year ago (last summer), initiated by the Finnish Culture Fund. At the same time the experiments were started for cultivating *Oxycoccus quadripetalus*, the natural cranberry of Finland, and also some others of our natural berries, namely the arctic berry, *Rubus arcticus*, and the cloudberry, *Rubus chamaemorus* L. We are since then growing the "American Cranberry of Commerce" on one experimental

field. It was then we came into contact with the American experimental stations of cranberry cultivation and we then also learned of your publication.

"The cranberry cultivation here so freshly started, is still on an experimental degree, but I am please to say we are already making advancement."

The vines which have been set experimentally are presumed to be some which were furnished by Dr. H. J. Franklin through connections in Washington, and are a small quantity of cuttings of both Early Blacks and Howes from the bog of the Lowell Cranberry Company at Carlisle, Mass.

N. J. Growers' Meeting to be Exhibition

Annual Summer Gathering Association at Bogs of William H. Reeves—'Coptre and Western Picker to be in Operation.

This year's annual meeting of the American Cranberry Growers' Association Thursday, August 28, will feature an exhibit of cranberry machinery and equipment. The regular speaking program will be omitted. Crop Statistician D. O. Boston will, however, give his usual crop estimate.

The gathering is to be at the bogs of William H. Reeves which is on route 40 between Upton and the Four-Mile State Colony traffic circle.

Equipment actually to be in action will be a helicopter and the Western Cranberry Picker. Other machinery will be on display, but will not be operated.

NEW SAND PLANT NOW

Last winter, in anticipation of your needs, I ordered a sand digging, screening and loading plant. It is now ready for shipment. There is a Sauerman drag scraper; Sauerman hoist with extra spools for ear-moving or power shift; Austin-Western plate feeder, 40-ft. belt and shaking screen. All powered by two Wisconsin VF-4 air-cooled engines. Here is a complete sand plant for half the cost of a power shovel alone. Capacity about 30 yards an hour. Who gets it?

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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of August 1947—Vol. 12, No. 4

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FRESH FROM THE FIELDS

By C. J. H.

"What's the crop going to be?" That is the question growers ask each other as August comes in and beginning of harvest is only a month or less away. Last year saw a near-record production, which, when the revised historical figure is released will presumably be about 857,000 for the total, with the final upped New Jersey production over the previously estimated 90,000. The December 1946 release of USDA Crop Reporting Service gave Massachusetts 550,000; Wisconsin, 145,000; Jersey, 101,000; Washington 46,000; and Oregon 15,000.

The feeling lately has been better for a "good" crop, but if last year's huge production is equalled there will be a good deal of surprise. If production approaches 300,000, and some feel it may do that, it will still be a big crop. However, it's anybody's "guess" until the Crop Reporting Services release the first official estimate August 19.

MASSACHUSETTS

"Good" Average Crop?

General feeling is that the crop will be a "good average" in spite of the extremely unlikely bud which developed last fall. Average production for Massachusetts would now be 500,000 or a trifle better. Berries, in many instances, are developing big in size, due in part to frequent and adequate rainfall in the past month. This large berry size, if it proves to be generally true, will, of course, increase the barrelage. With the crop this far along, more growers seem to be inclined to swinging to the theory maintained last spring by Dr. Chester E. Cross that the yield will be a "good" one. As for Dr.

Cross himself, he has not changed his original estimate (which he figured last March, but with the figure not published previously, as 575,000 bbls. or even larger than last year). If this estimate is not reached, he says, it will be only because he did not figure in a heavier-than-usual insect damage. He weighed this factor at the time, but had no way of determining in advance what this loss would turn out to be. Weather and other factors have been splendid.

Heavy Insect Infestation

As it has proven, this has been one of the most troublesome of insect years. This was not indicated at the beginning of the season when Gypsies were not of great importance and grub was not especially active. However, fireworm has lived up to its usual reputation as a first-class pest and fruitworm has developed very heavy. Weevil injury has been the worst in years, and particularly so in Barnstable County, chiefly on outer Cape bogs. On some individual bogs this has been severe.

Rains Aided Insects

Insect injury would have been much worse, however great it does develop for the season as a whole, if growers had not been so alert and willing to get after the bugs right on schedule. Growers have definitely minimized the potential losses. However, the rains of July have not been helpful in this respect, as materials have been washed off after application. In this insect control, 'copters and straight-wing planes played their part. By keeping off the bogs to such a large extent in insect control, growers have, it may be supposed, raised the potential to some

extent. A very great quantity of materials of various kinds have been used this season, and growers have been wide-awake in making fruitworm egg counts and then immediately applying insecticides. For instance, members of New England Cranberry Sales have brought samples in to Fred Hepburn at the packing house at West Wareham for help in much larger numbers than ever before, and the ground crews of the Company (in addition to the air control program) have done more work than ever before. In fact, operating crews have been increased by more than threefold.

As August comes in, a great many growers say their individual bogs look as good or even better than last year. Most growers now seem to expect a "good average crop", as they express it. Some, on the other hand, feel the crop may not come to 500,000 barrels, and it is pointed out that some of the larger growers do not anticipate good production, because of holding large acreages under for grub control or other specific reasons.

Opinion is far from unanimous this year.

NEW JERSEY

Rainfall

Following near drought conditions during late June and early July at Pemberton, a prolonged showery period from the 7th to the 22nd overcame the deficiency with plenty to spare when 5.5 inches was recorded at the Laboratory. This is 1.29 inches above normal for July. A large proportion of this rain fell during the daytime

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A STATE OF MAINE CRANBERRY GROWER

Foreword:—Maine has a more ancient and apparently impressive cranberry history than is generally known. Efforts toward cultivation were begun in the Pine Tree state at least as early as the 1850s; vines had been imported from Massachusetts by then. Even scanty research, which could well be preliminary to more extensive study reveals some interesting facts of early Maine culture.

There are at least two bogs, built and maintained in true "Cape Cod fashion", operated in Maine today. One of these is at Hollis, where a former Cape Cod man, now in his seventies, grows and harvests his crop every year on a property estimated as at least 75 years old. The other is the one with which the article which follows is concerned. At Alfred, historic shiretown, a Maine man, Jerry A. Giles (who was a Cape Cod visitor last fall) intends to build new bog, and a neighbor is to rebuild on the location of a bog which has a remarkable history—remarkable in the conception of its planning and its operation. This property was planted before the Civil War and was harvested "on the flood" seemingly long before water-raking was devised in Wisconsin. Its builder appears to have been a man of very advanced ideas, not only as to harvesting his berries, but in the handling and preparing for market—ideas which in efficiency are almost beyond today. With the obtaining of more information, it is hoped this fascinating story may be told in a subsequent issue of CRANBERRIES.

As concerns Maine in general, Dr. H. F. Bergman has made limited studies of native Maine varieties. In September, 1932, he found a variety in the margin of a swampy pond at Turner which he has designated as "Maine No. 25". This he describes as a medium late variety, with the qualities of good size and color, of being an unusually good keeper and a persistent cropper. He has planted at the State Bog, East Wareham, a single cutting of this vine, which now covers an area about five by 25 feet. Although promising, it was not used in the cranberry breeding program as a parent, but is being observed. In general, Dr. Bergman feels the vines from around the Maine ponds are not very good. They have big berries and bear heavily some years, but production is not steady.

One of the earliest references to cranberries has to do with those of Maine. This is the oft-quoted description of John Josselyn, "Gen-

tleman", who made a visit from England in 1639, coming to Boston, and then spent a year with his brother at Black Point near what is now Scarborough. The reference to cranberries is in his "New England Rarities Discovered", a book which has since been of great value as an early botanical refer-

ence. As to the use of cranberries, even at that early date, Josselyn wrote: "The Indians and English use them much. Boiling them with Sugar for Sauce to eat with their Meate, and it is a delicate Sauce, especially for roast Mutton; some make Tarts with them as with Goose Berries."

By CLARENCE J. HALL

The leading and best known cranberry bog in Maine today is at Madrid Station, town of Phillips, Franklin County, about 50 miles inland from the coast and up among the small mountains of back-country, Maine. The altitude of this bog is approximately 780 feet above sea level (U. S. Geographical Survey, Phillips Quadrant) in decided contrast to the usual cranberry location, such as Massachusetts State bog at perhaps 20 feet.

Currently operated by Leon R. Wing, this bog was built by his grandfather, Silas, in 1880-81, passed down to Leon's father, Bion, and it may come to be operated by Leon's son, Bion, in the future. The bog, situated in a pleasant valley between wooded hills, is one of seven acres. Its top crop, Mr. Wing says, has been 920 bushels. The average is 420 bushels, which at about three bushels to the barrel is 20 barrels to the acre.

Leon's father, who died in 1935, for many years operated it as a profitable venture, and Leon says he has, himself, netted \$4,000 a season, although this does not include any valuation of his own time. "We have had 700, 800 and 850 bushels time and time again", he says.

"Wing Cranberries" so designated widely in Maine retail outlets, do have a reputation over Maine and usually bring a premium price, even over "Cape Cods". In some stores in Maine, cranberry customers will not take any other cranberries until the "Wing" berries are gone. Mr. Wing mostly disposes of his crop to a commission house in Portland.

The Wing bog is chiefly set to native Maine selections, planted by Silas, who, incidentally, was reputed to have been an extremely able fruit, as well as cranberry grower, having the reputation of the finest orchards in Franklin County, producing apples, pears, plums and grapes. These native Maine cranberry vines are slender—not as thick as those of Massachusetts. The major part of the bog is set to a vine bearing a round berry which Mr. Wing knows as the "Cherry". There are a few of what he describes as "Bugles",

both of these being names similar to those given to cranberries, because of their physical shape, by the earlier growers of Cape Cod.

The Locally-Famous "Dills"

Then there is the pride of the Wing bog, the "Dills". These are a large, round, and well-colored berry, the name coming from the fact they were a selection from wild vines developed by a man named Dill, a major in the Civil War. There is only a third of an acre of Dills, but on that third-acre, Mr. Wing says, there have been gathered 140 bushels, which would be in the proportion of about 140 barrels to the acre.

Dr. Bergman included this bog in his visit to Maine in 1931, and his notes of that date describe the "Dill" as "an early variety, with large and very red fruit, which colors early." He has considerable regard for this fruit, as well as the "Maine No. 25", and feels both are varieties of possibilities. Other varieties which he found there were the "Cherry", describing this as a variety "later than the 'Dill', fruits more nearly spherical and somewhat broadened transversely, red with decided bloom, a good bearer, and fruits keep well; a white, pointed berry of same shape and general appearance, except

that it never turns red, was mixed in with this to some extent". The "Cherry" was obtained from a Mr. Masterson of Weld. Two other varieties, "Bell" and "Bartlett", were obtained from a bog at Peru, Maine, although said to originally have come from Cape Cod. There is also a small patch of "Vose's Pride", (Cape Cod). The "Cherries" were sent to Bion Wing by Dr. Franklin. Of the "Dill", Dr. Bergman added it is a poor keeper, but is said to keep better than Early Blacks.

The present Mr. Wing knows little of the origin of these varieties, except scraps of information he had gathered from his father, and nothing whatever of the history of Major Dill. "Agriculture of Maine", 1866-76, however, tells that "Dill's first name was Seward, and that a report on cranberry cultivation had been requested, and this early Maine cranberry grower had prepared and possibly presented this report.

At any rate, the report indicates that Dill had begun cultivating cranberries as early as 1851 at Phillips, although not at Madrid section—that he had first planted on land not cleared, but that he did prepare a bog in approved Cape Cod fashion in 1857. Among the vines he obtained for his first planting were cuttings from West Bridgewater, Massachusetts. He had planted on muck 3 to 8 inches deep, and had tried to kill out hardback by flooding for two years, but without success. In the 1857 planting he had obtained cuttings from a William Fowle of Strong (Maine) and a "basket" from Wells, also Maine. Major Dill had found the Strong vines "small", those from Massachusetts "larger with runners", and those from Wells "in between".

Although Dill did import vines from Mass., the berry which was given his name is believed to be a local Maine selection.

The vines on the Wing bog today, Mr. Wing believes, are practically all from these original plantings, which speaks well for the lasting quality of these natives and of this Maine situation as related to the growing of the Massachusetts importations,

Built "Cape Cod" Fashion

Silas Wing, in the main, built his bog along "Cape Cod lines." The location was originally heavily wooded and he cleared this swamp, drained it, dug ditches, leveled the muck, and then spread several inches of sand and set out the vines. It has marginal ditches.

Many subsequent sandings have brought up the sand to a depth of about a foot, this sand being over very good peat, as revealed by a boring with a soil auger. Dr. Bergman, however, found the bog not well drained. The bog seems shallow and dikes are not high.

Although better drainage might improve this Maine bog, its water supply is something to marvel at. The source is Toothacker Pond, which is not visible from the Wing property. Toothacker is a very pretty, typical Maine lake, small, but deep, and rimmed with birch and evergreens. When a flood-gate at the pond is opened, the water, after going beneath a culvert under a highway, makes a rapid drop of 30 feet from pond to bog, racing through a narrow valley as a swirling brook and out into the bog.

Frosts "No Problem"

With such a head and drop, frost flowage is no problem at all at the Wing bog. Mr. Wing declares he can put on any frost flood he wants in a matter of 45 minutes. Drainage from the bog is also quick. As a matter of fact, frosts, either spring or fall, do not disturb Mr. Wing particularly, despite his location so far to the north of the Massachusetts cranberry areas.

In the spring, Wing holds the water regularly until May 10th—exactly. "Nothing starts until Memorial Day", he says, "and after that I have to flow maybe two or three times. Knowing when to frost flow is 'a matter of using your head.' With him, it must be more or less that way. There are no cranberry frost warnings available to him. "If the temperature gets to 40 by about ten in the evening and it 'looks like a frost'. I put the water on, or else sit up and watch for a spell."

While he is seldom bothered much he recalls when his father put the water on fourteen times one spring. In the fall he says it may be necessary to flood two or three times. In the spring he refloods two or three times as a matter of good bog practice as he has come to know it, putting the water on at night and taking it off in the morning. This, he says, "takes care of any damage that could be done by bugs or mice before blossom time."

Only Had Two "Bad" Frosts

In the 60 years of cranberry growing at this Maine bog there have been only two occasions when frosts have done killing damage, he says. One of these occurred last summer on July 15th—the period of the same frost which broke July records for lateness in Massachusetts. Until that night he had estimated his crop at 300 bushels. The previous fall had been a big crop for him, and he was not anticipating so much in 1946. However, as the result of that frost he did not pick a single berry.

That night, he recalls, he felt "between the devil and the deep blue sea", as his vines were in full blossom and he didn't dare to flow and he didn't dare not to. He chose not to flow, and apparently "chose the devil", or at least made the decision which was totally disastrous. He also suspected later, he may have injured his prospects for this coming year, so heavy was the damage he sustained that night.

Harvesting at the Wing bog is with the aid of six to eight neighbors of the valley. The pickers still use an old-fashioned box-like scoop, or rake, like those used in Massachusetts many, many years ago, and which today are regarded as "museum pieces" by the few who still possess any. Only a few of the older Cape growers have ever seen these rakes, which are considered to have been a development of a rake used to gather wild cranberries in Europe from wet places. Wing uses these rakes, which were sold by Joseph Breck's of Boston, as a dry rake, or scoop.

The harvesters also use an odd-shaped field box, long and narrow,

(Continued on Page 24)

Wisconsin's 1945 and 1946 Cranberry Crops

By HENRY F. BAIN

The 1945 Wisconsin cranberry crop was the smallest in seven years—81,000 barrels on approximately 2700 acres of bearing vines, an average production rate of 30 barrels per acre. The 1946 crop was the largest of record, 145,000 barrels on an acreage that for yield purposes may be fairly taken as the present total figure of 2800 (8)*, although some of the newer plantings were still far from being in full production. The 1946 yield accordingly was at an average rate of approximately 52 barrels per acre. An attempt is made here to analyze some of the major factors that brought about such divergent yields in the two successive seasons.

1. Temperatures

When it is considered that Wisconsin cranberry marshes are distributed over an area approximating that extending from the bogs of New Jersey to those of Massachusetts, it is plain that no single location can be chosen to represent local temperatures for the entire area. The city of Marshfield was selected from the stations reported in the Wisconsin Section of the United States Weather Bureau's *Climatological Data* (19) chiefly because it is situated in the center of the state and is near the large Wood County cranberry district. Marshfield temperatures from March through September, 1945 and 1946, are shown in figure 1. Daily mean temperatures were averaged by 5-day periods, and normal mean monthly temperatures were plotted as heavy horizontal lines. The curves were made discontinuous to facilitate separation into monthly periods.

* References to Literature Cited at end of article.

Temperature records were carried back to include the month of March because warm Marches have been followed by low yields so often that some observers have come to suspect that warm weather at that period has a direct detrimental effect on the vines (4), (5); and

because, as will be discussed in detail, they are likely to impel radical changes from normal methods of handling water during April and May, and excessive use of water at those times can cause extreme damage to the approaching crop.

March temperatures in 1945 and 1946 were not only abnormally high, but, as Figure 1 shows, were remarkably similar. The daily departure from normal at Marshfield in 1945 was 9.9 degrees, while in 1946 it was 12.2 degrees.

In 1945, relatively warm temperatures continued for the first half of April, after which there was a drop to cooler weather. In 1946 the order of warm and cool halves of April was reversed, but the average temperature each year was normal or above (daily departure from normal, 1945, plus 0.1 degrees; 1946, plus 3.6 degrees.)

May temperatures followed parallel trends both years, being below normal except for the last 10 days each year. The daily departure from normal in 1945 was minus 4.8 degrees, in 1946, minus 2.0 degrees.

June temperature curves for the two years again were almost parallel, but 1945 was colder than

1946. Daily departure from normal at Marshfield in 1945 was minus 4.8 degrees—"the fifth coolest June during the past 55 years and the coolest since 1928" (for the state as a whole) (19); in 1946 the daily departure was -0.6 degrees.

In 1945 July temperatures were below normal except for one 5-day period—"the eighth coolest July for 55 years" (19). Daily departure at Marshfield was -3.5 degrees. 1946 was near normal, having a minus departure of 0.6 degrees.

"With an average temperature of 68.3 degrees August (1945) was the warmest month of the summer and the first month since April with above-normal temperature for the State. However, temperatures averaged below normal at nearly one-fourth of the reporting stations." (19). The average at Marshfield was 66.6 degrees, a departure of plus 0.2 degrees for that station. August 1946 had a minus departure of 1.7 degrees.

The first 10 days of September, 1945, were considerably warmer than normal, following which there was an abrupt drop to the below-normal trend that had characterized most of the summer. The daily departure for the entire month was -0.9 degrees. There was a minus departure of 0.5 degrees in 1946, mostly accumulated during the last 10 days of the month.

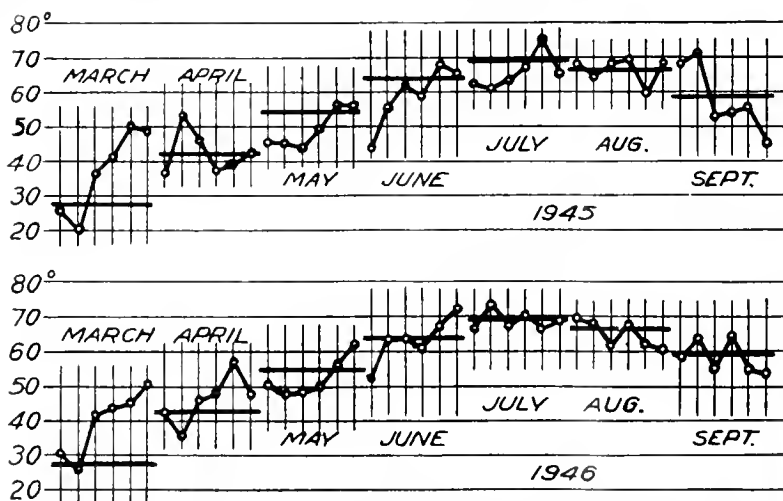


Fig. 1. 1945 and 1946 temperatures at Marshfield, Wisconsin, averaged by 5-day periods. Normal mean monthly temperatures shown in heavy horizontal lines.

In summary, the warm March of 1945 was followed by a growing season (for cranberries, usually from about the middle of May until late September) that was considerably colder than normal every month except for the near-normal month of August. The warm 1946 March was followed by a growing season that while averaging somewhat below normal, lacked the extended excessively cold periods that characterized most of 1945.

A better conception of the severity of the 1945 growing season may be gained by comparing it with extreme seasons in the Massachusetts cranberry region. Stevens (15) gave the temperature summations (cumulative sums of daily average temperatures in excess of 50 degrees) at East Wareham, Mass., for the years 1912 to 1935 incl., the summations being grouped by the periods May and June, July and August, and September. Comparable figures for 1945 and 1946 at the Beaver Brook, Wis., cooperative cranberry observing station of the United States Weather Bureau, are given in table 1. Beaver Brook summations were calculated from upland shelter temperatures; wild marsh daily minimums averaged 4.2 degrees lower than those in the shelter in 1945, and 4.7 degrees lower in 1946. The Beaver Brook station represents the northern-most cranberry district of the state.

The minimum summation of effective temperatures necessary for the maturation of a cranberry crop is not known, but the limit was definitely approached in Wisconsin in 1945. Vines came into bloom almost three weeks later than normal and remained in bloom over an unusually long period. "Full bloom" was reached about July 20

in Wood County and July 25 in the Spooner district. Blossoming persisted until August 15th in some of the northerly marshes. The consensus of opinion among growers was that berries would have failed to mature except for the favorable temperatures experienced in August and especially in early September. The harvest was delayed a week or more on most marshes, and berries were below normal in size, thereby contributing in some degree to the shortness of the crop.

Despite the coldness of the season, the quantity of bloom was not sub-normal, nor was frost damage excessive. The largest single factor leading to the short crop was poor set of the bloom; evidence will be presented indicating that this was primarily due to water injury during April and May.

That the short crop was not directly caused by warm weather in March and was not entirely due to the cold growing season was proved by the fact that certain marshes produced good crops. For example, a 160-acre marsh near Phillips had its largest crop of record, yielding 13,200 barrels; a 4½ acre marsh near Hayward produced 567 barrels; a 38-acre marsh near Wisconsin Rapids had 2224 barrels; an 18-acre marsh near City Point had 1249 barrels. These four marshes, comprising only 8% of the state's acreage, produced 21% of the total crop, or at a rate of 78 barrels per acre compared to the state's average of 30 barrels per acre.

In contrast to 1945, temperatures during the 1946 growing season were generally favorable. Peak of bloom in Wood County was reached the first few days in July, and in the Spooner district near the middle of July. Frost loss was again

negligible. Bloom over the state was heavier than normal and the set was definitely superior to that of 1945. With a few exceptions, water injury was unimportant. Berries were again somewhat smaller than normal. The warm March weather had no discernible effect on the crop.

2. Water Injury

While winter flooding practices are by no means uniform, the recent trend in Wisconsin has been in the direction of shortening the winter submergence period. Increasing numbers of growers time the application of the flood to coincide with a cold wave that holds promise of freezing the flood within one week's time or less, which normally comes about Dec. 15 or later. Some who follow this practice make frequent oxygen content tests of water, and drain the marshes before the floods are completely frozen if oxygen drops dangerously low. Other growers apply the winter flood a few inches at a time, allowing successive applications to freeze before more water is added. As a rule, winter weather advances so rapidly that even when the flood is applied earlier than in the above methods, vines stand in water a matter of days rather than of weeks before freezing is complete. Frost usually penetrates an additional foot or more into the soil under the ice during the winter.

Bergman (2) reported that in Massachusetts the oxygen-content of water under ice or snow-on-ice often drops with great rapidity, and Lewis and Stevens (13, 14) found similar results in Wisconsin. While records are few and indefinite, it seems safe to hazard the opinion that Wisconsin marshes frequently suffer some oxygen-deficiency injury while the winter flood is freezing.

The writer has seen no evidence that injury of this type occurs while the vines are frozen in ice. Blossom counts in 1944 (1) failed to demonstrate injurious results from sanding on the ice.

Vines stand in water again in the spring when the winter flood melts, the length of submergence depending on the practice followed in removing the flood. Some grow-

TABLE 1

TEMPERATURE SUMMATIONS ABOVE 50 DEGREES, BEAVER BROOK, WIS., 1945 AND 1946, AND EXTREMES AT EAST WAREHAM, MASS., 1912-1935

Location	May & June	July & Aug.	September	Total for growing season
Beaver Brook, 1945	326	908	238	1472
Beaver Brook, 1946	498	970	237	1705
East Wareham; coldest unit-periods in 24 years	400 (1926)	973 (1923)	246 (1917)	1619*
East Wareham, coldest summer in 24 yrs. (1926)	400	1072	275	1747
East Wareham, warmest summer in 24 yrs. (1931)	654	1292	454	2400

* Sum of coldest unit-periods.

ers allow most of the water to run off as it melts, then raise the flood high enough to prevent spring killing of vines while the upper three inches or so of soil frost are melting, after which the flood is removed permanently. Others hold the flood well over the vines until both ice and the requisite depth of frost have melted. Still others hold a full head of water until ice and all frost have disappeared, and even longer if cold weather persists.

Some marshes are later given a "spring reflow", usually lasting about 10 days, just before vine growth is expected to start. On the average, the spring reflow is applied about May 1 in the Wood County district, and May 10 in the Spooner district. Lewis (13) pointed out that it is possible for water injury to occur during the spring reflow. In general, however, growers have not feared water injury at either of the above two periods.

The greatest amount of water injury has usually followed winters of heavy snowfall, and there seems little doubt that it has taken place while the vines stood in water under snow-covered ice. The 1941 crop, for example, was the last previous to 1945 that dropped below 100,000 barrels, and it followed "a comparatively mild winter with a lot of snow" (9). Vines were thought in March to have "apparently come through the winter in good shape" (9), but in June it was reported that "There has been some leaf drop in that state" (10). Some growers did not flood during the winter months, depending on the snow cover for protection. (Fruit bud counts given later indicate that budding for the 1941 crop was also below normal).

The abnormally warm weather of March and early April 1945 introduced problems with which experience was lacking. Ice and frost completely disappeared shortly after the middle of March. Some young vines in the central part of the state made visible growth by the middle of April and many growers feared that fruit buds in older vines might have developed enough to become susceptible to freezing. Rather than risk the known dangers of frost injury,

these growers replaced the winter flood in April, some holding it for 30 days or longer. Others with ample water supplies covered the vines only during actual freezing weather. (Marshfield, at a higher elevation and probably having minimum temperatures several degrees above those of the Wood County marshes, had 20 April and 6 May nights with temperatures 32 degrees or lower). In a few instances, growers reasoned that the vines were less likely to start growing under water during warm weather and retained the winter flood until the middle of April or later. A few growers in the central part of the state and most of those farther north followed the usual routine and did not protect against April and early May frosts after removing the flood in March or early April.

Subsequent vine behavior correlated closely with the way the water was handled. In the central part of the state, vines which were drained early and not protected before the middle of May bloomed distinctly later than those handled by other methods, and yields were materially reduced by small size of berries. The best crops in this area were obtained on the marshes that were flooded intermittently and briefly through April and May. Crops were equally poor on marshes kept flooded through March and April, and on those reflowed for long periods in April and May. On the average, the northern marshes produced the best crops, although, as noted, bloom was late and berries were small. As the result of 1945 experience, long submergences were generally avoided during the similar 1946 weather.

Most of the types of water injury described by Bergman (2) were present in profusion in 1945. Fruit buds dissected before growth started exhibited varying degrees of injury—entire buds killed, apices of buds killed, but lateral flower initials uninjured (these later develop into "umbrellas" or "bald-heads", producing flowers, but not the central uprights), or one or more individual flower initials killed without the stem apex being affected. Fruit buds of the latter type give rise to the condition

called "bud absorption" in Wisconsin; as growth proceeds, the injured flowers either fail to grow at all, or the flower stalks bearing dead flower buds at their tips grow a short distance from the upright and then die and dry up. In addition to the above types of injury, there was definite failure of flowers to set properly.

One of the commonest early indications of water injury was noted soon after terminal growth started. Injured vines, most frequently located in slight depressions in beds or on lower ends of sections, remained dormant and dark in color, while surrounding uninjured vines were covered with reddish-green new growth. Uneven starting of this type appears almost certain to indicate water injury. Vines in the injured areas started growing later in the season, and if the injury was not too severe some of the fruit buds succeeded in blooming and setting berries that were immature at harvest time.

The greatest amount of injury seen in 1945 was of the milder types; there was relatively little bud killing, but some killing of individual flowers, a great deal of delayed blooming, and, above all, long-spread-out appearance of flowers that simply failed to set.

Observations on two marshes gave an insight into the parts played by water injury and certain other factors. On one, the 73-acre Biron marsh near Wisconsin Rapids that had occasionally been damaged by water in previous years, the 1945 winter flood was held until May 15, while in 1946 the flood was withdrawn March 29 and not raised again. On the other, the 160-acre Cranberry Lake marsh near Phillips that had not had a history of water injury, although the winter flood is regularly held later than on the average marsh, the 1945 flood was withdrawn April 24, after having been lowered once or twice during the warm weather; the 1946 flood was held continuously until April 15. The Biron marsh suffered severe water damage in 1945 and moderate amounts on some sections in 1946. The Cranberry Lake marsh was practically uninjured in 1945, but was one of

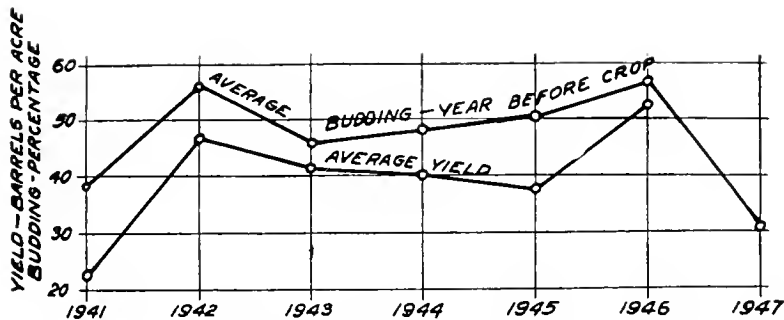


Fig. 2. Annual Bud Set and Production at Badger and Midwest marshes, 1941-1946.

the few in the state extensively damaged in 1946. 205 random fruit buds collected on the latter marsh on May 31, from two sections that later proved to have less than the average amount of injury, were dissected and examined for injury with the following results; buds dead, 12 (5%); buds with one or more flower initials dead, 75 (35%); buds apparently uninjured, 120 (58%).

1945 bloom was judged to have been about equally heavy on the two marshes, i. e., the injury at Biron did not greatly reduce the numbers of flowers. Differences in set, however, resulted in widely different yields: 29.2 barrels per acre at Biron, 83.7 barrels at Cranberry Lake. The 1946 injury at Cranberry Lake reduced both the numbers of uprights that bloomed and the numbers of blossoms per upright; and as the blossoming season extended over a long period, the numbers of flowers in bloom at any given time were unbelievably small. The percentage set was phenomenally high, however, a circumstance that will be discussed later, and resulted in a yield of 38.4 barrels per acre; the Biron marsh yielded 81.4 barrels per acre.

Fruit set counts on the 2 marshes, made by the method described elsewhere (1), are given in table 2. The sample counts brought out the differences in type of injury with great clarity.

That the widespread failure in set in 1945 was the direct result of water injury was evident from three facts: 1. It occurred on marshes which were flooded for long periods in April and May, but was absent on nearby marshes which were not subjected to long

floods. 2. Unmistakable forms of water injury occurred locally throughout marshes that failed to set properly. 3. Similar failure to set was experienced on 2 marshes where oxygen-tests were run, in locations where oxygen content dropped too low before water was removed.

(Continued next month)

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Ace Directors In Wisconsin

Directors of the American Cranberry Exchange were to meet at Wisconsin Rapids, Wisconsin, this year, August 7th. This is the usual pre-harvest meeting, held in Massachusetts last year.

Directors gathered in New York, August 5th, and, with the exception of two, took the train to Wisconsin in a group. The two attending otherwise were Homer L. Gibbs of West Wareham and George R. Briggs of Plymouth, who flew to Milwaukee, reaching the Rapids from there.

NCA COMMITTEE MEETS IN WEST

The West Coast Advisory Committee of NCA held a meeting at Bandon, Oregon, July 20, to summarize the season's activities to that date and to plan for the rest of the year. An output increase to 150 barrels per day is to be expected at the NCA cannery at Coquille. Completion of a cold storage unit to hold berries at the plant for later canning is expected this year and a unit for freezing cranberries for the frozen food market is planned for installation next year, it is understood.

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ADVERTISING CRANBERRIES

IF it may be assumed that the industry is coming into a period of expanding production, and this does seem to be the prospect, then it becomes obvious that a larger "selling job" must be done. By this is meant no criticism of present agencies and methods, but simply that with **more** cranberries to sell each year **more selling** must be done. More people must be induced to eat more cranberries more often—markets and demand must be intensified and broadened if the grower is to continue to get good returns.

The advertising of cranberries may be becoming an industry-wide job for the industry to take over as a whole under some plan or other. Individual units are doing fine jobs of advertising "brand" cranberries and this should not be lessened. But shouldn't this be added to in a program of industry-wide advertising of cranberries, just as cranberries?

C. M. Chaney has already made a suggestion along this line with his proposal for a "Cranberry Institute" which would advertise cranberries, without mentioning any trade name or brand. This has been discussed by others to some extent—methods as to how cranberries can be more extensively and intensively advertised and all growers paying their proportion of the costs. One way it could be done could be through the regional associations.

With increasing cranberry crops, and undoubtedly keener competition ahead for cranberries there must be an intensified effort to make general consumers more aware of cranberries and to buy more cranberries. This advertising, perhaps on a barrel basis by the growers, could be done through regional associations. In this day and age adequate advertising is important, and above the splendid "brand" advertising being done now, the pushing of cranberries on an industry-wide basis, could add weight to make people more "cranberry conscious."

DOWN In Jersey there has been a "skeeter-meter" set up at Burlington to reliably estimate the efficiency of mosquito control. This machine, it is reported, is to measure the number of 'skeeters, not by

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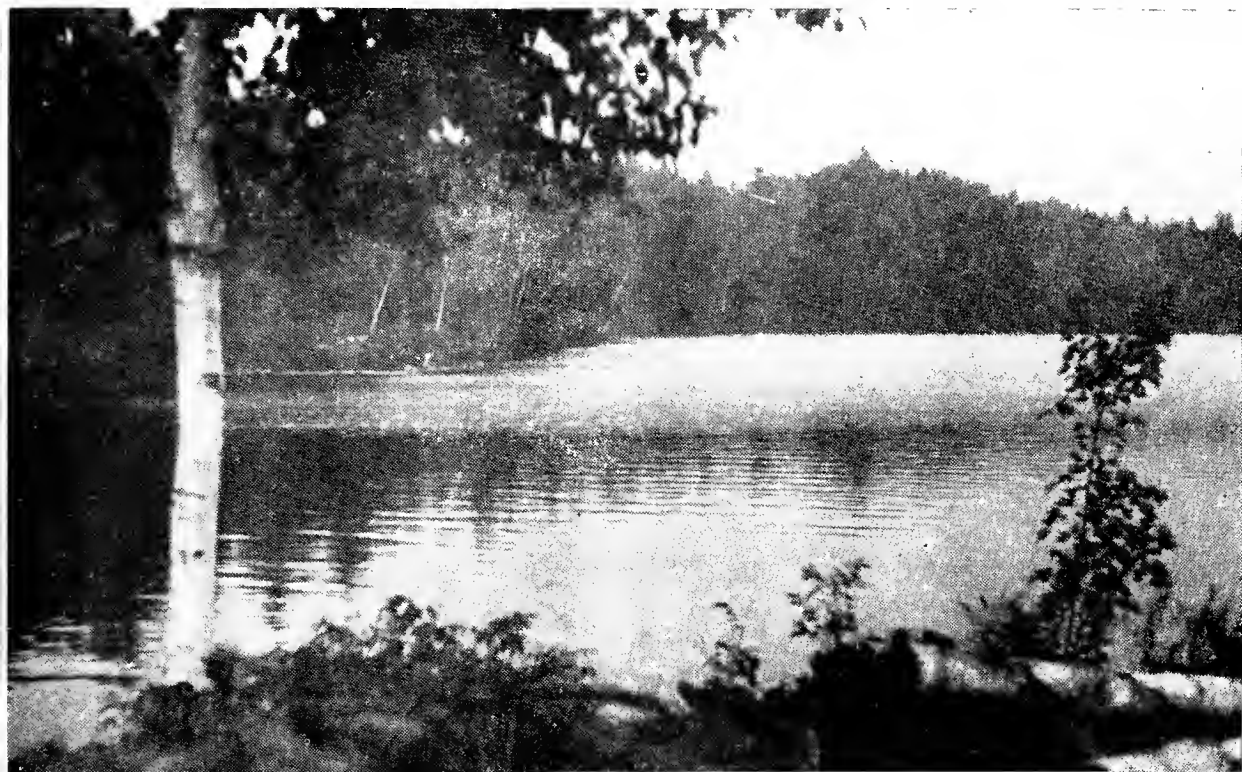
New Jersey

CHARLES A. DOEHLERT,
New Jersey Cranberry and Blueberry Station,
Pemberton, New Jersey

the number of bites suffered by Mr. and Mrs. John Q. Public, but by the nightly catch of the insects. The nightly catch was from 5 to 9 in a 12-hour period. A 12-hour "bag" of more than 42 was held to mean the pests were too numerous. Rural life is certainly becoming more and more scientific.

WE were rather surprised to be informed recently that the word "National" in our title of "Cranberries, the National Cranberry Magazine", has led some to the belief there is an affiliation with National Cranberry Association. There is none, the word "National" has been used in the title since the magazine was first published in 1936.

Pictorial Section

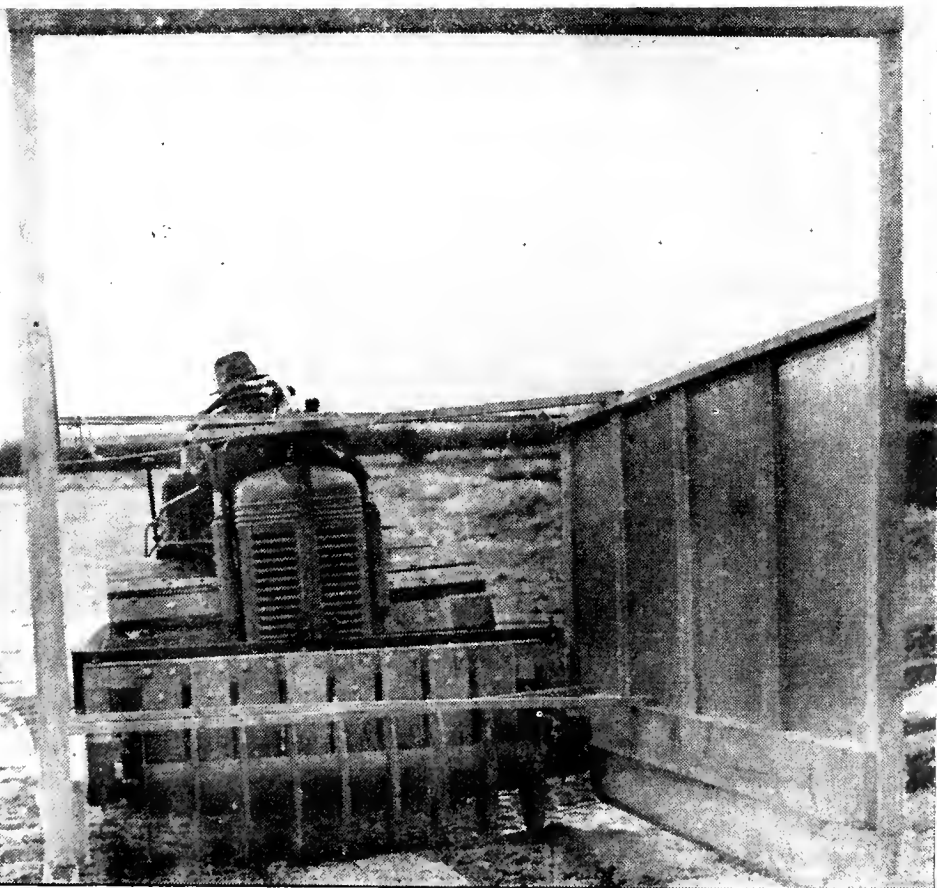
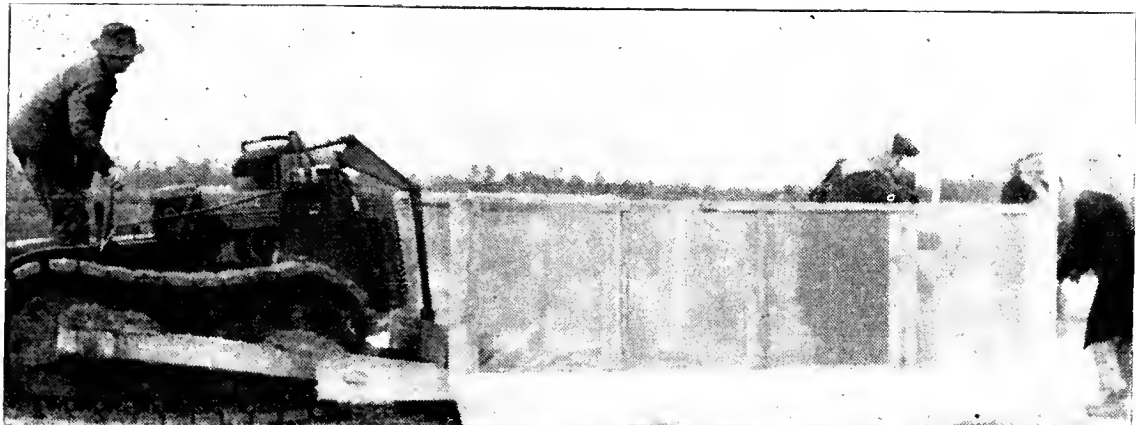


Upper—Shows lake at Madrid Junction, a typical Maine lake, at point from which the Wing bog is flooded.

Lower—Wing bog in September, 1917, late Bion Wing (left) and Dr. Neil E. Stevens, (back to camera), using the local longhanded scoop. (Cranberries Photo)
(Photo courtesy Bureau of Plant Industry, U. S. Department of Agriculture)



A straight-wing plane spreads fertilizer on Pierceville bog of A. D. Makepeace Company (story page 20). Russell Makepeace, acting as flagman, has just lowered the flag, which guided Pilot Braun on his run. At right Dr. Chandler walks over to make check on spread canvas. (CRANBERRIES Photo)



New Jersey vine setting machines. Photos 1 and 2. (See Next Page)
(Photos by Wm. E. Tomlinson, Jr.)

Jersey Growers Experimenting with Vine Setters

Much interest has developed in New Jersey in mechanical "vine planters." Several growers worked on designs of their own during the winter, and these were placed in operation, apparently with satisfactory results, this spring. "Planting Vines by Mechanical Methods" was the subject of a discussion by a five-man panel at the annual convention of the American Cranberry Growers' Association at the bogs of Clayberger & Goodrich, near Atsion last August.

Those taking part were J. Rogers Brick, Medford; Isaiah Haines, Whitesbog; Theodore H. Budd, Sr., Pemberton; J. Sterling Otis, Tuckerton; and a paper by H. B. Scammell was read. All of the devices are of the disc harrow type and one of the most ingenious was made at Jos. J. White, Inc., by replacing the bulldozer blade of a small track-laying tractor with the harrow, making use of the lift for adjusting the depth of planting.

Describing the Whitesbog machine Haines said:

"For motive power we have a crawling tractor with 18 inch track. We designed a straight, or perfectly flat disc of $\frac{3}{8}$ inch material. The edge of the disc was blunt, simply left as it was cut. These discs were mounted on a home-made axle with wooden spacers, holding them six inches apart. The assembly was mounted on a hydraulic lift.

"After scattering the cuttings on the prepared bog, we pushed them in to a depth of about 6 inches with the discs. The caterpillar tracks following pressed the soil firmly in two bands. Then, without turning the tractor, we returned to the starting point and pressed down the soil in another pair of strips, completing the job and bringing us into position to start another round.

Photographs 1 and 2 show a similar machine in operation at Sim Place, Penn Producing Company, this being an exact duplicate of the Whitesbog machine except for the windshield which Isaac



Photographs 4 and 5 of Brick vine setter. (Photos by Wm. E. Tomlinson, Jr.)

Harrison added to keep the vines from rolling up into a ball on a windy day.

Mr. Brick, in describing his machine (photos 4 and 5, asserted he was not recommending the practice to others, although for himself it had worked out very well. He said:

"After all stumps are removed and the ditches prepared and leveling done, the area is worked with a double disc farm harrow. This discing is done through the summer in order to kill weeds, grass, etc., and the soil is prepared by this harrow until it is in about the condition that we like it on the farm for planting corn.

"The bog is drained and dried off as early in the spring as possible and disced again in preparation for planting. When we are ready to plant, with the vines in a central location, we proceed as follows: The vines are cut in about 6-inch lengths and placed in baskets for the men to spread evenly over the ground. These men, with baskets of vines, will start on one side of the bog and spread the vines over the ground, using about 10 barrels per acre. As soon as a strip is covered with vines the harrow, with a land roller hitched behind it, is drawn over the area covered with vines and the discs push the vines into the ground and cover them and the roller has a tendency to help fasten them. The discs are used with very little set."

Mr. Brick added that the success of this method depends on timing the operation when the soil is in right condition for the harrow, as if it is too wet or heavy the vines will not be covered. At the end of the day it is very essential the bog be flooded to firm the soil and uncover the tips of many cuttings that would otherwise be buried in soil. This means that any area not planted cannot be worked again until dry. "We try to get enough help so that the entire bog can be planted in one day and have been able to plant ten acres with ten men in one day."



Photo taken at the home of J. K. Baker at bog, this bog being one of about five acres, but one of the largest in an area which produces from 150 to 250 and 300 bbls. per acre. Rear row, left to right: A. B. Woodworth, director Coos Co-op; C. M. Chaney, Mrs. Baker, Ray W. Bates, president Coos Co-op; R. P. Russell, Exchange broker, R. P. Russell, Inc., Seattle, Wash.; in front, Lester Haines, Fred Spada, Spada Distributing Co., Portland, Ore.; Elmer Gant, secretary Coos Co-op.

ACE officials In Oregon

During the latter part of June C. M. Chaney, ACE general manager, and Lester W. Haines, recently promoted to assistant sales manager, visited the Bandon area

of Southern Oregon. The "Easterners" enjoyed the trip to the Coast greatly, and said the members of the Coos Co-op seemed very much pleased to be a part of ACE. Chaney estimated that the production of the Coos members would increase from three to five times within the next five years.

Colley Cranberry Company

Plymouth, Mass.

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17 Court Street

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Save This
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This picture shows part of the "flotilla" of 11 Sempos float boats which will be used on Massachusetts bogs this fall to recover the otherwise lost "bottom" berries. The boats, which have been improved over last year's models, are shown in back of the Sempos Products Company on Dick's Pond, East Wareham, where they are manufactured. It is expected more than 5,000 acres of bogs will be "float boated" by Sempos this year. Boats will be on exhibition at the New Jersey Growers' meeting and probably Cape Cod Growers this month. (Photo by Paul Eldredge)

Four Weeks To Picking—

Screenhouse Equipment will be needed.

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Equipment needed for Fall:

Pumps

Sanding Wheelbarrows

Bog Tools

HAYDEN SEPARATOR MANUFACTURING CO.

E. C. St. Jacques

WAREHAM, MASS.

Coos Bay, Oregon

July 1947

Western Pickers Inc. Conducts a Question and Answer Column

What is the rental cost per barrel for the machine?

The charge per barrel will be announced when the machines are released and will include all cost of supervision and mechanics, but not the cost of operator and box handling crew, which the grower will supply.

Why a royalty charge instead of an outright sale of the machines?

(1) Most growers are still skeptical that such a machine exists and would rather wait to see it demonstrated.

(2) Most new machines are rapidly improved after first use, and Western Pickers, Inc. wants a thorough test of machines under its own supervision.

(3) The small grower fares the same as the large grower in picking costs.

Does it harm the vines?

We expect less damage to the bog, vines, and berries than by any other method of picking, and observation indicates that the average yearly production gradually increases.

What time of day is picking done?

The best time, of course, is when the vines are dry in the daytime, but with slight alteration it will pick in water or in the middle of the night.

How about untrained vines?

The first time over, of course, is the hardest. Cowlicks, whorls, tufts, and flattened out places must all be straightened out and placed in position, in addition to picking the berries.

How clean does it pick?

It picks all the berries above the low point of its teeth. It could pick berries off the ground, but it is hardly advisable because it might damage the ground runners.

How fast does it pick?

For estimating purposes, one acre a day has been set as its capacity.

What is the long-time effect on the grower?

It should result in better kept bogs because of less picking time and less worry during harvest time.

Can all growers have a machine?

We will have only twenty-five machines this year, which is only a fraction of what is needed. Growers should apply to the National Cranberry Association which will allocate the machines, giving as many growers as possible time and opportunity to use the machines.

Naturally, members of National Cranberry Association will have preference in scheduling the machines. (Advt.)

Air Dusting Continued in Mass. Through July

Insect control from the air in Massachusetts continued on the large scale all through July, weather permitting. Rainy weather did interfere somewhat and minor difficulties continued to develop in the 'copter program, particularly mainly hopper, gate, and some mechanical troubles. There were also long delays in the 100-hour check-ups of the machines. There were no more accidents, however, and the assurance grew that air control of insects will be the main reliance in the future, there being a strong leaning to preference of the 'copter by a great many, but others still feeling small, fixed-wing planes do a satisfactory job at much lower cost.

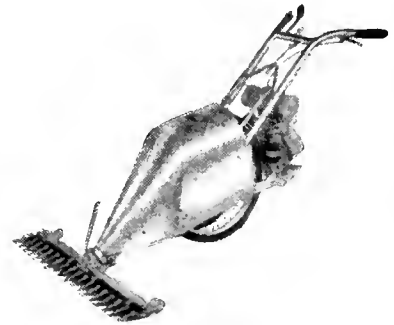
On August 1, acreage dusted by the NCA machines totalled 6,279, and of upland 244, for 247 accounts. 235,355 lbs. of dust had been used and 771 gals. of spray. Average acreage per hour was 18. This included the time of flying to and from the loading bases to the bogs. This factor consumed considerable time, as many of the bogs of NCA members are small. The fact is that 74 per cent of NCA membership is made up of growers who operate 10 acres and less.

The NE Sales 'copter, operating from the Plymouth airport in Carver, had done approximately 2,000 acres in all by the end of the month. Two operators were available to work this ship in turns, one a test pilot from the Bell Aircraft company. In addition to the 'copter service NE had furnished straight-wing service and more ground dusting than ever before.

Makepeace company, which has led in straight-wing work, had put on approximately 140,000 pounds of material by the end of July. This would be approximately 2800 acres, based on about 50 pounds to the acre.

Crop Duster, Inc. of New Bedford also continued work for individual growers up to practically the end of the month.

Some of this work was, of course, "repeat" coverage of the same acreage for one reason and another, including different insects.



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Air Fertilizing Tests Conducted

An experiment in spreading fertilizer by Piper Cub was made at the Pierceville bog of the A. D. Makepeace Company July 25th, with apparently successful results and at least proving that this practice is feasible. Results were checked by Dr. F. B. Chandler, assisted by George Rounsville of the Experiment Station.

This practice provides another use for aircraft in cranberry growing.

The bog on which the demonstration was held had a few days previously been drained from a late holding for root grub. Russell Makepeace had marked off four acres in four one-acre plots. The first two were tested for the rate of application, on one a fertilizer of 13-30-0 being used and on the other a 5-10-10 mixture. The ship, piloted by Freddie Braun, carried 100 pounds of fertilizer, loading at the Cape & Vineyard Airport on Route 28, Wareham.

A new type hopper was used, said to be developed along the lines of a "seed pan" for seeding from the air. This was later used for dusting with excellent results.

As fertilizer is heavier than dust, the plane can be flown in more wind and after the dew has gone from the vines. The spread-

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ing was done from a height of ap-
proximately 20 feet above the vines.

A comparative test with a ferti-
lizer was held at the bog of R. M.
Andrews, Carver, August 4th, with
results which were considered ex-
cellent. A large group, including
Dr. Franklin and H. F. Bain of
Wisconsin, witnessed this demon-
stration.

Fresh from the Fields

(Continued from Page 5)

and consequently interfered to
some extent with the blueberry
harvest. Though the loss may not
have been great, there was some
loss.

Temperature

July has been cooler than nor-
mal, with only two days in the

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East Wareham, Mass.

90s. The average daily mean temperature at Pemberton was 73.7 degrees, 2.3 degrees below normal.

Crop Prospects

There have been a number of very encouraging reports from growers on this year's cranberry prospects. Last year's production probably won't be beaten, but it appears there will be no repetition of the 1943, 1944 and 1945 lean years.

With the peak of the blueberry harvest over, that crop is expected to approximate quite closely the record crop of 1946.

Insects and Diseases

The cranberry fruit worm has appeared in more numbers than usual on some early drawn and dry bogs. The false yellow-headed fireworm or Sparganothis fruit worm has been noted on several properties in varying amounts. The yellowheaded fireworm has been troublesome on several bogs this season where control was not applied for the first generation.

WISCONSIN

July Frosts

As July was ending Wisconsin was still a week to ten days late insofar as the growing season was concerned. On the night of July 21 there was a fairly heavy frost

with temperatures reading from 28 to 32. Most marshes had to flood that night. Very little damage was suffered by the growers. On the previous evening, Sunday, July 20, there were some cold spots on the border-line of flooding and a few marshes ran some water.

Insects

Second brood fireworm at July end was just starting to hatch, but it did not look as though there would be a serious infestation. Fruitworm has shown some tendency to work in the berries, but likewise there was no serious threat. There was considerable activity in the control of leafhop-

per. DDT seems to be the favored insecticide, with considerable cryolite and pyrethrum being used also.

"Average Crop"

C. D. Hammond, Jr., general manager Wisconsin Cranberry Sales Company, was saying of the crop as the month ended, "at the present time the set-up here in Wisconsin looks fairly good and the crop will be average or a little above average if nothing adverse happens during the rest of the growing season."

New Plantings

Of the between 400 and 500 acres planted in Wisconsin this year,

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Vernon Goldsworthy planted a little more than 50 acres at his new northern development, which was by far the largest planting in the state. "Goldy" is now getting ready for planting next year and with what he will put in for himself and acreage of which he has charge he expected to plant 75 acres in the spring of '48.

"Guessmate" by Goldsworthy

In mid-July, Goldsworthy, who every year does not hesitate to put forth an early estimate, of the 1948 crop says: "If I was to guess at the crop now, I would guess it from 110,000 to 120,000 barrels. The new acreage which is coming in now is beginning to mean quite a lot."

WASHINGTON

Slightly Bigger Crop

At the end of July D. J. Crowley was saying the "crop still looks slightly better than last year." There was a lot of rain during July, and this is so unusual that Crowley never before experienced

that in the 25 years he has been at the Washington station. There was little need for the use of sprinklers. Insects were remarkably scarce, he reports, also.

Bog activities continue heavy; several growers are clearing small acreages with a clam shovel, gasoline powered. Among those so engaged are Newkirk and Chabot, Joe Alexson and Leomoin McArthur. Morgan, Row and Gorman are using a donkey engine and bulldozer in clearing their acreage.

Annual field day of the Washington growers was to be held August 8 at Long Beach Experiment Station and this was to be followed the next day by a tour to the Grayland district.

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LITERATURE - PRICES
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Maine Grower

(Continued from Page 7)

with slatted sides. When placed in a small screenhouse, which he maintains by the side of his bog, these boxes provide ventilation for the berries while in storage.

The Wing bog has its own system of screening, and it works on the familiar "bounce" principle, but the rig is not like the ordinary separator.

"We have a home-made elevator, upon which we run the berries to take out the chaff, dirt, and soft berries", Mr. Wing explains. "The soft berries, if any, run slowly and drop through spaces in the elevator—the hard berries jump these spaces and land in a box at the bottom."

Disregards Insects

It has been said that frosts bother Mr. Wing but little on this

"Way Down East" bog. Insects trouble him not at all. He never sprays or dusts because he says there are no insects in Maine which will seriously injure his crop. He disregards this problem, so

troublesome to growers elsewhere.

In the winter he puts on a flood as soon as the ground really begins to freeze, just about as is the practice in Massachusetts. He does not flow particularly heavy,

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Eatmor Cranberries

Financial returns to cranberry growers depend principally upon the price obtained for fresh berries; as long as growers control the distribution of the fresh fruit there will be a stable industry.

Growers assure the successful marketing of their crops, whether "fresh" or "processed", by participating in the operation of this one member - one vote organization.

Members truly control the organization and thus can be assured that its primary interest is that of all members.

Now is the time for cranberry growers to affiliate with this organization and its associated companies.

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Tel. Barnstable 107

just enough to put the vines completely under. He tries each year to get in some ice sanding, and while there is always enough ice in his Maine inland area, there is usually also so much snow he is only able to put in a few days of work. The face of a huge cliff near the bog is testimony that a great deal of sanding has been done at one time and another. The sand is a little finer than is usually considered the best for bog work in Massachusetts, but it is, nevertheless, good sand.

Bog Has Lasted Well

That the bog was well constructed is proven by the fact that in spite of the years it is in surprisingly good grade. The building of the bog floor was a thorough, painstaking piece of work. It is still heavily vined for the most

part, but its condition as to weeds is not what Mr. Wing desires it to be. Some sections are overgrown, and in certain areas a complete renovation job is needed for restoration. But that same situation is true on many bogs not in Maine.

Does Mr. Wing value his Maine bog highly?

He says, "I consider it just as valuable as any bog on Cape Cod. My berries bring better prices in Maine than do Cape Cods and there is always a market for all I

Continental Red Seal Industrial Engines

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Main St., Wareham, Mass.

Tel. 227

can raise." Also, he hopes his son will want to continue as a cranberry raiser. There would seem to be some likelihood of this, for certain it is that the Wings through three generations, isolated as they are from nearly all contacts with cranberry growing, have stuck doggedly to the business. Leon Wing has made a trip to Massachusetts and visited the State bog, but most of the time he is largely out of direct touch with other cranberry men. What cranberry interest there is in Maine today seems to be entirely individualistic.

Atwood's Parlor Car

Although the Wing bog is assuredly far from the principal cranberry districts, by a pure coincidence there is one "tie-in" with

Carver, Massachusetts, or at least the famous bog of Ellis D. Atwood. The fact is that when Mr. Atwood bought his narrow-gauge railroad equipment in Maine, some of this rolling stock had once

passed along the edge of this bog at Madrid Junction. The Junction today is abandoned, and there are only a couple of houses there, but in days gone by this had been a station on the Sandy River and

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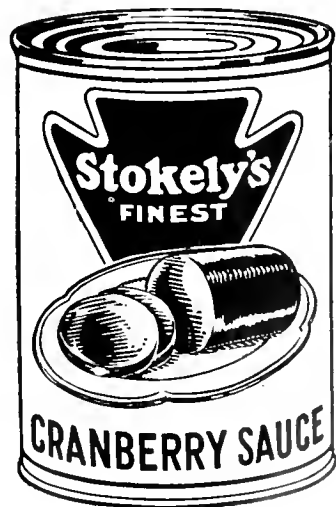
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Rangeley Lakes line. "The Rangeley" parlor car, now operated by Mr. Atwood as the prize piece of the Edaville R. R., formerly went over the rails directly in the rear of Mr. Wing's home. Passengers on the S. R. & R. L. looked out of its windows over the acres of the Wing bog, just as passengers today gaze out over the Atwood bogs.

Oddly, this parlor car seems to be destined to be passing cranberry bog—if not in Maine, then in Massachusetts. There was this association between the slim-gague equipment and cranberry country before Atwood brought the equipment to his cranberry bogs, though he was not aware of it at the time.

(Note: The fact that some of Atwood's Maine equipment had previously been used in this iso-

lated Maine cranberry bog area was first suggested to the writer by Dr. Neil E. Stevens, who is

Maine born, and recognized the coincidence from memories of his younger days).

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to All Cranberry Growers

In the midst of a busy summer we should like to remind you that:

1. During its fiscal year ended March 31st, 1947 the Exchange added 133 members, each of whom will sell, as do all Exchange members, 100% of his berries through his cooperative.

2. There were also 11 transfers, and a number of new members have been accepted since the fiscal year ended.

3. Last year was by far the largest in our history in dollar volume. No one knows what prices will be next year, but the Exchange will have more cranberries to sell.

4. The outlook for fresh cranberries in 1947-1948 is good. There is plenty of sugar again and the wholesalers are showing their usual interest in fresh cranberries. There have already been requests to place orders for cars of Eatmor Cranberries at our opening prices.

We are very grateful for such confidence among wholesalers. It shows that the years cooperating cranberry growers have spent improving pack and grade are appreciated.

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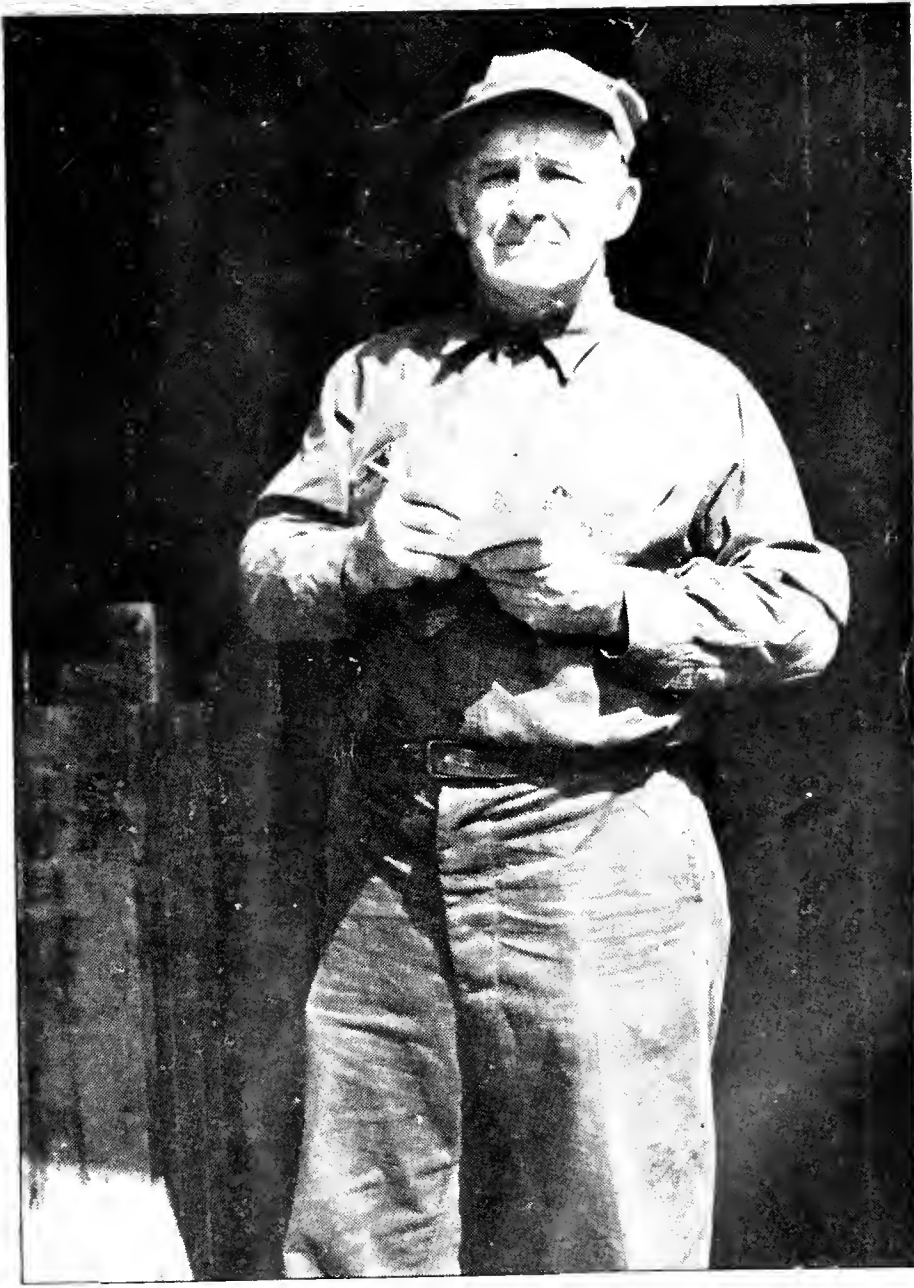
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WEEKLY
CRANBERRY
MAGAZINE



FRED P. HEPBURN, Packing house foreman
(Story Page 25)

CRANBERRIES PHC

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Friendliness is one thing that costs nothing in business, yet pays a big profit to all. For friendliness promotes an understanding and insight into other's problems that make their solutions easier. Fifty-three years of experience have proved to us that friendliness is an essential to good business. And Growers Cranberry Company's wide knowledge of all phases of the Cranberry business can help solve your problems quickly, efficiently, and with mutual good will.

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85 Per Cent

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are Members of the

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A True Cooperative—One Member, One Vote

and they

Deliver to Their Cooperative 100% of Their Production

1947 Cranberry Season Opens August 20

NCA Directors opened the 1947 price on Ocean Spray on that date to start the season early and assure a longer market for members' berries. The new price is low enough to build a wide consumer demand for increasing production . . . and high enough to bring good returns to the growers. A \$200,000 advertising campaign starting September 1 continues to build consumer demand for Ocean Spray. The National Cranberry Association expects to pack 4,000,000 cases of Ocean Spray products. We invite you to join with the 1,000 grower-members of the organization to market your berries cooperatively and share the good returns it offers . . . and the security it brings by keeping the cranberry business in the growers' hands.

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Complete Banking Service

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Opening Fresh Fruit Price Discussed

Both N. C. A. and Ace Issue Releases Showing Differences of Opinion

The official forecast of the size of the crop has been made, picking was beginning as September started, and the selling price, as always, became a principal topic. NCA announced a cut in the wholesale price of Ocean Spray cranberry sauce, and other processors were reported to be making cuts also. The two major co-ops issued the following releases concerning prices:

NCA RELEASE

"While general food prices continue to creep upward, cranberry growers have made a right-about-face in voluntarily reducing prices 18%.

At a meeting held at Hanson, Massachusetts, on August 20, Directors of National Cranberry Association, a grower cooperative with 1,000 members in Massachusetts, New Jersey, Wisconsin,

Washington and Oregon, launched the 1947 cranberry season by naming a wholesale price of \$2.00 a dozen on their Ocean Spray canned cranberry sauce, compared with the current price of \$2.45.

M. L. Urann, President of the Co-operative, said: "The cranberry industry is trying to do its part to lower the cost of living. The cost to produce cranberries has not declined, and neither has the cost of processing. But the Directors and the grower-members of this Co-operative realize their obligation to the consumer. They are taking a long look ahead and voluntarily lowering prices on Ocean Spray products to encourage greater buying. The cranberry growers are willing to take less in order that consumers may get more."

National Cranberry Association markets about 50% of the national cranberry crop. About 85% of its output is sold as processed cranberries, and 15% as fresh fruit, both under Ocean Spray brand."

ACE RELEASE

"C. M. Chaney, General Manager of the American Cranberry Exchange, took sharp issue with a recent article in a New York financial newspaper quoting M. L. Urann, president of National Cranberry Ass'n., to the effect that "even a price of \$25.00 a barrel for cranberries is too high for the coming season."

Pointing to the fact that berries sold through the Exchange last season returned to the growers more than \$30.00 a barrel, Mr. Chaney stated: "You don't need an economist to know that the cost of production has continued to skyrocket."

Mr. Chaney said it was "Very unfortunate for growers that bearish publicity has been issued right at the opening of the selling season", and termed "utter folly any belief that the upward spiral in the cost of living can be seriously affected by a radical, self-imposed reduction in cranberry prices."

"In fact", Mr. Chaney said, "the total value of the American Cranberry crop last year was 25 million dollars. This, even when retail costs were added, represents approximately 25c per capita per year. A reduction of 20% in the price of berries would therefore represent only 5c per capita, but would work hardship on the 2000 growers, as it would represent an average loss to them of more than \$2500 each in gross income'.

Speaking for the Cranberry Exchange, Mr. Chaney said: "Our organization, as a 100 per cent grower-owned cooperative, has as its responsibility the securing of a fair price for growers. We will open our price this year just as we have during the past 40—on the basis of careful consideration

A Special Opportunity

is now offered to cranberry growers to become members of a truly cooperative company—a one member – one vote organization which provides a complete service for its members—on actual cost basis—in the production, packing and marketing of their crops.

Its membership list is comprised of active, self-reliant, clear-thinking growers looking to the future and the democratic operation of the cranberry industry.

Its Board of Directors, representing all districts, are chosen by a truly democratic method and work for the best interests of all members.

A truly grower-controlled service organization.

The New England Cranberry Sales Company

9 Station Street

MIDDLEBORO, MASS.

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of September, 1947—Vol. 12, No. 5

Published monthly at The Courier Print Shop, Main St., Wareham, Massachusetts. Subscription, \$3.00 per year.
Entered as second-class matter January 26, 1943, at the post-office at Wareham, Massachusetts, under the Act of March 3, 1879.

of supply, demand and purchasing power and with the aim of getting a fair return for growers.'

The American Exchange normally sells more than three-fourths of its berries in the fresh market. The National Cranberry Association is primarily a processing organization.

Beattie Named Mass. Cranberry Specialist

A new cranberry specialist has been named to assist Massachusetts growers in the solution of their problems as part of the Extension Service. J. Richard Beattie, who has become widely and favorably known among the growers as Plymouth County Agent, specializing in cranberries, has been named to the position by R. A. VanMeter, acting president of University of Massachusetts. His appointment is effective as of October 1, and Mr. Beattie, Mrs. Beattie and two children plan to make their home in the general vicinity of the Experiment Station at East Wareham.

This position was created by the Massachusetts legislature in the last session. J. T. Brown, director of Extension Service of Plymouth County, who made the announcement, said the loss of Mr. Beattie in his department would be keenly felt, as Beattie has developed a strong program in the horticultural interests of the extension service.

Mr. Beattie, a native of Guildhall, Vt., was graduated from the University of Vermont, 1939, where he received a B. S. degree in agriculture. In 1940 he received his master's degree from the same institution and was immediately accepted as assistant county agent in Plymouth County. He became associate in 1942 and county agent in 1945 under Director Brown.

U. S. D. A. August Estimate

The following is the U. S. Dept. of Agriculture bureau of Agricultural Economics N. E. Crop Reporting Service release for the cranberry crop this fall, as reported at the annual meeting of Cape Cod Cranberry Growers' Association:

For the United States, cranberry production for 1947 is estimated at 770,900 barrels. The 1946 crop totalled 857,100 barrels and the 1936-45 average crop is 638,836 bbls. In addition to 1946 the crops of 1942 and 1937 which totalled 812,200 bbls. and 877,300 bbls. respectively are the only ones larger than this season's prospect. Prospects are rather favorable this year in all producing areas. Expected production is above average in all areas and on the West Coast record crops are in prospect.

CRANBERRY PRODUCTION IN BARRELS

States	10 year average 1936-1945	1946*	1947
Massachusetts	424,900	553,000	505,000
New Jersey	83,500	101,000	93,000
Wisconsin	97,500	145,000	112,000
Washington	24,180	42,000	42,900
Oregon	8,750	16,100	18,000
United States	638,830	857,100	770,900

* Revised.

Prepared by:
H. A. Salmela

A. C. HACKENDORF
C. D. STEVENS

Statisticians

Cape Cod Growers' Meeting

Record attendance, an estimated 500, enjoyed an interesting program at the annual meeting of Cape Cod Cranberry Growers' Association, Tuesday, August 19th, at State Bog, East Wareham. The day turned out fine—and plenty hot, as is usually the case, for this gathering. Many heard the talks outside the meeting under the trees rather than in the station itself, through a loud speaker provided by George Raymond.

The crop report (as above) read by C. D. Stevens, statistician in charge, New England Crop Reporting Service, was the usual highlight. The other features were the appearance of D. J. Crowley,

director Washington State Experiment station, A. J. Corliss of the Greenfield gypsy moth department and Col. Charles Wellington Furlong, who delivered an address on European affairs, particularly warning against the spread of any communistic tendencies in this country.

The membership learned from Treasurer Harry Hornblower that the association during the year had increased its membership nearly one-third, there now being a total of 370, and the general funds of the treasury had been increased by a thousand dollars, this now being over the \$5,000 mark.

National Advertising Campaign

As one of the important pieces of businesses the association voted a committee to consider a national advertising campaign. Purpose of this is to make and keep the consuming public more conscious of cranberries, without regard to trade name). It was pointed out that the industry is in a growing, healthy condition and demand must be kept up if satisfactory prices are to be maintained. This committee was chosen as Russell Makepeace, Carl B. Urann and Melville C. Beaton. It was to report at a later meeting.

Officers Elected

President George E. Short very ably conducted the long and interesting program, and having served two terms, concluded his service. The nominating committee, which was Homer Gibbs, Carl Urann and John F. Shields, placed for ballot the following, who were elected:

President—Russell Makepeace,
First Vice President—Melville C. Beaton, Wareham.

Second Vice President—Edward L. Bartholomew, Wareham.

Secretary—Gilbert T. Beaton, Wareham.

Treasurer—Henry Hornblower, Boston.

Ass't. Treasurer—Miss R. Thelma Laukka, Wareham.

Directors—Dr. H. J. Franklin, Harrison Goddard, George Short, Orrin G. Colley, Nahum Morse, John F. Shields, Frederick Eldredge, Jr., John F. Harriott.

The office of assistant treasurer is a new one, and Miss Laukka is full-time secretary at the Experiment Station. Messrs. Colley, Morse, Shields and Eldredge are presidents of the four cranberry clubs and this action was in carrying out plans for closer cooperation between the over-all association and the four regional groups.

Crowley Praises Eastern Bogs

Director Crowley was making his first visit to the East in 24 years, having visited New Jersey before going to Massachusetts (leaving there for Wisconsin). Dr. Crowley made some interesting comments on the contrasts between cranberry growing in the East and the Pacific coast, noting particularly that some eastern bogs were as large as whole areas of bogs in his region. He declared he was highly impressed not only by the "park-like" appearance of

many Massachusetts properties, but by the many fine bogs he was surprised to find in New Jersey.

Col. Furlong

Col. Furlong, who appeared under the auspices of the National Civic Federation, was introduced by President George E. Short, as "foreign correspondent, author, painter, educator, soldier, and American citizen." The speaker gave a forceful presentation of the present world situation, going into the background history. He said that as he was driving down to the meeting that morning he was thankful that he was one of 145,000,000 Americans who were free to ride along a beautiful country road, if they chose, without getting the consent of any dictatorial authorities first. He said that in certain European countries it was impossible for a citizen to travel "from one small village to another" without first getting a permit to do so. He then said he thought this meeting of cranberry growers, "many of whom were competitors", was a splendid demonstration of democracy. "You are meeting here in complete democracy, competitors, yet joining in a free meeting, and that is a fine testimonial for what many call the 'capitalist system' and free enterprise.

"You are enjoying your heritage as American citizens. You use sand in your industry, I understand. And sand mixed with grit is what we need today to preserve our heritage of democracy and freedom. You have a right to this way of life—freedom, liberty, a public school system, and the right to buy and sell freely."

He said this heritage must be given thought, if it is to be preserved. "There are those who would take it away from you. There are those to whom your way of life is an interference to the plan of life they want." There are foreign agents working among us, he continued, who are trying to indoctrinate young people into thoughts foreign to the American heritage.

"Our way of life is in the balance. Communism has declared war against our way of life." He then sketched in the danger points in the Middle East, where struggle

is going on and where war may break out. He said a communistic form of dictatorship was no better than that of the Nazis. He said he did not blame the common people of Russia and we should strive to aid them, as they are enslaved, but that the seat of evil was "the Kremlin", and the dictators of the Kremlin were determined to force communism upon the whole world.

A. J. Corliss

Principal speaker at the morning session was A. J. Corliss of the Greenfield gypsy moth laboratory, who gave a detailed talk upon the story of DDT. He told how first tests were made for its effectiveness in kill upon gypsies and brown tail moths, and then of tests for its effect upon human beings, fish, bird life and bees. He exploded many beliefs which had spread as to its bad effects, and gave a strong account of its value in insect control.

Hail Insurance

Representatives of hail insurance companies spoke upon a plan to make hail insurance available to cranberry growers, and their discussion was illustrated by colored moving pictures. N. W. Webber and Mr. Bardon of Hartford Life Insurance and Alvin Reid, representing Hail Insurance, were the speakers. This is a new project in Massachusetts, new to most growers, but one in which there is much interest.

University of Massachusetts

Representing the University of Massachusetts were Dr. R. A. Van Meter, acting president, Dr. F. J. Sievers, director of the Experimental Station, and Willard Munson, director of Extension Service. Dr. Van Meter said the University is dedicated to research and to higher education and he expected that within two years, as the GI training period was ended, that more boys and girls who wished could be taken in.

Dr. Sievers referred to the more than \$30,000 which the East Wareham station had produced through the crop of berries on the State bog last fall, and said it was more than paying its way. He praised the growers for their interest and cooperation and said he felt that the University of Mas-

sachusetts was giving the growers good service.

Mr. Munson paid an acknowledgment to the importance of the cranberry crop, and particularly to Southeastern Massachusetts, saying it brought in from 5 to 15 million dollars annually. He saw increased crops in the increasing acreages.

Equipment Exhibition

R. J. Hillstrom, manufacturer of the "Western Picker", brought two machines, the new aluminum model and the original Stankavich machine, and although neither was demonstrated on the bogs, the crowds that gathered showed the interest of the Massachusetts growers in this machine. Mr. Hillstrom, who will remain in the East for several weeks, will give demonstrations a little later in the season.

During the noon hour, from 12 until 2, various pieces of equipment were on display besides the picker from Oregon, and these included a large showing by Frost Insecticide Company of Arlington, and Continental Motors by J. N. Hackett and Alan Painten.

A government biplane gave a demonstration of insect control from the air, zooming low over the State bog, but spreading water rather than DDT spray. The machine was equipped with a new revolving distributor, considered giving better coverage.

Lunch was served by ladies of the Wareham M. E. church.

Attending this meeting were representatives from every cranberry-growing state in the country: Mr. Crowley from Washington, R. J. Hillstrom and Kaye J. Howard from Oregon, Guy Potter and Albert Hedler from Wisconsin, Charles A. Doehlert, in charge of the New Jersey cranberry-blueberry station, James D. Holman, Isaac Harrison, Alvin Brick and Walter Z. Fort, all of that state.

N. J. Meeting

More than 300 attended the summer meeting of the American Cranberry Growers' Association August 28th at the bogs of William H. Reeves, Route 40, between Upton and Four-Mile State Colony traffic circle, New Jersey. This

meeting was an innovation in that it was an exhibition of cranberry equipment.

The Ocean Spray helicopter was demonstrated, with "Slim" Soule piloting. Liquid spraying was shown as well as dusting. The great maneuverability of the 'coper impressed the growers.

Weather was misty, but comfortable in temperature, and did not interfere with the inspection of equipment. The demonstration of the Western Picker was limited to running on the upland. Jersey growers were looking forward to seeing two of these machines which have been assigned to actual demonstrations on bogs.

The New Jersey Cranberry-Blueberry Laboratory showed an exhibit of mounted cranberry insects, which was instructive to many.

Enoch Bills, president, and the committee in charge of arrangements, consisting of D. M. Crabbe, Joseph H. Palmer, Francis W. Sharpless, Benjamin F. Cavileer, John H. Cutts and Charles A. Doehlert, were congratulated for putting across the largest summer meeting held in many years. Mr. Reeves was a cordial host and provided an excellent setting for the exhibits on spacious cleared upland around his bog buildings.

List of exhibitors:
Arco Drainage & Metal Products, Inc., drainage, water control products; Auto Gear & Parts Co., power units; Cutts Bros., bulldozer on trailer with truck to tow; Fenimore Bros., Cub tractor; Growers' Cranberry Co., nets, scoops, weed mower; Jos. H. Haines & Sons, irrigation pump, pipe; Model M tractor with mower, turf pulverizer; Isaac Harrison, vine planter and Hayden duster; Lakehurst Motors, 6 tractors with equipment and other tools; C. A. Lippincott & Bro., 2 Clectrac tractors; Parkhurst Farm Supply, irrigation pumps and equipment; Sidney W. Reid, 2 sprayers, Lowther "C" saw for clearing land of trees, brush, briars, trimming and cutting up felled trees; Bean Mist Duster, Buffalo turbine, tractor with mounted loader; F. A. Scammell, mower; Sempos Products Co., Sempos float boat; Milton H. Stricker, demonstration bee hive; Jos. J. White, Inc., cranberry mower; Carl F. Klotz, Ariens tiller; William Haines, floater boat; National Cranberry Association, Trading post; Fortnum Motor Co., 3 Diamond T trucks, 3 Gibson tractors, 2 Garden-all tractors and 2" attachments; Weigel-Chevrolet Co., bog disc harrow; N. J. Experiment Station, insect exhibit; Lewis Barton, irrigation equipment.

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Wisconsin Meeting

Wisconsin Rapids, Wisconsin—Members of the Wisconsin Cranberry Growers' association heard visiting speakers discuss problems affecting their industry at the regular summer meeting of the association in the Hotel Witter Saturday morning, Aug. 9.

H. H. Harris, representative of an insecticide manufacturing concern, told the group of the continuous research being conducted for new and improved insect poisons. Grower and consumer interest in insect control has increased in the last several years as a result of research work done by the government and private industry during the war, he said.

Harris described the residual, or longer lasting effect of DDT and compared it with other new insecticides such as chloridane and benzene hexachloride, but said that to date "we have no particular insecticide which meets all of the necessary requirements."

County Agent D. R. Rowe suggested the planting of selected grasses and nursery stock to help cranberry growers meet the problem of water erosion. He cited the need for continuation of fertilizer programs and reminded the growers that the soil conservation service in Wood county is available for all enterprises engaged in agriculture.

Clarence Searles, speaking of the action taken by the state conservation commission to control deer damage in central Wisconsin, said that the property of Mrs. Leona Amundson in the town of Remington had been made a test area for this work. Searles said that carbide gas exploders, to frighten the deer away, had proved ineffective after several days. Removal of the deer by shooting has continued, but will not be necessary after the worst offenders have been killed, he declared.

M. S. Anderson, sales representative for the National Cranberry association; Leo Sorenson, entomologist for the NCA; and C. D. Hammond, general manager of the Wisconsin Cranberry Sales company, also spoke briefly.

Wisconsin's 1945 and 1946 Cranberry Crops

By HENRY F. BAIN

(Continued from August)

3. Pollination

Observations on pollination in 1945 and 1946 are given below with full recognition of the fact that with a single exception (3), controlled experiments were not conducted, and that innumerable factors were operative in producing the yields finally harvested.

Evidence that lack of pollination in 1944 had been responsible for reduction in yields on the four marshes on which the writer is employed led to the 1945 experiments with honeybees reported by Farrar and Bain (3), in which it was found that bees were effective pollinators when they worked on cranberry flowers. 50 colonies of bees were kept at the Cranberry Lake marsh in 1945 and 1946, and both years the bees were extremely active on the marsh throughout the extended blossoming seasons. It seems inconceivable that they were not a major factor in bringing about the excellent set both years, more particularly in 1946, when an unprecedented set took place in the extremely light bloom on water-injured vines (see table 2).

Seventy underpopulated colonies were kept at the Biron marsh in 1946, but the bees did not work extensively on the marsh until after mid-bloom. As table 2 shows, the set in a water-injured section was not quite up to standard, though it was much better than in the preceding year. 1945 injury was greater than that of 1946, however.

8 or 10 colonies were kept at the 65-acre Beaver Brook marsh both years. Water injury occurred on parts of the marsh each year, and the entire 1945 crop was adversely affected by heavy autumn fungus leaf-drop in 1944. Bees did not visit the marsh in 1945, but worked extensively in 1946, together with

a fairly heavy bumblebee population. Fruit set counts on this marsh are given in table 3. As the table shows, the set improved in 1946, whether because of leaf-drop control on the sections where the counts were made, pollinating-insect activity, or other causes.

The Midwest marsh near Spooner had an extremely heavy bumble-

bee population in 1946, but not many in 1945. Fruit set counts are given in table 4. The sampled sections were among the best on the marsh in the respective years. This marsh yielded 51 barrels per acre in 1945 and 70 barrels in 1946.

The bumblebee population on Wisconsin cranberry marshes built up noticeably in 1946 after falling to very low numbers in 1944 and 1945. Adequate numbers to fully pollinate the flowers in the absence of all other agencies were present on some marshes in 1946.

TABLE 2
FRUIT SET COUNTS IN SEARLES CRANBERRIES, 1945 AND 1946
BIRON AND CRANBERRY LAKE MARSHES
(Figures represent units per square foot)

Marsh Section No.	Biron		Cranberry Lake		
	A-6		N-2-2	S-8-5	
Year	1945	1946	1945	1946	1946
Water Injury	Severe Typical of marsh	Some, more than ave. on marsh	None	Extreme typical of most of marsh	One of least injured on marsh
Uprights not blooming	508	307	296	294	317
Uprights blooming	196	160	152	46	56
Tot. number of uprights	704	467	448	340	373
% uprights blooming	28	34	34	14	15
Uprights blooming, not fruiting	152	66	28	2	3
% Uprights blooming, not fruiting	78	41	18	3	4
Tot. number of flowers	512	450	373	55	94
Flowers per blossoming upright	2.60	2.80	2.45	1.15	1.68
Number of berries set	44	111	160	47	74
% flowers setting berries	9	25	43	88	80
Number of berries per blossoming upright	0.22	0.70	1.05	1.00	1.30
% berries borne on 1-flowered uprights	13	2	9	82	33

TABLE 3
FRUIT SET COUNTS IN SEARLES CRANBERRIES
BEAVER BROOK MARSH, 1945 and 1946
(Figures represent units per square foot)

Year	1945*	1946	
	Average of 15 sq. ft. counts on 12 sections	"Big Jumbo"	"Reservoir No. 3"
Water injury	Considerable on some sections	Considerable	None
Fungus leaf drop	Severe on most of marsh	None	None
Uprights not blooming	191	309	340
Uprights blooming	167	149	177
Total no. of uprights	358	458	517
% uprights blooming	47	33	34
Uprights blooming, not fruiting	—	52	33
% uprights blooming not fruiting	—	34	19
Total no. of flowers	263	266	435
Flowers per blossomiog upright	1.52	1.76	2.46
No. of berries set	67	101	176
% flowers setting berries	25	39	41
Number of berries per blossoming upright	—	0.68	1.00
% berries borne on 1-flowered uprights	—	25	7

*1945 counts furnished through courtesy of C. H. Lewis, Mgr. Badger Cranberry Co. Counts made in Oct. 1944; some buds may not have survived winter. Method of counting gave higher percentage of buds than those made in 1946.

* References to Literature Cited at end of article.

As noted above, too many uncontrolled variables entered into the final production on the marshes cited to permit the dogmatic interpretation that an abundance of pollinating insects would have prevented the state-wide poor set of 1945; but the evidence is definitely indicative that heavy populations of pollinating insects aided in increasing set, especially in water-injured vines.

4. Fruit Bud Set

Wisconsin growers for many years have held that the fall fruit bud set not only predetermines the maximum limit of the succeeding year's crop, but that it supplies a reliable forecast of the size of the

crop if the following winter and growing-season losses prove to be near normal in magnitude. Budding for the 1946 crop was better than for 1945 and the best in a number of years. Basing his predictions primarily on average budding throughout the state, Goldsworthy (6) was quoted in February 1945 as saying "Wisconsin's prospect for next fall should be from 115,000 to 125,000 barrels", and for the 1946 crop (7), "better than 125,000 next year." In June, 1945, Hall (11) stated "Crop could be 115 to 125,000." In spite of the spring situation, Vernon Goldsworthy is ready to take a chance and say now that, barring unpre-

dictable disasters, Wisconsin should produce between 115 and 125,000 barrels this fall. Some others feel that buds may have started from early warmth and water may consequently have caused considerable injury. Henry F. Bain was making no comments until he could observe later conditions." Subsequent events proved that the major 1945 damage had been done before this time, and the abnormally great water injury reduced the crop well below the 115,000 figure. There were no exceptionally large losses in 1946, and the crop came up to expectations as based upon the fruit bud set.

TABLE 4
FRUIT SET COUNTS IN SEARLES CRANBERRIES
MIDWEST CRANBERRY CO., 1945 AND 1946
(Figures represent units per square foot)

Section number	27	9
Year	1945	1946
Water injury	Slight amount	Slight amount on one-third of section
Uprights not blooming	332	253
Uprights blooming	304	172
Total no. of uprights	636	425
% uprights blooming	48	40.5
Uprights blooming, not fruiting	168	31
% uprights blooming, not fruiting	55	18
Total no. of flowers	888	412
Flowers per blossoming upright	2.90	2.36
No. of berries set	166	165
% flowers setting berries	19	40
No. of berries per blossoming upright	0.55	0.95
% berries borne on 1-flowered uprights	0	9

TABLE 5.
PERCENTAGE FRUIT BUD SET AND YIELDS,
BADGER AND MIDWEST CRANBERRY MARSHES, 1940-1946

	1940	1941	1942	1943	1944	1945	1946
Bud Set							
Badger Cranberry Co.	39	54	45	48	47	56	31
Midwest Cranberry Co.	38	58	47	—	54	57	34
Yield							
Ave. on 2 marshes, in barrels per acre	22.4	46.8	41.5	40.2	38.0*	52.6	—

* Yield reduced by cold growing season and water damage, as discussed in text.

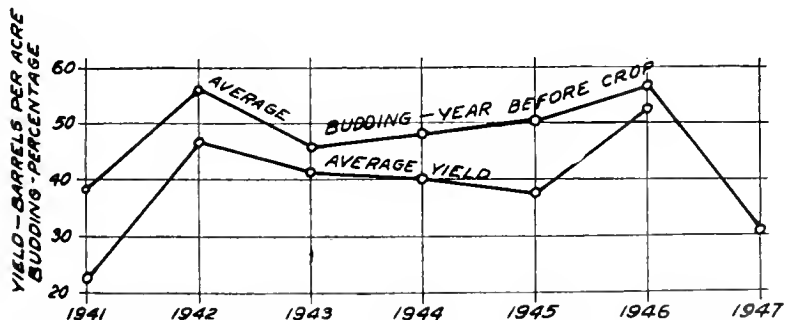


Fig. 2. Annual Bud Set and Production at Badger and Midwest marshes, 1941-1946.

So far as has been found, no records in support of a correlation between fall fruit bud set and the succeeding crop have been published. For this reason Mr. C. H. Lewis, manager of the Badger Cranberry Company, has kindly consented to the inclusion here of his 7-year series of records of fruit bud counts on the Badger and Midwest marshes. The figures (table 5) represent the percentages of well-formed uprights that had fruit buds in October of the years indicated, as determined by counting one or more square-foot sample areas on nearly all sections on each marsh and averaging the section-counts to obtain the percentage set for each marsh as a whole. The annual bud set varied between approximately 32% and 56% in the 7-year period, a range of 24%, and though the marshes are located 15 miles apart and are dissimilar in many respects, the annual agreement in bud set was remarkably close.

Figure 2 shows the relation between the year-before-the-crop bud set and the average acre-production on the two marshes during the period of the records. The two curves follow parallel trends as closely as could be expected when allowances are made for unequal intervening losses. On the basis of the low 1946 fall bud set—a condition which existed generally throughout the state—the 1947 Wisconsin crop is expected to drop well below that of 1946. Current-season influence is expected to moderate the drop in production on

the two marshes under consideration here (but not the total state crop) due to the fact that on one a long-standing autumn leaf-drop disorder was completely controlled for the first time in 1946.

In the writer's opinion, the fruit-bud set is fully as important as the Wisconsin growers generally believe. Dr. Franklin, in his exhaustive study of the relation of weather to cranberry production, states (5, p. 9), "On the whole, cranberry weather relations in any year seem to be mostly constructive for the crop of the following year, but more largely destructive for the crop more immediately in hand." As applying to Wisconsin conditions, the "destructive" forces begin to operate immediately after fruit bud formation is completed and continue to act until the succeeding crop has gone into consumption. A 32% budding cannot be expected to withstand losses equal to those of a 56% budding and produce a crop of equal size. This may be tantamount to saying that Wisconsin cranberry vines as a rule do not produce an excess of blossoming uprights. Fruit-set counts reported herein and elsewhere (1) would seem to substantiate the idea. Insofar as Wisconsin is concerned, statistical correlations between recorded weather data and production, such as the one ostensibly existing between warm Marches and low production, may not necessarily represent true cause-and-effect relationships, for the reason that unrecorded constructive or destructive factors of great magnitude, such as fruit bud set and catastrophic losses (from water injury, etc.), so often determine the size of the crop.

5. Insect and Disease Losses

Estimates of insect losses necessarily reflect personal judgment and are to be accepted in this sense. The total state loss was probably not greatly different in the two seasons, with 1945 likely having a slight margin over 1946 if any difference existed.

The reverse was true in respect to fungus disease losses. Berries were shipped out earlier than usual both years, holding storage losses to smaller than normal proportions; but there was clear evi-

dence that the 1946 crop would have been of poor keeping quality if held late, whereas late-held samples in 1945 were of excellent keeping quality. The actual milling wastage in 1946 was considerably greater than that in 1945.

A field rot of berries caused by *Phytophthora erythroseptica* developed on at least two marshes in August, 1946, causing an estimated loss of 60 barrels on the two marshes where it was observed.

6. Soil and Water Acidity

Table 6 gives the 1945 and 1946 yields shipped from marshes having specified acidity-ranges of soil and water. All marshes for which the three items were available were first grouped into classes having ascending pH ranges of flooding water, without regard to soil acidity; next, into classes having ascending ranges of soil pH, without regard to water pH; finally, into classes in which acidity of both soil and water were taken into account. pH values were taken from data collected by L. M. Rogers and N. E. Stevens during their many years of investigations in Wisconsin cranberry marshes, presented by Stevens at the August 1944 meeting of the Wisconsin Cranberry Growers' Association in the form of a graph having pH values of soil and of water as abscissas and ordinates respectively. Dr. Stevens has informed the writer that the chart will be published in the near future.

Yield and acreage figures were supplied by the Wisconsin Cran-

berry Sales Company and the Midwest Cranberry Association. 53 of the 62 marshes represented on Stevens' chart were included in the membership of the two sales co-operatives, but 7 had to be excluded from present calculations because of incomplete yield records. The data in table 6 included the remaining 46 marshes, comprising 1432.5 of the total 2800 acres in Wisconsin.

With respect to pH of flooding water, the marshes were divided into 5 classes having pH ranges of 5.0 to 6.5 incl., 6.6 to 7.0, 7.1 to 7.5, 7.6 to 8.0, and 8.1 to 8.3. This division did not result in equal-sized classes, either in numbers of marshes or in acreage; it was used primarily to bring out possible effects of water in the higher pH ranges.

Four classes were used in the soil-pH grouping, equalized as nearly as possible by acreage. Divided in this manner, the respective classes worked out to be 3.6 to 4.5, 4.6 to 4.8, 4.9 to 5.4, and 5.5 to 6.6, incl.

In the combined soil-and-water-pH grouping, Stevens' chart was divided into four quadrants having the nearest possible equal acreages above and below a median water-pH axis and similarly approximate acreages left and right of a median soil-pH axis. The respective medians worked out to be pH 6.55 for water and 4.85 for soil. Acreage and yield relations in this grouping are shown graphically in figure 3.

A careful study of the data in Table 6 shows that, with a few

Marshes	pH	Number of Marshes	Total Acreage	Acres per Marsh	Yield in 1945 Total Bbls.	Yield in 1946 Bbls. per Acre	Yield in 1946 Total Bbls.	Yield in 1946 Bbls. per Acre	Ave. Acre Yield, 1945 and 1946.
Grouped by pH of Water	5.0-6.5 incl.	20	767.5	38	29775	38.8	37975	49.4	44.1
	6.6-7.0 incl.	16	462	29	15151	32.8	24064	53.8	43.3
	7.1-7.5 incl.	3	93.5	31	3562	38.1	6817	72.9	55.5
	7.6-8.0 incl.	4	81.5	20	2365	20.0	3251	39.8	34.4
	8.1-8.3 incl.	3	28	9	608	21.7	875	31.2	26.4
Totals		46	1432.5		51461		73782		
Averages				31		35.9		51.5	43.7
Grouped by pH of Soil	3.6-4.5 incl.	11	363	33	21079	58.0	20020	55.3	56.7
	4.6-4.8 incl.	11	375	34	11140	29.7	19769	51.4	40.5
	4.9-5.4 incl.	11	365.5	28	7769	21.3	17545	48.0	34.6
	5.5-6.6 incl.	11	322	29	11473	34.9	16878	51.3	43.1
Grouped by Combined Soil and Water pH	Water 5.0-6.5 incl. Soil 3.6-4.8 incl.	15	574.5	38	26335	45.8	29730	51.7	48.8
	Water 5.0-6.5 incl. Soil 4.9-5.4 incl.	5	191	32	3748	12.4	8245	42.7	31.5
	Water 6.6-8.3 incl. Soil 3.6-4.8 incl.	7	163.5	23	5884	35.9	9629	58.8	47.4
	Water 6.6-8.3 incl. Soil 4.9-5.4 incl.	19	501.5	26	15494	30.0	26178	52.2	41.5
	Water 7.1-7.5 incl. Soil 5.5-6.6 incl.	3	93.5	31	3562	38.1	6817	72.9	55.5

TABLE 6

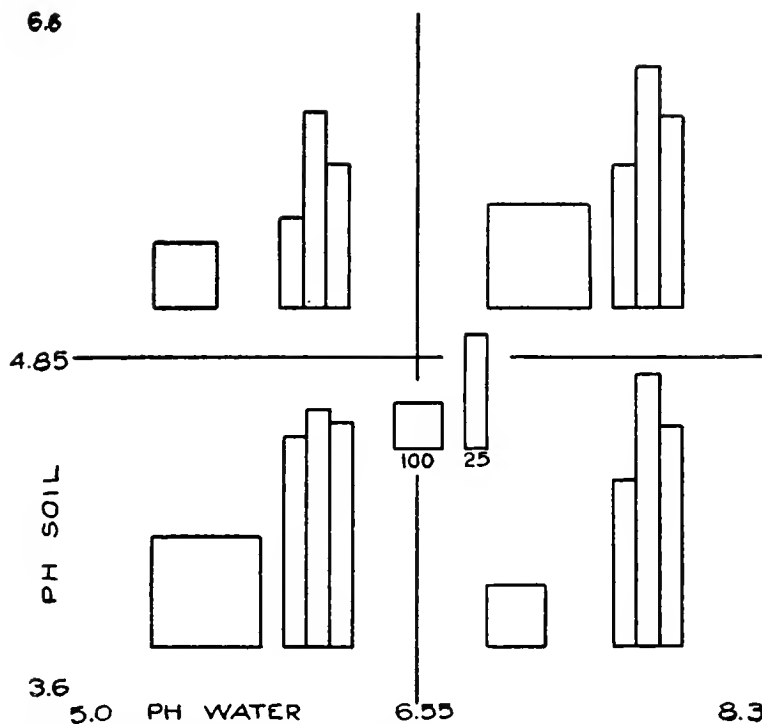


Fig. 3. Acreage and yield of Wisconsin Marshes in relation to pH of Soil and Water.

Left-hand columns, yields per acre in 1945.
 Middle columns, yields per acre in 1946.
 Right-hand columns, average of 1945 and 1946 yields.
 Scales indicated by small figures in center of chart:
 square - 100 acres, column - 25 barrels per acre.
 See table 6 and text for further explanation.

be no evidence that the remaining marshes have soil or water relations inimical to the production of crops of average size. It is generally recognized in Wisconsin, however, that marshes in the higher pH ranges of soil and water are more difficult to manage.

Various phases of water and soil acidity problems are discussed in references 12, 16, 17 and 18.

Conclusions

Although one subject has been treated at a time, as if each set of conditions operated independently of all others, the actual facts are that not only were they inextricably interwoven, but simultaneous factors not considered here undoubtedly played important parts in bringing about the yields the two years. With due regard to these limitations, it is felt that the following conclusions are justified:

1. Water injury was the primary cause of the short crop in 1945.
2. Cold weather, with resultant small size of berries, was a contributory factor.
3. Warm weather in March did not directly affect either crop, but indirectly was responsible for the water injury suffered in 1945.
4. One effect of water injury, poor pollination, may be partially prevented by increasing populations of pollinating insects.
5. Oxygen-deficiency injury occurred independently of the type of flooding water used.

In the writer's view, Wisconsin's cranberry production is determined largely by **management**—if the term is used in a broad sense to include weed and insect and disease control; using water when needed, avoiding its use when not needed; fertilizing, sanding, pruning, drainage—all the myriad day to day operations that favor the cranberry plant or hinder it from giving its best performance. It is not easy to grow cranberries in Wisconsin; behind the majority of the obstacles will be found the ever-present threat of cold weather. Yet no single marsh has been seen in any year in which better guesses in specific phases of management would not have resulted in a larger crop of berries. As knowledge and experience are gained, guesses are being replaced more and more

(Continued on Page 27)

ASSOCIATIONS VALUABLE

WE believe the industry can be congratulated upon the fact the Cape Cod Cranberry Growers' Association increased in membership this past year, and that it shows signs of becoming a stronger organization. What progress it did make during the past year was not due to luck, but to the determination of officers and directors that the association must be strengthened if it was to survive and be a factor in the industry. It still has a long way to go in obtaining membership of growers it should have and in increased activities.

The industry needs these regional associations, such as the Cape Cod, the American Cranberry Growers of New Jersey, the Wisconsin State, and the recently-organized groups of the West Coast, where all growers, without regard for their marketing affiliation, can assemble and make decisions concerning their general welfare. They are now more necessary than ever, with two large national co-ops and independent distributors and processors competing for markets (as they all have a perfect right to do under the American system of free enterprise). They are, as Col. Furlong pointed out at the Cape Cod meeting, splendid examples of American democracy. At these meetings, as he further said, growers who market as they see fit, can and do assemble and talk over decisions for common crop betterment. These open meetings are a defense against Communism or any other form of dictatorship. In voting a committee to consider general cranberry advertising at the Cape meeting, we feel a step forward was taken. To increase general cranberry consumption is a project in common for all growers.

IT is not only the cranberry growers, that is, the owners of bogs and marshes, who make up a strong industry. It is also the workers of the industry, such as Fred P. Hepburn of New England Cranberry Sales, "never owning, nor expecting to own a berry", as he said in the brief article in this issue, who contribute much. These "humbler" members of the cranberry-growing family—and there are many, many of them—deserve recognition.

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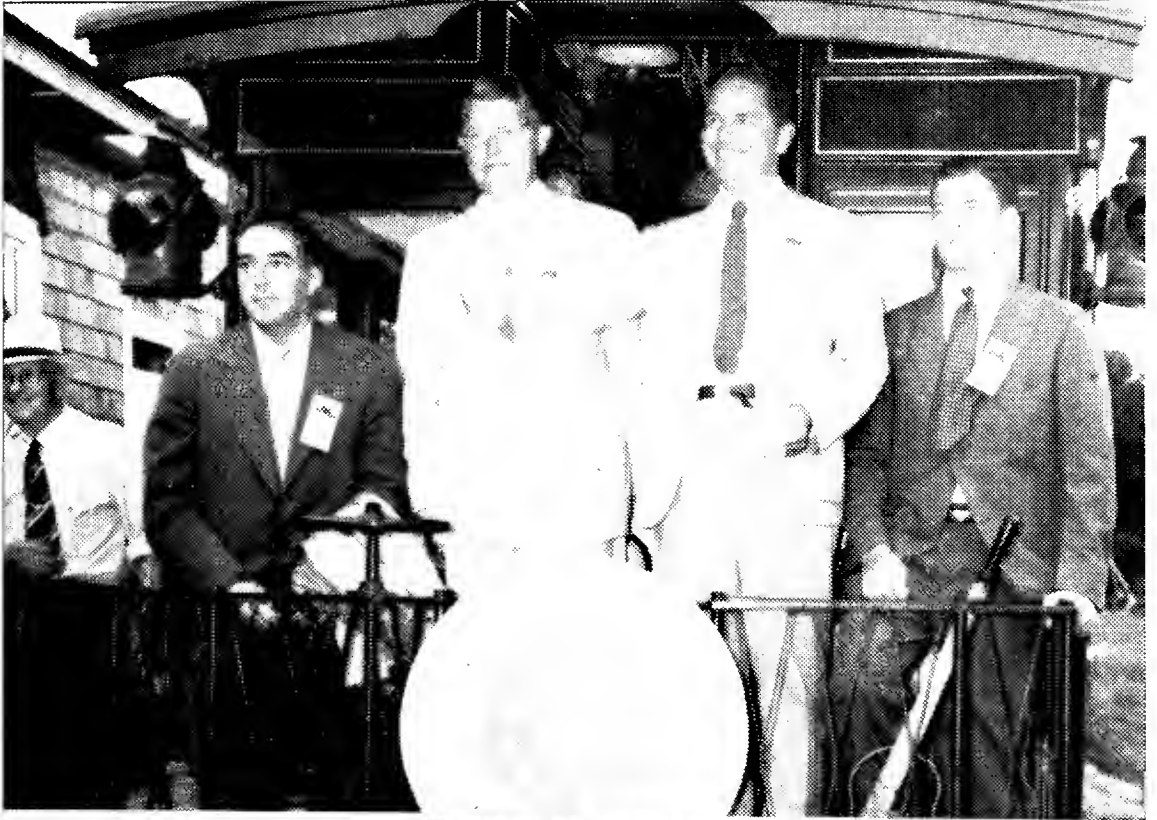
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IT was with shocked regret that the Massachusetts cranberry industry learned of the death of Congressman Charles L. Gifford. Mr. Gifford had been a cranberry grower, regular attendant at cranberry meetings; many, many times a speaker at meetings of Cape Cod Cranberry Growers' Association meetings, and a good friend of the industry.

MASSACHUSETTS now has a state cranberry specialist. Growers are to be congratulated upon that, and the appointment of J. Richard Beattie, former Plymouth County Agent, provides a man who has made a reputation in the cranberry field, and a man very well liked.

Pictorial Section



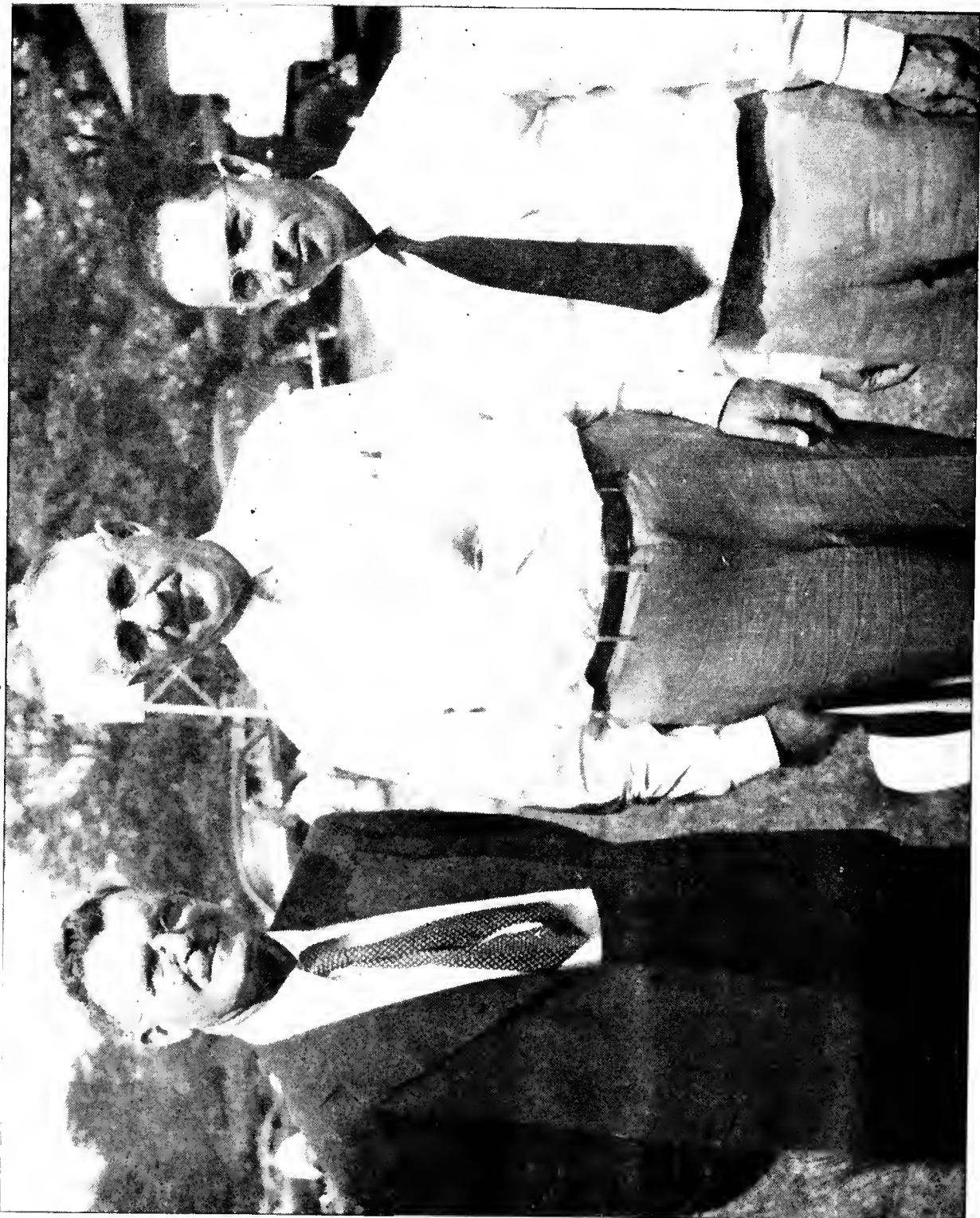
Massachusetts' Governor, Robert Bradford, guest of honor at the Plymouth County Republican Club, August 16th, at the bogs of Ellis D. Atwood, South Carver, declared of the Edaville Railroad:

"Some may think of this railroad of Mr. Atwood as a toy". But to him he said it was a symbol of the initiative and go-ahead spirit of Atwood and the cranberry industry. "It is a striking example of free enterprise

Upper photo shows, left to right: Lloyd Waring, new state Republican Committee chairman, George C. P. Olsson, Plymouth County Clerk of Courts and chairman of Plymouth

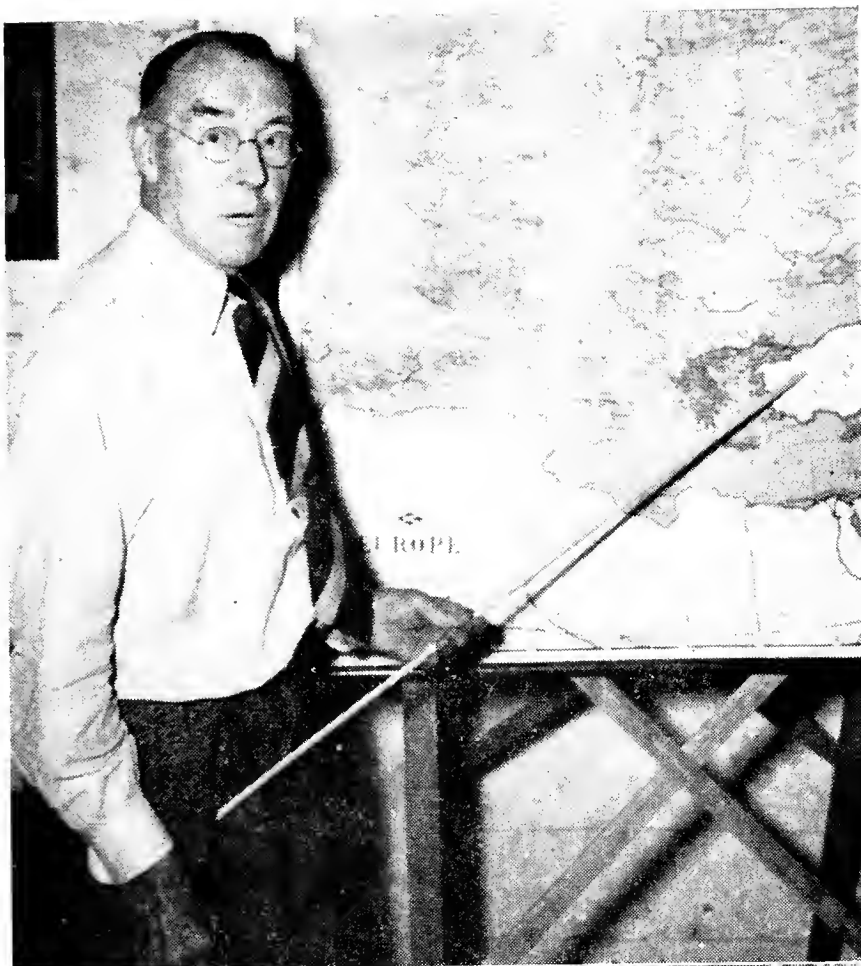
County Republican Club committee; Gov. Bradford and John Ames of the Governor's council. They are on the observation platform of the "Governor Bradford" special. Lower photo: the Governor is seen with Mr. Atwood and the conductor of the train before boarding for the five-mile ride around the bogs. Governor Bradford is only one of many thousands who have enjoyed riding around the bogs this summer, and, it may be assumed, carrying away a memorable and favorable impression of the cranberry industry.

(Photos David Eldredge).



D. J. Crowley, director Washington State Cranberry Experiment Station; F. J. Sievers, director Experiment Station, University of Massachusetts, C. A. Doehle, associate research New Jersey Cranberry Laboratory at annual meeting of Cape Cod Cranberry Growers' Association.

(Cranberries Photo)

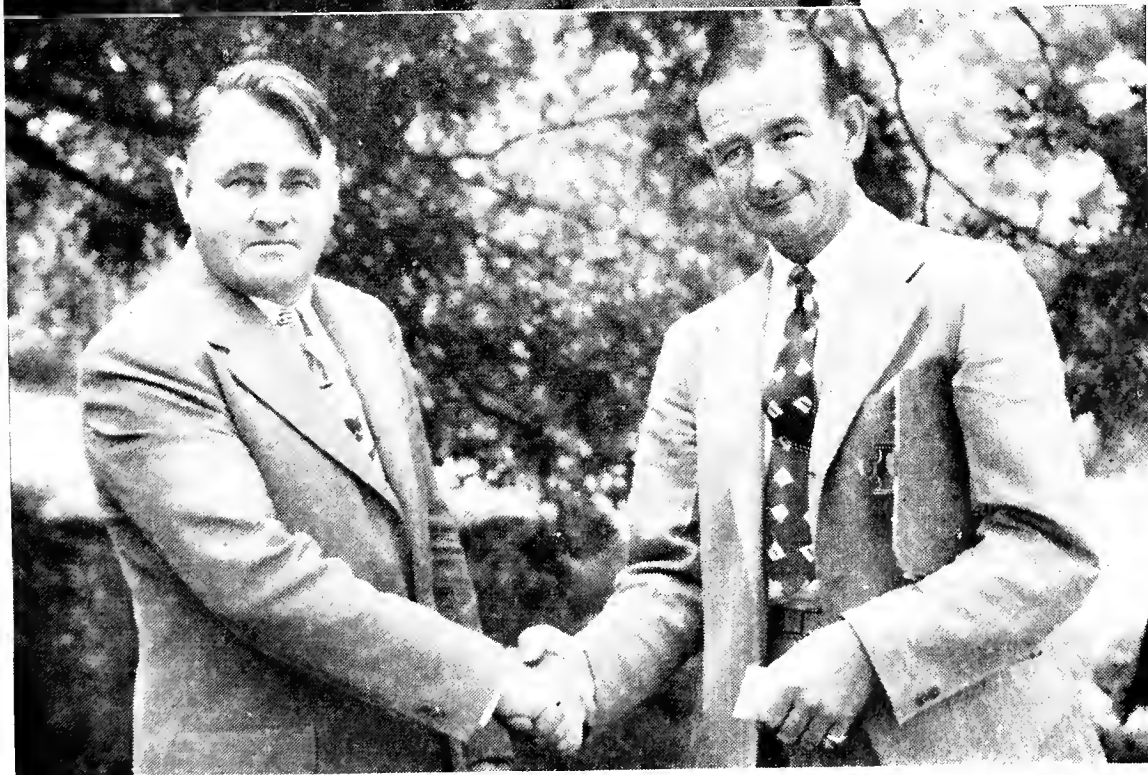


Col. Furlong, who gave principal address at Cape growers' meeting.

Below:

George E. Short, left, retiring president, wishes his successor, Russell Makepeace, the best of luck.

CRANBERRIES PHOTOS





A. V. Anderson and Mrs. Anderson of Grayland, Washington, are shown with Dr. H. J. Franklin at Massachusetts State Bog, East Wareham, the Andersons having just returned from a flying trip to Sweden. Mr. and Mrs. Anderson on this trip were two of a party of 16 cranberry growers of Grayland, who made the entire journey from the Pacific Coast to their Scandinavian homelands by air flying to Seattle, Seattle to New York, New York to Stockholm, and reversing the trip on the way home.

This was the first return visit for most of the party in many years, for the Andersons in more than 40. They had all come to this country by slower boat and to the West Coast by rail. Most of the party went directly to Grayland from New York, but the Andersons visited their niece and husband, Mr. and Mrs. Walter R. Anderson, of Auburn, Mass., and then made a brief tour of points of interest in the Massachusetts cranberry area.

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Washington Field Day

Long Beach, Washington—The Field Day which was held August 8th at the Cranberry-Blueberry Laboratory attracted more than 150 enthusiastic growers and their friends to the Experiment Station at 10 a. m.

D. J. Crowley, Superintendent of the station, explained some of the work which he is carrying on at the Laboratory before a shower drove the group to the Grange Hall. He continued his talk there and was followed by Dr. J. H. Clarke, who talked about the work being done at Cranguyma Farms.

Much credit is due Mrs. B. B. Saunders and her committee for serving a delicious baked salmon dinner in the Grange dining room at noon. The dinner was furnished by the Long Beach Cranberry Club.

Attorney John H. Binns of Tacoma, regent of Washington State College, and Dr. J. W. Kalkus,

Superintendent of the Western Washington Experiment Station at Pugallup and Assistant Director of the State Experiment Stations, were introduced and spoke to the growers.

Visit "Cranguyma"

About a hundred people drove to Cranguyma Farms, where they watched sanding operations and the sprinklers at work. The next stop was at the Chabot and Newkirk bog, where clearing by machinery was in progress. Many growers later drove to the Blair Brothers bog, where they watched the giant sprinklers in operation.

Grayland Cranberry Tour

Over 35 Long Beach cranberry growers drove to Grayland on August 9th to attend the cranberry tour there. All of them stopped at the cannery of the National Cranberry Association at Markham and were shown through the plant. The frozen berries were washed in warm water, taken through the huge stainless steel cookers where sugar was added by the hundred

pounds, and finally emptied into the small cans and sealed. Strained cranberry sauce was in the process of being prepared Saturday morning.

At noon over 250 cranberry people met in the Community Hall, where a salmon dinner, with ice-cream and cake for dessert, was served by the Grayland ladies.

While the group were gathered for dinner, Nolan Servoss, Assistant County Agent in charge of Cranberries, acted as master of ceremonies. Mr. Crowley was introduced and gave a brief history of the cranberry industry in Washington, from a few discouraged growers in 1920 to the thriving industry today. Dr. Clarke of Cranguyma Farms spoke briefly on cranberries. He was followed by W. S. Jacobson, Western Manager for the National Cranberry Association. He stated that the business of the National Cranberry Association in Washington in 1946 was about nine times that of 1942.

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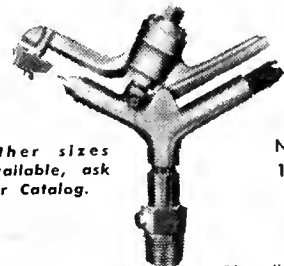
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		50	135	115	23.5
		70	145	123	28.2

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The guest speaker of the day was Congressman Russell V. Mack of Hoquiam. He has long been a cranberry booster and gave an interesting talk. He stated that the people of Washington, D. C., were very poorly informed about our great state of Washington.

Floyd Svinth, County Agent of Grays Harbor County, represented the Extension Service and gave a short talk, as did Helmar Basso, County Agent of Pacific County.

The Grayland Tour came to its conclusion in the evening with a big dance held in the Community Hall.

ACE Directors In Wisconsin

What might well be called Wisconsin Rapids' "Cranberry Week" was the week of August 3rd, with the first Wisconsin meeting of the directors of the American Cranberry Exchange on the 7th, the meeting of the Wisconsin Cranberry Sales Company on the 8th, and the annual meeting of Wisconsin State Cranberry Growers' As-

sociation climaxing on the 9th.

Theodore H. Budd, Pemberton, New Jersey, presided at the meeting of the directors on the 7th. The meeting considered matters relating to the allocation of the 1947 crop of member growers and business relating to general operations of the national co-operative. Directors had luncheon with directors of the Wisconsin Sales Co. that noon.

Officers of the Exchange who attended in addition to Mr. Budd were: C. M. Chaney, executive vice president and general manager, E. Clyde McGrew, treasurer and assistant general manager, and Lester F. Haines, assistant sales manager.

Directors attending included Edward L. Bartholomew, Wareham, Mass.; Arthur D. Benson, Middleboro, Mass.; Bernard C. Brazeau, Wisconsin Rapids; George Briggs, Plymouth, Mass.; George A. Cowen, Middleboro, Mass.; Harold S. DeLong, Mather, Wis.; Homer L. Gibbs, West Wareham, Mass.; Vernon Goldsworthy, Wisconsin Rapids; Robert C. Ham-

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mond, East Wareham, Mass.; James D. Holman, Lakewood, N. J.; Craig M. Scott, Wisconsin Rapids, and George E. Short, Plymouth, Mass.

The following day the directors met with a large gathering of members of the Sales Company, this meeting being at the Bull's Eye Country Club. Visiting officials addressed the Wisconsin members on progress made in the past year, and indicated that the Exchange had been strengthened in all fields of operations.

Washington Cranberry Survey Is Completed

Nolan Servoss, assistant County Agent of Pacific County, Washington, who has charge of cranberry operations, has completed his survey of the Washington cranberry industry.

He found that Long Beach now has 300 acres of cranberry bog in production, 32½ acres not yet pro-

ducing, and that there are 49 growers.

Grayland has 322 acres in production, 110 yet to reach the yielding stage. There are 317 growers.

In the North Beach area, north of Hoquiam there are 15 growers who own 16½ acres in production and are bringing in 12½ acres of new bog.

January issue of CRANBERRIES reported a survey for Oregon which showed there were 174 acres producing in that state; there were 96 acres planted, but not in production, with 166 additional acres to be planted shortly.

MASSACHUSETTS

Following is the N. E. Crop Reporting estimate of August 20th for Massachusetts:

The Massachusetts cranberry crop is estimated at 505,000 barrels—9 per cent less than the 553,000 barrels harvested in 1946, but 19 per cent above the 1936-45 average crop of 424,900 barrels. Weather conditions have been

moderately favorable for the development of the 1947 cranberry crop. During the spring months frequent flooding was necessary

(Continued on Page 20, Col. 2)



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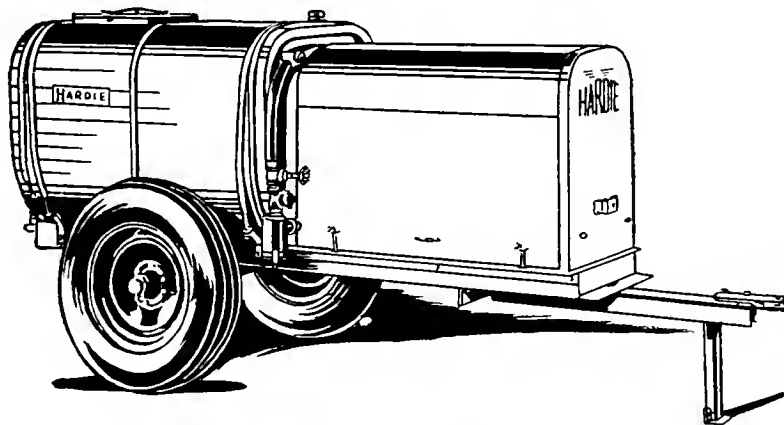
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Western Pickers, Inc. Discusses Bog Floors

Now that the first successful tests of the Western Picker has been made in Massachusetts, several points relating to successful picking should be enlarged upon.

First—Since only twenty-five pickers are available this year it follows that not every application for picking can be taken care of immediately. Therefore, the following plan has been evolved for Massachusetts only. This state has been divided into nine districts and definite machines allotted to each district. Then, some time during the picking season, each grower can see the picker in operation on conditions that nearly resemble his own.

Second—The matter of costs. Not having any history to go by and knowing that during the first year many non-repeating costs such as demonstrations, trucking, frequent moving, the price was based on a barrel basis of 90 cents without an operator and \$1.05 with operator.

Which brings up the next point. So far as possible Western Pickers, Inc., desires that growers themselves operate the picker on their own bogs. They alone know what is required and certainly they would be better able to direct future picking operations if they were familiar with the actual mechanics of the machine.

Particularly is this true when he observes and notes the unevenness of his bog bottom and eventually realizes that his ultimate picking success is nearly inversely proportional to the number of hollows in his bog floor.

One last word of caution—Don't be misled into believing this is a perfect picker. It is not automatic—it needs able human guidance. It is still an experimental machine and is still being improved and adjusted to definite conditions. Certainly some mechanical deficiencies will appear as the season advances, but if and when they do Western Pickers and NCA will do their best to foresee and correct it.

(Advt.)

(Continued from Page 19)

for frost protection. Water supplies were generally adequate for flooding. A hail storm on June 19 over the Carver area caused severe damage on a few bogs. Growers report that the moderate bloom has been followed by a near-average set of fruit. Berries are showing very good size. Fruit worm appears to be causing somewhat more damage than during each of the previous two years, although losses from this cause are not expected to be large.

According to reports from growers. Early Blacks are expected to account for 54 per cent of the crop as compared to 59 per cent last year and a 1941-45 average of 56 per cent. Howes are expected to be 41 per cent of the total. Last year Howes made up 37 per cent of the crop and on an average comprise 38 per cent of the crop. Indicated production in Massachusetts is one of the largest on record. Larger crops occurred in 1946, 1942, 1937 and 1933 when 553,000, 572,000, 565,000, and 506,000 barrels respectively were harvested.

August Hot, Humid

August was a terribly dry month with many days of high temperatures. Temperatures up to the 15th were high, readings of 89 being recorded at the State Bog. The heat was accompanied by high humidity, making very uncomfortable weather. This heat wave was broken for the cranberry area by a cold front and rain on the 16th. Up to that time there had been only .06 inches of rainfall. On that day .83 was recorded for that rain, and to that amount of rainfall the crop was definitely benefited.

Rainfall Only 1.11 Inches

A second heat wave ended August 26th, this bringing record highs, 95 being recorded in Boston for the hottest August 25th in the records of the Weather Bureau—so hot was it, in fact, that as a

stunt an egg was actually fried on the sidewalk. The heat, or probably more accurately, the continued lack of rain, did the berries no good in sizing and maturing. The drop in temperatures the afternoon of the 26th was sudden and accompanied by showers and, in some Massachusetts areas, severe thunder showers. Cloudy, cooler weather followed.

August ended with but a total of 1.11 inches of rainfall. Berries were suffering from the deficiency and were not coloring as much as hoped for as September began. Lack of rainfall also had reservoirs generally down, which was not a cheerful prospect for any September frosts which may be in the making. The size of berries was not increasing as much as had been expected, some growers reported. There was some bottom rot, or scald.

NEW JERSEY

New Jersey Crop Reporting Service releases the following concerning the Jersey crop:

Based on reports from 114 cranberry growers from all producing sections of the state, the preliminary estimate of production for the 1947 crop is placed at 93,000 barrels—8 per cent below the 1946 crop of 101,000 barrels, but 11 per cent above average. Bogs generally came through the winter with a minimum amount of winter-kill, reported at about 4 per cent. Spring frost damage this year was reported slightly higher than usual—averaging approximately 13 per cent. This was attributed largely to injury sustained from frost on May 8, 9, and 10, and the cold snap on Declaration day when the temperature dropped as low as 30 degrees in some bogs. Most growers reported a moderate to heavy bloom, but continuous showers and rains during the period July 4-22, right at the peak of the bloom, resulted in unfavorable conditions for proper pollination. Following this period, beginning July 23, the weather turned warm and hot, creating a humid atmospheric condition favorable for fungus growth and development. At the time of the survey, August 1, many growers were apprehensive

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of the extent of rot damage, but continued clear and open weather the first half of August was beginning to clear this up somewhat. The set of fruit averaged about normal, and the reported insect damage was considerably lighter than last season, although a few growers reported some fire-worm damage.

The survey of prospective production for 1947 by varieties shows the following: About 45 per cent of the total crop will be Early Blacks, about 34 per cent Howes, about 12 per cent Jerseys, and the remaining 9 per cent classified as "all others."

Rainfall Satisfactory

August has been moderately favorable for the cranberry crop in regards to rainfall. The total at Pemberton through the 27th was 3.71 inches, which is 1.07 inches below normal for the month.

Temperature Normal

The average daily mean temperature through the 26th was 74.5 degrees or almost exactly normal. From the 12th through the 16th and again from the 23rd through

the 26th very hot and humid weather prevailed, with temperatures ranging from the high 80's to low 90's. August 15th was the hottest day of the season when the

temperature reached 94 degrees at the Pemberton Laboratory.

Too Much Rot

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growth of the fruit rot fungi. Many bogs have rotted badly in spite of all efforts at control. If New Jersey falls below the 93,000 barrel estimate, fruit rots will be largely to blame.

WISCONSIN

Gov't Report

Government estimates as concerns the Wisconsin crop, as of the 19th, by N. E. Crop Reporting Service was: "In Wisconsin bogs are a week behind the normal progress at this time of the year, but fruit is sizing well.

Cub Dusting

Airplane dusting with Piper Cubs has been tried out in Wisconsin on approximately 300 acres of marsh belonging to members of the Wisconsin Cranberry Sales Company, with 5 per cent DDT dust being used. The insects which the growers were trying to control were blackheaded fireworm and the bluntnosed leafhopper. The second brood of fireworm proved serious on some of the marshes, and in some instances did quite a bit of damage.

Fruitworm does not seem to be too active this season. There were

(Continued on Page 24)

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WISCONSIN

(Continued from Page 22)

isolated cases, but the damage has not been great.

During the latter part of July and into mid-August the water supply became rather low, due to extreme hot weather. Thermometers registered 108 on the marshes, not for just one day, but for three or four days in a row. There was some blasting of berries, both the blossoms and the small berries that were starting to grow.

The frost damage of July does

not seem to have been as serious as at first believed, according to C. D. Hammond, Jr. Marshes which were hit earlier in the season came along well. Not in all

cases, but in most. Some marshes which earlier in the season had apparently suffered a 25-35 per cent damage now seem only to have been injured from 5 to 10%.

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Fred P. Hepburn Completes 20th and Busiest Year With NECSCO

By CLARENCE J. HALL

New England Cranberry Sales Company this year did its biggest job to date in fruitworm control for grower-members—in egg count and then in control—Frederick P. Hepburn, foreman of the Tremont packing house, asserting: "I have never before seen anything like this summer for requests for egg counts by the growers." We took more than 500 samples, representing at least 135 growers, and other counts were made at the bogs.

"This year fruitworm infestation was second only to 1944", he says, "and besides the eagerness of the growers to have accurate egg counts made, they were never so ready to follow instructions in control."

"In assisting growers, we used the 'copter straight-wing plane and ground dusting and spraying crews. Besides the amount of insect control we did from the air, we actually did more ground dusting and spraying than in any previous year. We had two dusting crews and two spray crews, and a third dusting outfit to use in emergencies."

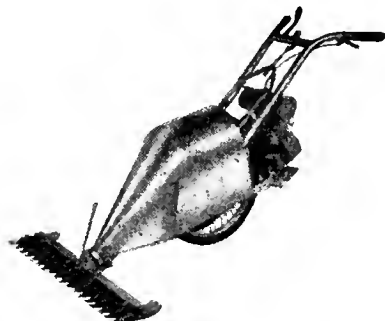
One reason Hepburn assigns for the greatly increased service

program of NECSCO this summer is that the co-operative is now supplying a complete operation service to more bogs than previously. This service includes all operations from frost protection, packing and marketing. About 250 acres are now so being handled, representing approximately 15 owners, the bogs in location ranging from Kingston to Bourne.

In addition to this having been his busiest summer, it also marked another event for Hepburn—that of having rounded out 20 years on July 22, of service with the New England Sales. So rushed up during the height of the fruitworm season was he that his fellow workers at the plant are still chuckling over one incident of the season. That was the morning when Hepburn appeared for work wearing two neckties. In his haste to be on the job, he had put on one tie, then placed another over it and dashed off to work. He was not aware that he was "doubly-tied" until others began to laugh. Then Hepburn enjoyed the laugh at his own expense.

However, that was but a single lighter moment in a year of intensive work, Hepburn providing ex-

tremely valuable service through his proficiency in making the egg counts and in making control recommendations. He, in turn, kept in close touch with Dr. Franklin and others at the Experiment Sta-



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tion in providing the proper advice.

Hepburn began working for New England Sales as a carpenter and has filled every job at the packing house except that of laborer. He was made foreman about ten years ago. Still working under the supervision of Raymond Morse, who is superintendent of field operations and screenhouses, he has complete charge of the Tremont house. At its highest peak yet (1942) a total of 26,383 barrels were packed there, and in fact, the average for the past three years, excepting 1944, has run about 26,000 barrels.

During the harvest season about a dozen men, besides truck crews, work under his supervision, as do 10 women screeners. As large a number of employes, including sanders and weeders on the bogs,

as 110, have worked out of the Tremont packing house.

He is very much interested in his cranberry occupation and says of his employing company there could be no finer people to work for than the management of New

England Cranberry Sales Company.

"I like cranberry work very, very much", Hepburn says, "although I never owned a berry in my life, and don't expect to". Although not a grower, he is inter-

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Prior to going to work for the Sales Company, Mr. Hepburn was employed for a time by John J. Beaton as screenhouse foreman. His father, Finley F. Hepburn, for years was foreman of the steel mill of the Tremont Nail Company and Fred worked under his father until the mill was closed down. He then turned to carpentry, but, as he says, "drifted" into cranberry work.

ested enough to be a member of the Cape Cod Cranberry Growers' Association and of the Southeastern Massachusetts Cranberry Club.

Bain

(Continued from Page 11)

by certainties. For this reason the writer is confident that Wisconsin's 20-year upward trend in per-acre production has not yet reached its peak.

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The American Cranberry Exchange, Inc.

U. S. Dept. of Agriculture Lit. No. 1

The Cranberry Growers' Cooperative

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Massachusetts' L. B. Handy and his dog, "Rube".

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"Chicken 'n Cranberry" Campaign Boosts *Ocean Spray* Sales 725%!



In September, Ocean Spray launched a national advertising campaign to make cranberry sauce as popular with chicken as it is with turkey. Ocean Spray brokers arranged displays like this, taken in one of the Mayfair super markets in Los Angeles on September 4.

Ocean Spray was displayed on the meat counter, in the grocery department, and beside freezer boxes where frozen chicken is sold. Chicken 'n Cranberry recipes published by NCA were passed out to customers.

At the end of the third day, the store manager added up his sales. Ocean Spray sales had increased 725%, and chicken sales had increased 85%!

Said Mayfair's store manager to Ocean Spray's Los Angeles representative, "You can come back with this promotion any time. It builds sales!"

What does this mean to cranberry growers? That Ocean Spray is building greater demand for cranberry sauce . . . that it is showing distributors how to make more money on Ocean Spray . . . that by winning consumer support and dealer cooperation it is assuring you an expanding market for your increasing crops.

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ACE Opens Its Early Blacks at \$27 a Barrel

Trade Reported Buying at
This Figure—NCA Re-
ports Heaviest September
"Ocean Spray" Buying—
Both Co-ops Advertising
Intensively.

American Cranberry Exchange opened its price for Early Blacks September 17 at \$6.75 a quarter, or \$27.00 a barrel, which is \$1.00 more a barrel than the opening last season. In announcing the price C. M. Chaney of ACE added that harvest of Blacks was running about 15 per cent below the figure in the Government August estimate.

National Cranberry Association had set a wholesale price on sauce of \$2.00 a dozen, a reduction from \$2.45, on August 20th. For fresh fruit NCA was also quoting \$6.75 a quarter.

ACE set its opening figure after thorough consideration of all factors which might affect the sales, and the \$6.75 figure was announced by Mr. Chaney following a meeting of ACE directors in New York the 16th.

Good acceptance by the trade was reported by Chaney and it was said at New England Sales Company that the Blacks could all be disposed of, it was expected, the only difficulty being in obtaining berries of sufficient color to fill orders. Beaton's Distributing Agency was also receiving ample orders.

Exchange has backed its sales with advertising, which through 1946 has amounted to a total of \$3,579,000 and the program this year includes color ads in national magazines and black and white in dailies throughout the season, promoting the "Eatmor" trade name.

NCA reports that "Ocean Spray" sales for the month of September were expected to reach 500,000 cases for a dollar value of \$2,000,000. This amount would be the largest September sales on record. NCA has released information that an active promotional campaign and the new low price are factors in boosting sales, as was proven

by reports from the trade. At Cleveland, through a super market chain store 1,100 cases were sold in a single day; in New Jersey, with a similar feature, there were sales of 1200 cases in a day. Prevailing price for "Ocean Spray" in retail stores has been 21 cents a can, NCA reports, although stores in Boston, New York, Chicago and Portland, Oregon, already are featuring it at 19 cents a can, "and by Thanksgiving time it is expected that most stores will probably be using 'Ocean Spray' as a leader at 19 cents".

With prices of most foods continuing to rise, NCA's directors felt that cranberry sauce will sell in large volume this year only if prices are lower than last year, NCA said.

To promote sales NCA, in addition to 23 ads scheduled to appear in national magazines this fall, has contracted for black and white ads in 63 newspapers in leading cities. Copy for the newspaper ads in October will feature "new low price", and the "chicken 'n cranberry" theme. November will feature cranberry sauce with Thanksgiving turkey and December cranberry sauce with holiday meals.

With this new program, NCA's fall campaign, the largest in its history, will reach some 130,000,000 readers.

Growers Watching "Western Picker" Experiments

"Western Picker" has been demonstrated on a number of Massachusetts bogs of NCA members, before the end of September there having been 21 machines in operation in these experiments. September 25th saw a demonstration at the State Bog, which was witnessed by Drs. Franklin, Chandler, Cross, a number of growers, and others.

Comment on the success of this picker has been varied, but consensus of opinion seems to be that the machine "definitely has possibilities". Some have been more favorably impressed than they anticipated.

R. J. Hillstrom, the manufacturer, who is spending this fall in the

eastern cranberry area, has not said the machine is perfect, and he admits there are still bugs to be ironed out. The difficulties include a rigidity which has not always conformed too well to Massachusetts bogs on which the floor is not even. In Oregon vines are higher and there are no berries close to the ground.

Comment has been that too many vines were picked, although all agree that the machine leaves the bog "looking beautiful". The point has been raised by Mr. Hillstrom that if the amount of vines the machines pulled into the boxes was compared with the vines a scooper pulls off, and the vines which are pulled by after-harvest raking, the "Western Picker" would take off fewer vines than the scooping-raking method. He feels three models may be necessary for eastern bogs, one for tall, medium, and short vines.

This fall's tests have been interesting, and Hillstrom feels that eventually complete satisfaction will be achieved.

Wareham Legion Preparing to Choose 3d 'Cranberry Queen'

Organization meeting of the cranberry festival committee of Wareham Post, 220, American Legion and Auxiliary, has been held to make plans for the annual Legion cranberry festival and the choosing of the Massachusetts "Cranberry Queen". This will be the third successive year in which the Legionnaires and the Auxiliary have conducted this festival and choosing of a queen, the affair being held at Wareham town hall. General chairman of the committee is Alton H. Worrall, chairman of the Board of Selectmen of Wareham. Date of the festival is to be announced later.

CANNERS' PRICES

Canners, it is understood, are paying advances to growers, with no specified final payment. National is advancing \$15 a barrel for the first 200 barrels and \$10 for berries in excess of that.

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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FRESH FROM THE FIELDS

By C. J. H.

The Crop

No official estimate of the crop was available at press time, but it appeared Massachusetts was falling off 15% and possibly a little more from the August estimate of 505,000 bbls. Estimates as October came in were from 425,000, which was the figure of A. D. Benson of New England Cranberry Sales Company. Dr. Franklin felt certain the crop would not be more than 440,000. Some were giving the estimate even lower than these figures. Cars shipped from Middleboro Sept. 30 were 155, as compared to 241 last year.

Drought continuing from late July through August and into September was what buckled the Massachusetts crop principally.

New Jersey was reported to be falling off at least 10 per cent from the August estimate of 93,000 and this was before a reported considerable frost loss in the series of eastern frosts starting September 26th

Wisconsin, on the contrary, was reported as increasing from the 112,000 barrels to 130,000 and with some possibility of approaching last year's figure of 145,000.

West Coast prospects were said to be continued favorable for a large production.

MASSACHUSETTS

Season Started Well

Labor was adequate and Massachusetts seemed set for a good crop as harvesting started, except that the drought conditions which had existed all during August and part of July were continued. However, by the end of first week of picking (Sept. 13), Dr. Franklin and others were saying they would

not be surprised if the estimate of 505,000 would not under-run by 10 per cent. Weather up to that time had been very hot and rather humid. There had been no "fall" weather—berries were, in many instances, coming from the bog too heated. Temperatures were in the 80s, often the high ones.

Sunday, the 14th, brought the first rain of the month and this was a good one, steady and soaking, 1.36 inches being recorded at the State Bog. This helped conditions to that extent.

However, there was a general opinion that the crop was running at least ten per cent off in Plymouth and upper Barnstable counties. On the lower Cape, the decrease was far more serious. Many growers were not getting 50 per cent of what they had anticipated. It is usually the big cropping of dry Cape bogs which help swell Massachusetts' total.

Frosts

A high pressure area arrived over the cranberry district beginning the afternoon and evening of the 16th, and the 17th was the first really cool day of the season. The change was abrupt and definite, the air sparkling and cool, replacing the heat and humidity.

But by that time it had become quite evident that a good deal of damage to the crop had been done.

A series of frosts came on the nights of September 26, 27 and 28 with temperatures of 22-28 being reported along the coast where there was some wind all night, except the 28th. The first two nights held high potential danger except for this wind. Lower temperatures were recorded inland. Some growers lost substantially. With water

supplies at the lowest minimum, growers everywhere husbanded water with the utmost care.

What promised to be a real cold spell began again on the night of September 30, but along the coast the wind again blew the nights of September 30 and October 1 and while there were temperatures of 24 the frost damage would have been slight. This spell brought the coldest report of the season to date, with 17½ at Holliston.

Dr. Franklin tentatively placed the losses at 2 per cent, although some others have figured a little above that.

Berries Not Sized Nor Colored

Up to the first of October it had been a troublesome season, with the frosts, lack of water, and lateness of the berries in coloring and sizing. Berries had not sized as had been the earlier anticipation, and in fact there were many small berries. The light color had caused trouble in getting berries to ship for fresh markets and had caused delays at canneries. Berries were called at least two weeks late. Color had improved by end of month, however, with the coming of cold weather.

Some growers had trouble with scoopers not showing up, as picking was tough, with tangled vines, weather conditions having grown long runners. Tightening of picking crews was especially noticeable in those picking by the box.

NEW JERSEY

Hot days and warm nights increased the size of berries during late August and the first half of September. In spite of limited rains there was enough soil moisture to prevent hurt by drought

(Continued on Page 18)

"LECK" HANDY

After 57 Years of Cranberry Growing, Massachusetts' Most "Individual" Grower is Still Building Bog

By CLARENCE J. HALL

Having built his first bog in 1890, when he was 16, and now owning (partly with others) approximately 450 acres, L. B. Handy of Wareham, Mass., is still going ahead with intensive building plans. He is currently building a 40-acre bog, with eventual potential of 150 in Middleboro with a younger partner, and with his son-in-law has recently acquired a nearly 100 acre property at East Taunton where a large renovation program is in progress.

"I like to build and improve cranberry bog", says Handy, who is never known by his first name of Leslie, but to all his friends as "Leck". "Somebody will get some good out of these bogs I am working on now. There aren't many things today you can put your money into and get it all back ten years ahead if you should want to sell. You can do that with good cranberry bog.

"I know it's true you used to build bog for \$1,000 an acre and you could get help for \$1.00, \$1.25 and \$1.50 a day, and that first-class bog now costs \$3,000 or better an acre to build. When bog was \$1,000 an acre you got ten dollars a barrel, some years less. With \$3,000 an acre bog last year you got \$30 a barrel. What's the difference?"

Started From Nothing

Handy in more than half a century in the cranberry game has experienced many times when things were not as good as he is convinced they are today. "You can't start from nothing and build up to something without having had some tough sledding at times."

"Practically nothing" except a desire to become a cranberry grower, was what "Leck" had when he started in. He began by building a bog of 3½ acres adjoining the farm of his father, Edward Handy, on the Blackmore's Pond road at South Wareham. He had picked cranberries and weeded, as had many others of his generation. His father, who was a seafaring man from the neighboring town of Marion, was not a cranberry grower, but "Leck" built an acre near his father's farm, where he had been born in 1874. Handy's mother was from Vermont.

It is interesting to note that after 57 continuous years in the business, Handy is completely satisfied with the life and the prospects of

a cranberry grower; so much so that he still wants to expand and that he is not afraid the bottom is going out of the business. He does not think that prices are to go drastically lower. He believes the grower will continue to get a good return for his crop. Every grower hopes he is right, but not all have the courage to go ahead with big plans.

Handy Has a Mind of His Own

However, what others believe would have no influence upon the thinking of L. B. Handy. Mr. Handy, with his New England background, is an individualist, if ever there was one. He does his own thinking for himself. In fact, Handy by nature is rather a "perverse" individual. He is probably the most "contrary-minded" grower in the Massachusetts industry today, as well as one of the largest. Actually he gets a good deal of fun in being on the opposite side of the fence, most of the time.

"Leck" Handy will disagree with most anybody on most anything at most any time. In fact, the harder anyone argues with Handy and the nearer they come to bursting a blood vessel to move him from his stand, the more he chuckles inwardly. He has a great fondness for "spoofing." While Handy is arguing, apparently with great seriousness, a third party listening in is apt to get a smile now and

then from the corner of Handy's mouth.

It is only a stranger to the industry who argues with Handy. Those who have been growing cranberries for any length of time, at least anywhere near Wareham, know Handy as one of the most influential growers and as one who knows his cranberries and cranberry growing. Any man who has started with "nothing" and built it into "considerable" in the cranberry business as Handy has done is bound to have the respect of his fellow growers. So "Leck's" views on cranberry growing, when he is serious, are listened to.

He Loves to Argue

One of Handy's partners is no lesser person than Dr. Henry J. Franklin, and even he has long since given up attempting to know what slant Handy will be on in any issue—that is, when he is in one of his arguing moods. Handy seldom agrees publicly with Dr. Franklin in much of anything about cranberry growing. Yet when they discuss their problems together they must always reach an amicable working agreement. They have been partners for 26 years.

On nights of impending frost, Handy is usually one of those who gather at the Experiment Station from adjacent areas, while "Doc" Franklin is making his preliminary telephone calls and working out his formulas before issuing his warning. When Dr. Franklin finally turns around from his figuring and says, "I am going to send out a forecast tonight 'heavy frost, 26 degrees'" for instance, Handy usually loudly makes some such announcement as this: "That means 35, I'm going home and go to bed." And out he goes. Franklin merely shakes his head sadly, and gives out the forecast. But if you followed Handy after he left the station, in the small hours of the night you would find him out on one of his bogs, watching the weather just as anxiously as any other grower.

When Franklin says, "You need 30 hours for a gypsy worm flow to be effective", Handy declares to all and sundry, "8 hours is a great plenty."

He Gets Fun Out of Life

This facet of Handy's character has been dwelt upon at length because there is only one "Leck" Handy in the Massachusetts industry. He is a "true individual" and respected as such. Cranberry growing has enabled Handy to live pretty much the kind of life he has wanted to, it seems, and many another can envy and respect the success he has achieved in his chosen profession and the satisfaction he gets out of being able to "be himself." It appears that long ago Handy made up his own philosophy and it has been said of him by others, and not infrequently, "I wish I could get the fun out of life that 'Leck' Handy does."

Handy is essentially an out-of-doors man (as are many other growers). Although never saying much about it, he is a real student of nature. He hunts and fishes. He is a long-time member of New England Fox and Hounds Club, the one organization he is willing to belong to. He knows plant life. As a side-line to cranberry growing he is partner in a trout hatchery, which he established. For a time he raised mink, but lost in this venture when his mink "died from poison horsemeat". Every winter he packs off to Georgia or North Carolina with his dog or dogs, and his "women folks"—Mrs. Handy, his daughters, Dorothy and Hazel (both also interested in cranberry growing), and often other feminine relatives. There he and his dog, currently a thoroughbred Brittany spaniel named "Rube", go off quail hunting, while the "women folks" stay at a hotel and take trips around the country amusing themselves.

He Has His Hobbies

As a hobby, Handy has long collected Indian arrowheads, tomahawks, and other relics. In his bog building he has dug them out and found them in sandpits and come across them, hunting in the woods. He has collected thousands—and has given most of them away. North Carolina is particularly "happy hunting ground" for arrow heads, called "points" there, he says, and he has picked up as many as a cigar box full in a single field, which were being plowed under by a farmer.

He has carried one arrowhead, which he believes was made from a piece of petrified wood, in his pocket for more than 30 years. He uses it to strike matches upon, to keep going one of the several pipes he carries in his pockets.

He wouldn't admit this, either, but Handy, as a New Englander, really likes and knows good antique furniture. He has picked up a good deal of it in his travels, but he calls it "just buying to keep the women folks happy."

The small bog of 3½ acres by the "old home place", where Handy began has now become a property of 150 acres, a part of which he still knows as the "home" bog, or Blackmore's pond bog, and the upper end as "Eagle Holt." When he first set vines he did as most other growers then did: he set out a number of varieties experimentally. These included Centennials, Batchelors, McFarlins, as well as Early Blacks and Howes. He is now on a program begun several years ago of ripping out these odd varieties and replanting them with the standard Blacks and Howes; in fact, when he is finished all except 100 acres will be in Blacks. He is also having much of the earlier acreage scalped and rebuilt, chiefly with a view to getting a better level.

This property is flowed by seven reservoirs and two pumps in Blackmore pond.

At Eagle Holt he has his principal screenhouse. Most of his berries are packed there. This screenhouse is 220 feet long, has five Bailey mills. He also has screenhouses at properties in Middleboro, but if his crops from these properties come to less than a couple of thousand barrels he finds it more economical and easier to truck them to his main seat of operations at South Wareham, where he has a standard crew of screenhouse workers.

To get back to varieties, Handy's preference is now for the Early Blacks. He is convinced of the advantages of this swing to the early variety, as are many other growers, and for the same reasons. Blacks can be harvested and gotten out of the way quicker, avoiding much frost troubles, and they bring just as good prices from the

canners. Over a period of years it has been his experience that Blacks produce a better average per acre than any other variety.

Blacks predominate at a bog he calls the "Cornfield" along Point Road in Marion. This he built in 1901 and 1903 in partnership with the late Louis Morse of North Attleboro, a jewelry manufacturer. When Morse passed away, the latter's interest was bought out by Handy and the late James T. Hennessy. This is a property of about 25 acres. He owns one other property in Marion, the Burden Brook bog, near the Mattapoisett town line. He acquired this some years ago with John Harju, a foreman of Handy's for more than 45 years. It had originally been built by an association of ministers of the gospel. The former owner before Handy was Lester Jenney of Mattapoisett.

One of his bogs in Middleboro, in addition to the new one he is now building, he calls the "Poorhouse" bog, because it is located near the Middleboro almshouse on Wood street. The other is at Rock, a village of Middleboro. These are about 20 acres each.

These he also owned with Mr. Hennessy, and it was a long and happy partnership between the two men until Mr. Hennessy passed away. The latter is still warmly remembered as one of the most respected and able growers in Massachusetts. For many years he was president of the Cape Cod Cranberry Growers' Association. Mr. Handy has always chosen fortunately in his partnership associations.

Built Inland Bog

He has a six-acre bog in Foxboro, in partnership with Richard Morse, son of "Lou" Morse. On this inland bog in Norfolk County, which he has owned for more than 15 years, Handy gets his best production per acre. His average he gives as 700 barrels, but his peak has been more than 800. This bog is set to Howes. He built this bog himself, and rather against the prevailing judgment that Plymouth and Barnstable counties were the areas best suited to cranberry growing. Relying on his own judgment he went back from the coast, figuring the climate there would be



Partner Walter E. Rowley, Jr., and his rod man for the past 12 years, Harvey Swift.

(CRANBERRIES PHOTO)

more, not less suitable to cranberries.

He Favors Inland Climate

"I like the climate there", he says. "It's there I've had my best luck." A better word than "luck", however, might be success because of sound reasoning. He acted on the theory he could get better crops if he went away from the foggier coast. All will not agree with this, by any means, but Handy says: "I've come to think that the farther you get away from the salt water the better off you are. I have seen blooms on my Wareham and Marion bogs which should have set twice the crops they actually produced. But a spell of damp, foggy weather would come in and I wouldn't get half the barrelage I should have had. There just weren't enough hours of sunshine.

"I've been up in Foxboro when there was bright sun all day. I've come back as far east as Middleboro and there was some mist.

I've gotten back to Wareham and found it has been cloudy and foggy all day. I've about come to the conclusion that in Massachusetts to get the best conditions you want to build bog west and north of a Plymouth-Middleboro-Taunton line. Middleboro to my thinking is a better place to grow cranberries than Wareham, and Wareham is better than the Cape itself. You get cold, wet winds and fogs from both sides there."

This is a long way from the thinking of some of the pioneer growers of the Cape where the industry began. Such, for instance, as the belief of Josiah Freeman of Orleans, who wrote in 1855: "I consider them (cranberry vines) rather of a marine plant, and therefore should prefer to plant as near salt water as possible, and not have them overflowed with salt water".

Others than Handy are coming to have a favor for bogs which are

more inland and where the sunshine factor is felt to be much more favorable.

Lowell Cranberry Co. Bog

The property of the Lowell Cranberry Company, the bog in which Handy is in business with Dr. Franklin and the sisters of the late Mr. Hennessy, is even more inland than Foxboro. Located in Middlesex County, this is well away from the Southeastern Massachusetts cranberry area. The main bog, which is one of about 40 acres, is at Carlisle, and there is also a 10-acre bog at Wilmington. Both are north of Boston and not far from the New Hampshire state line.

Highest production at the Lowell Company has been 3600 barrels, but this is a bog which, oddly enough, has never been given the opportunity to produce to its fullest. The reason is, vines from Lowell Cranberry Company are in constant demand and being cut

nd sold. This Carlisle bog is the only one in Massachusetts from which, while making no guarantee. The owners sell vines in good faith, believed to be entirely free from false blossom. Cuttings are always being taken to many points in the cranberry-growing areas of the United States, to Canada, and even a few to Europe. Some years a number of acres have been cut. This bog is a little warmer than Cape Cod in the months of May and June, but is colder in September and October.

His Big Interest Now, the New Middleboro Bog

Handy's chief interest at the moment is obviously the building of the new bog at Middleboro. This is to be along Route 28 (main Cape highway) and west of the New Bedford road from the Middleboro rotary traffic circle. This is a piece of property upon which Handy says he has had his mind for the past 10 or 15 years as being admirably suited for cranberry bog. His newest partner, Walter L. Rowley, living at West Wareham, and a civil engineer, also had a bog in this area in mind. Rowley has been interested in cranberry growing for the past dozen years.

Three years ago Rowley began buying up property for the new Middleboro enterprise. So far he has closed sales with 40 different owners and still the deal is not complete. In all the area takes in about 600 acres or more.

The property is fed by spring brooks, and Handy and Rowley expect ample water supply with a three-foot drainage drop, water eventually making its way into the Taunton river at Middleboro. The immediate goal, as previously stated, is to put in 40 acres, these now well under construction. These will be in two locations.

One will lie on both sides of the Cape highway, a little to the south of the traffic circle and the junction of the "old" Taunton road. On the west side there will be a reservoir, 140 acres in extent, with a depth of 4 to 6 feet, this to be back from the highway about 50 feet. Forty acres are to be built on this side.

To the east of 28, trees and underbrush have been cleared and



Son-in-law, George Papageorge

(CRANBERRIES PHOTO)

piled for burning. Thomas Bros., contractors, of Middleboro, have been working for nearly two years with a clamshell shovel, clearing land and waterways, and E. G. Howes, another contractor, has put in nine months of bulldozing.

One section is in the township of Lakeville and has already been

partly set to vines. There was a former small bog there, the property of Maurice W. Washburn, and this has been rebuilt and incorporated into the 20 acre tract there.

Rowley

Engineering for the project is in hands of Rowley. Rowley's only other bog property until the pres-

ent has been a bog of six acres at East Harwich which he bought from Daniel Bassett a dozen years ago. This is a bog which has good sand and water and for the past ten years has averaged Rowley better than 60 barrels to the acre. "I wouldn't have bought and kept this if it hadn't been good bog", Rowley says. Rowley's brother, Dr. Rowley of Harwichport, is also a grower as a side issue, being in partnership with Raymond Morse of West Wareham in bogs in the Yarmouth area.

Rowley is a member of New England Cranberry Sales and has been a director, and at times has taken an active aggressive part in the policies of that organization. He is a member of the Wareham Finance Committee. His services as a surveyor keep him constantly in demand.

While he has previously been "doing all right for himself", as the saying goes, the new junior partner of Handy, speaking of his expectations for the new Middleboro property, says of Mr. Handy, "No one else ever gave me a break like this before." Mr. Rowley appreciates being the partner of Handy in this big new venture.

In the planting of the new Middleboro bog, Handy is using a vine-setting machine which has created a great deal of interest. Some of the acreage was set by the ordinary method with dibbles and hand work. A comparison between the two is pertinent.

Handy has estimated the cost of setting vines by hand as \$200 per acre, as setters have charged him \$1.25 a rod for putting the vines in. With the machine, which will do an acre up to two a day, he figures the cost as between \$30 and \$50 per acre;

Bob Pierce, His Foreman, Developed Vine Setter

The setter, which was first used on the Blackmore's Pond bog with much evident success, was designed by Handy's general superintendent, Robert Pierce of West Wareham, who is known widely as an extremely efficient bog manager. Born in East Rochester, "Bob" Pierce has known cranberries all his life and has been with Handy ten years last April.

Pierce developed this machine, using an Ariens Tiller as the basic unit; in fact, he simply assembled the vine-setting equipment at the rear. Retaining the regular "hex-sided" Ariens shaft, he rounded it at each end to take steel disks. These disks (4) are 20 inches in diameter, made of 3/16 inch steel, blunted so they will not cut the vines. They are mounted ten inches on center, so they cover a row of 30 inches. Following behind the disks are wooden rolls, "spool shaped", which narrow from four inches at the ends to one inch in the center. They pinch the sand in and make solid after the disks have pushed the vines down.

In actual operation vines are broadcast—not heavily, about 15 barrels to the acre—on bog already sanded in the usual manner. Then the machines run over them. The disks push the cuttings in, the rollers make them fast. Either a five or six man crew is used. Two men ahead broadcast vines by hand, then the operator (and an assistant if the going is hard) runs the machine behind them, and following the setter are two men with pitchforks who rake up the vines which were not planted.

The machine is still an Ariens-Tiller and with the vine-setting arrangement removed is continued to be operated like any tiller.

Son-in-Law Partner in East Taunton Bog

The East Taunton bog is another property which is a definitely inland cranberry bog in Bristol county. This property is one of the older and one of a relatively few in this area. There is now a tendency, which is apparently on the increase, for the industry to expand out of Plymouth and Barnstable counties, where it is centered, and doubtless will be for the foreseeable future, at least.

A Massachusetts cranberry industry survey now in progress showed in a preliminary report that gains in acreage are being made in Bristol, Middlesex, also Dukes and Essex, since the last survey in 1934. There is also an increase in Plymouth county. Duke's is an island county entirely, which does not conform with any inland trend.

Yet Handy is not unsupported in his contention that inland counties

are the equal and in some factors, notably sunshine, superior to locations near the ocean. Dr. Franklin has long said that Middlesex County has thousands of acres admirably suited to cranberry cultivation. There are good locations in Worcester county and in New Hampshire. Salt water does temper frosts in the fall of the year, but if there is adequate and suitably-controlled water protection low temperatures are not a drawback.

The purchase of the East Taunton bog by Handy's son-in-law, George Papageorge of Wareham, August 14, 1946, brought this into the Handy "orbit." This inland East Taunton bog has one of the superior water supplies in the state. There are no less than seven reservoirs with a total acreage of about 800. There are magnificent heads of water, concrete chimney flumes controlling the supply being 20 and more feet deep. Water, with even this head, is not held at full capacity. Canals go around the bogs so that each, with the exception of the lower, may be flooded separately and at will, such as for insect control.

Papageorge is inclined to believe that this bog may have always been run too wet. He is attempting better drainage. Main ditches are being widened and deepened, also margin and cross ditches. More dikes are being put in. Papageorge plans to run it on a basis of lower water table than before. An intensive renovation program of sections of the bogs has already been started. The property is by no means one which is free of weeds, but at the same time it has a remarkably lush growth of vines.

The bog was bought from American-National Fireworks company and in a relatively few years has changed hands a number of times. Papageorge declares he expects it has now changed hands for the last time.

Papageorge is the brother-in-law of William Decas of Decas Bros. of Wareham, who have built up a very considerable bog acreage in Massachusetts during the past dozen or 15 years. He is a GI, having served three and a half years in the Army, mostly at Camp Lee, Virginia, with the rank of

staff sergeant. Before going into service he had experience in buying and selling cranberries.

Independent in Marketing

As individually inclined as Mr. Handy is, it might be expected that he is not a member of any co-operative. He isn't. However, for several years Handy did belong to the New England Cranberry Sales Company, but then switched in 1913 to the "independent" Beaton Distributing Agency, and his loyalty has been there ever since. "Beaton sells my berries at the market price, and he makes only a reasonable service charge", Handy comments. "I'm perfectly satisfied." Concerning National Cranberry Association, and before that Cranberry Cannery, Inc., he says he has never given a serious thought to joining.

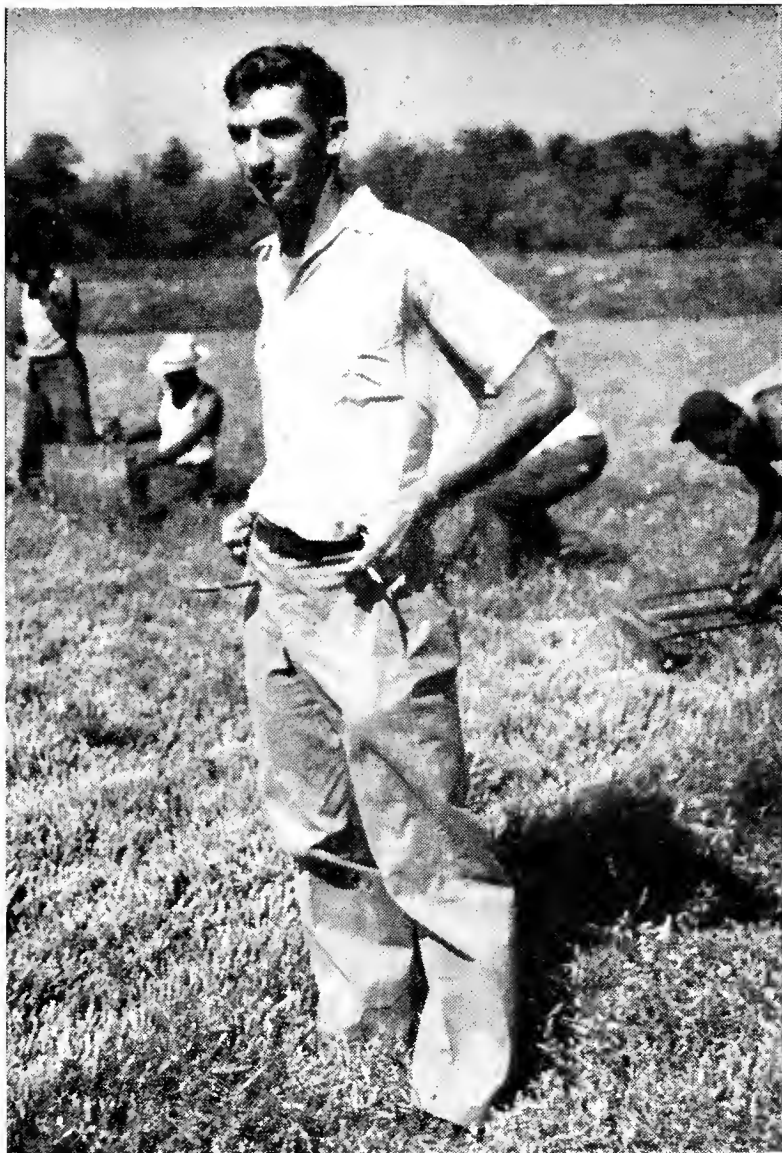
For a time he did belong to the Cape Cod Cranberry Association, but dropped out. He belongs to none of the cranberry clubs, either.

Mr. Handy simply isn't a joiner. Whereas many enjoy being a member of about any group for which they can qualify, Mr. Handy feels just the opposite. And it might be said in passing that some others can be fully sympathetic with his feeling for going his own way. If there were not some individualists this would be a monotonous world.

Like many another grower, Handy has gone in for cultivating blueberries, but only to the extent of raising enough for his own use. On July 25th of this year he spent a portion of his 50th wedding anniversary with a family group picking the berries.

He is Simply a "Cranberry Grower"

In his own consideration, Handy is "simply a cranberry grower." Since his interests have produced more than 11,000 barrels in a single year, no one can dispute that, and particularly since he built up to that production from so little. Beyond that his particular interest lies in building bog, building up old pieces into good producing properties. He feels that is a worthy objective and it certainly is a constructive ambition. Pierce, his foreman, is more of the grower type, and enjoys taking care of properties after Handy has built them. Now, Handy says, he has acquired a son-in-law who knows



Foreman "Bob" Pierce

(CRANBERRIES PHOTO)

the selling end of the cranberry business, and a younger partner who is an engineer. He is rounding out his "organization", loose one though it may be.

In spite of his success in his chosen vocation, Handy remains completely unpretentious and informal as to dress and manner. He is as easy as an old shoe. And he will probably always remain a humorist in his own way. He tells one story about himself which is illuminating.

One frost night he was roaming around to his properties, worrying whether there was sufficient danger to flow or not. He stopped in front of a church and cast the beam

of his flashlight up onto the steeple to a weathervane to see if there might be a bit of air stirring. A woman motorist came tearing along, stopped her car, and inquired "what in the world are you flashing a light upon a steeple at this hour of the night for?"

"Well", Handy replied, "I thought I just saw a bumble bee up there and I wanted to make sure."

The overly-curious woman stepped on the gas as quickly as possible, and in driving away Handy heard her murmur something about "crazy people shouldn't be allowed wandering around loose, not at night, especially." Handy was left alone again, having a good laugh for himself out of that one.

THE CRANBERRY MARKET IS BIGGER, TOO

IT is an encouraging thought expressed in the most recent issue of "Cranberry World", ACE house organ, that the growth of American population has opened up new potential markets of consumers of cranberries, and that the 1,000,000 barrel crop—when it comes—need not necessarily be feared. The article added that in fact there are scarcely any more cranberries eaten per capita than when the crop and the nation were both smaller. The writer, C. M. Chaney, said, "I should even add that with relative income at anywhere near its present level the sale of a 1,000,000 bbl. crop should offer no more of a problem than the sale of a 600,000 bbl. crop in years past."

This sounds entirely logical. The fact is this nation is growing faster than perhaps many of us realize. Consumption of all food stuffs is up. That is a major factor in the present scale of high prices—the old, reliable law of supply and demand.

We have read elsewhere recently that so rapidly has the nation grown, in fact, there has actually been a decline of per capita resources, even while the national total has increased. In the past 15 years, instead of a gain in the physical wealth on the per capita basis there has been a decline.

There has been alarm that the cranberry industry has been increasing too rapidly, that bigger and bigger crops are to be expected from increased better acreage and increasing knowledge and better tools giving greater production per acre. This may be a blessing—that the cranberry industry has "been on the ball".

TO continue the same subject, the statement has been made by the president of NCA that the 1,000,000 bbl. crop is not a thing of the future—it is here, in effect, with the carry-over from the 1946 harvest. ACE studies indicate, on the contrary, that the carry-over is not big enough to make up, with the present crop estimate, a million barrels of cranberries to be sold. However that may be, the crop is certainly getting to be up in the vicinity of the 1,000,000 barrels, and this can be a good year to

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demonstrate what the industry can do. Sugar is free again, and this is the first year in some time that fresh fruit has had a fair chance to compete with processed.

Both co-ops the going about the business of doing something about disposing of the cranberries of the growers. Both are advertising widely and heavily, and advertising does move things. So are some of the "commercial" canners spending money to make the consuming public feel it wants more cranberries. But the industry as a unit has not yet seen the necessity for this. We feel eventually it may.

WE'VE made rapid progress in things mechanical this year, helicopters, picking machines, float boats, etc. But still we haven't overcome the surprises of Nature. Just look what the dry weather and some fall frosts did to the potential crop of Massachusetts.

Pictorial Section



Vine setter, developed by "Bob" Pierce (page 10), showing disks and rollers.

(CRANBERRIES' PHOTO)

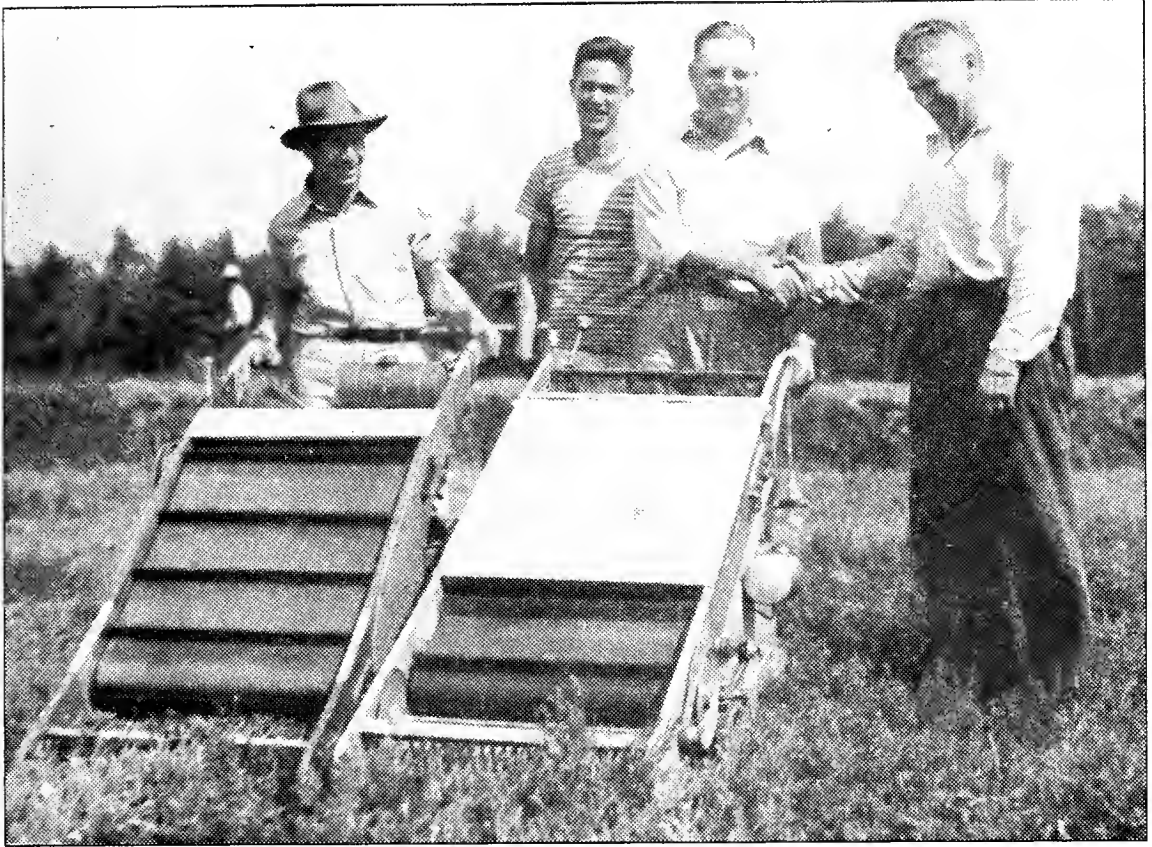
RIGHT: Vine setter, moving forward. Note vines broadcast before Tiller and set in rows as it has passed along.

LOWER: A section of vines, about three months after planting by the vine setter.

CRANBERRIES PHOTO



Test "Western Picker" on Massachusetts Bog



ABOVE: R. J. Hillstrom, extreme right, receives congratulatory handshake from Harrison F. Goddard, after first test of Western Picker on Goddard's Middleboro bog. To the left of Goddard are Hillstrom's son, "Tom", and David Wright, who flew east to assist in the Cape Cod demonstrations.

RIGHT: Goddard himself operates a picker

(CRANBERRIES PHOTO)





NECSCO Wiggins 'copter successfully applies fertilizer to Loon Pond bog of A. D. Benson.
(Story page 24)

(PHOTO HAROLD WILLIAMS, Middleboro)



Growers' Company Exhibits

Many New Jersey growers learned why there was a market for their cranberry crop when they visited the Growers Cranberry Company booth at the Ocean County Fair in Lakewood Saturday, September 6. Walter Fort, field man for the Growers Company, had an exhibit there every method used by the American Cranberry Exchange to make the consumer public cranberry conscious. Besides the posters, banners, and recipe books used to advertise cranberries, Mr. Fort had on display to show and explain to the growers a collection of the advertising that was circulated as features with full color photographs in twelve major national magazines that had a total circulation of 101,754,345.

Many growers who had heard about the advertising that was done, but had never seen it, took a keen interest in examining the advertising and expressed satisfaction that it was certainly a thorough job.

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Western Pickers Inc., Discusses Introduction Problems

Western Pickers, Inc., has been gratified at the reception given it by the Cranberry Industry at large. Usually the introduction of a new product is met with much skepticism. It seems as though there might have been a prejudice against mechanical pickers—probably inspired by many previous unsuccessful attempts.

In the case of the Western Picker, the idea has been one of tolerance—maybe it will work—give it a chance. At any rate, we have met fewer detractors than we anticipated and some who have gone downright overboard for the Western Picker.

It is hard to introduce any new product (probably if it were easy everybody would be doing it). The mechanics of proper introduction are not easy. In the first place you can't just stick in your own bailiwick—you must go out in strange territory where you don't even know your way about or where to get things done. Secondly, you should have an ample trained staff to properly demonstrate at widely separated points. Third, you should be sure that your machine is well put together so that it won't fall apart at the crucial moment. Fourth, you should have a well-oiled organization to handle the various economic, financial and technical problems that arise. Fifth, you must have a good product, and lastly—time enough to thoroughly explain and demonstrate it.

Western Pickers Inc. may have fallen down in some of these aims, but believes that its product is the best picker that the field has yet produced, and the opinion seems unanimous that the underlying principle is sound and will work.

It is a strange thing that nearly everyone who sees the Western Picker says that he had a picker nearly like that in mind and he can hardly resist making some little improvement upon it even before he sees it in operation.

At any rate, the Western Picker is in the field to stay and next year's model is well underway now and many of these so-called "screwy" suggestions of Cranberry growers will be incorporated in the newer and improved models for next year. Western Pickers Inc., welcomes all such suggestions.

(Advt.)

Eighteen

Fresh from the Fields

(Continued from Page 5)

except on some newly planted bogs. At the same time, field rot increased and on a considerable number of individual bogs it became severe. Berries colored up very slowly, delaying harvest.

Frosts

No frost occurred until the morning of September 22, when there was a brief dip to 27°. No damage resulted, even on unprotected bogs. In the evening of Sept. 26, 23 degrees was predicted. The following morning, temperatures generally ranged from 22 to 26 degrees, with damage on unprotected bogs ranging from ten per cent to an occasional estimated 50 per cent.

Crop Off 10 Per Cent?

Near end of September, most Early Blacks have been picked. Movement to the processors has been brisk, probably 10 days ahead of last year in number of barrels delivered. The majority of small growers have completed their harvest. The dry weather of August and September has reduced water supplies seriously, so there will be some loss of late varieties that are usually protected by frost floods. Between rot and frost, some guessers are looking for a crop at least 10 per cent less than forecast last month.

Planting Vines Scarce

Plans are being laid for fall sanding and planting. There is a shortage of good vines for planting. Growers planning to prune vines that are free of false blossom should advertise the fact. In a number of cases vines with too high a percentage of false blossom will be planted for want of knowing where to get better vines.

Personals

After a very busy summer, William E. Tomlinson is taking a two weeks' vacation in various parts of New England.

P. E. Marucci, research fellow on blueberry stunt disease, is winding up his summer's work at the Pemberton Laboratory and will start his winter studies in the Graduate School of Rutgers University on October 1. He will be back when the blueberries start their spring growth.

WISCONSIN

Raking generally started on September 22, and it shortly became the opinion of Wisconsin Cranberry Sales Company that the crop might be nearly as large as that of last season and that 130-135,000 barrels could be expected at least.

Good Pre-Harvest Weather

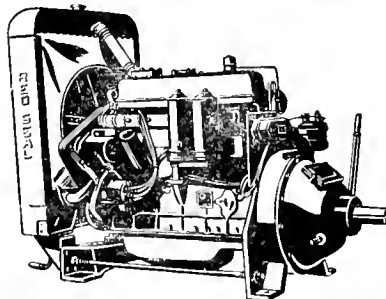
There was excellent growing weather for the first two or three weeks preceding the beginning of harvest. This accounted a good deal for the improvement in crop prospects.

WASHINGTON

Cranberry harvesting got off to an unusually early start this year, with some berries having been picked at Cranguyma Farms, near Long Beach, the last week in August. This bog is coming into production for the first time this year, with a crop which has been estimated at 3500 quarters.

Sunshine and adequate rain combined to make this season about ten days early, and Cranguyma's new vines were especially early. Berries were reported as large and well-colored. Dr. J. Harold Clarke, manager, reported that these ber-

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ries were the first in the market at Seattle.

Harvesting began early on the Cranmoor bog of Mr. and Mrs. Guido Funke, the second week in September, with Early Blacks being picked. Many growers with "standard" McFarlins also got the picking underway early.

OREGON

High September Temperatures

High temperatures were recorded in September, one day there being 85 and another 90, and the result was that some growers had sun scald, 25 per cent on some fields. September 16th there was a frost, temperatures dropping to 27 degrees. Most of the growers were trying to harvest their berries as soon as possible, fearing early cold weather.

Less Hand Picking

Labor situation was very easy for the first time since the start of the war. Growers were paying \$1.50 an hour in the field on mechanical pickers and water raking and \$1.25 in the grading shed, which is higher than last year. In fact, some were turning away

hand pickers, as more bogs are being machine picked or water raked. "Western Pickers" have been used on some bogs, and Frank Zorn is water-raking with a machine of his own invention that has promise as a very practical device. M. L. Kranick and Melvin Boak also tried out this machine.

Ivie Bog Sold

An important bog transaction has taken place in that E. B. Ivie has sold his bogs to Jack Windhurst. The Ivie bogs, built by the late H. A. Dufort and son, William T. Dufort, and later owned by E. D. Webb, who sold them to Ivie, are considered among the finest and most successful in the area. Reputed price of sale was a substantial figure.

Expansion of the area in cranberries continues.

CORRECTION

The name of Franklin E. Smith was omitted from the list of directors of Cape Cod Cranberry Growers' Association. At the August meeting there was also a vote that Chester A. Vose of Marion be made an honorary member of the board.

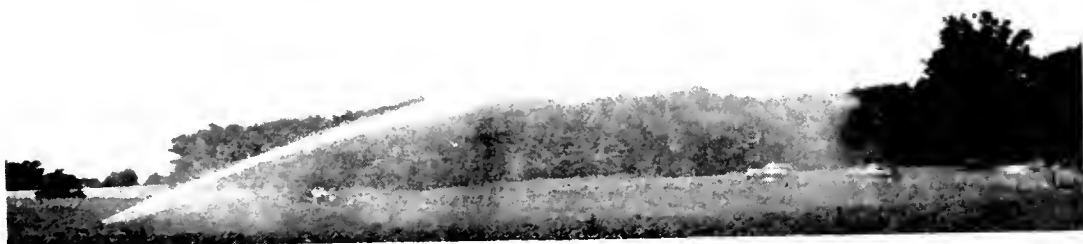
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MAGAZINE TO FEATURE CRANBERRIES IN COLOR

The Massachusetts cranberry industry in colored photography will soon be a feature of the Saturday Evening Post, it is expected, as Arthur Griffin, one of the foremost color photographers, was in the Cape Cod area taking pictures for that purpose. Mr. Griffin got in contact with A. D. Benson of New England Cranberry Sales Company, who took him to bogs where 'copter dusting was in progress, harvesting, and screening at NECSCO packing house at Tremont. A visit was also made to the famous cranberry plantation of Ellis D. Atwood at South Carver, home of the now-famous Edaville railroad, where pictures were taken.

'Copter Spray Tests

Test of a 'copter (NCA) at State bog Friday, Sept. 5, using spray from a boom, conducted under supervision of Dr. Bergman, was not entirely satisfactory, but will be continued. Material used was a

mixture of Fermate and kerosene, the Fermate being used because it is black and easily seen on slides spread on the bogs.

Tests showed that distribution was uneven and the coverage was

not satisfactory. A boom 25 feet long, extending out to either side of the 'copter body, was the method used. Pilot was "Slim" Soule.

Different mixtures, pressures and nozzles will be tried out.

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NECSO MEETING

New England Cranberry Sales Company's fall meeting September 4th, Carver Town Hall, attended by 150, which was one of the best attended, was carried through on a note of optimism. ACE General Manager C. M. Chaney said he expected a good market for the fresh crop if conditions continued as they appeared at that time. He expected a smaller proportion of the crop would go to processing this year, and pointed out that now sugar is "free" again to housewives, more would go back to the pre-war custom of preparing their own sauce. E. Clyde McGrew, assistant general manager, and Lester Haines, sales manager of ACE who had been surveying conditions in other cranberry areas, supported Chaney's opinion.

Aerial Surveys

The co-operative voted to have the Eastern Aerial Surveys, Inc., of Boston, represented by Donald W. Flin, make aerial photographic surveys of company member bogs on a cooperative basis. Mr. Flin,

assisted by Stanley Benson, has plotted out locations of bogs. The scale of the air pictures is 800 feet to one inch, and aerial photographs of bogs with reservoirs and

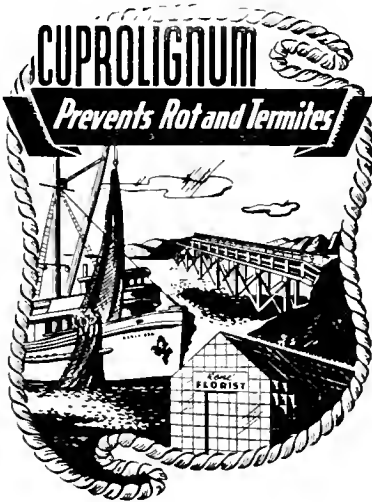
other surroundings are expected to show in excellent detail. Photographs of bogs will be given to member owners only, and other properties included in the taking of

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the vast pictures will be blocked out, if the other owners so desire.

Helicopters

E. W. Wiggin, Jr., of the Wiggin Airways, attended the meeting and plans were discussed for next year. Benson said the Sales Company will use helicopters for both dusting bogs with insecticides and for fertilizing.

Mr. Benson called the roll of and introduced 25 new members of the company.

Raymond Morse, company foreman, described the bog service rendered members, Stanley Benson reviewed the helicopter service,

and Miss Sue A. Pitman described the office work and introduced the company staff members.

Arrangements have been made by which Semplos float boats will be provided members for gathering the "float" berries following the picking, these berries going for processing.

The meeting lasted until 3.30 p. m. from 10 a. m., with an interval for luncheon.

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NCA to Hold 2 "Open Houses" in Massachusetts

National Cranberry Association announces that its annual Open House will be held at the Onset plant October 11 and at Hanson October 18. Open house is a yearly event in which NCA welcomes visitors to its two Massachusetts processing plants and gives them an opportunity to see members' berries being turned into Ocean Spray cranberry products.

NCA expects large crowds. At the Onset event, which occurs over Columbus Day week end when Cape Cod traffic is always very heavy, some 2,000 people attended last year, and at Hanson 3,000 attended. At both the Hanson and Onset open houses this year, guides will be on hand to show guests through the plants, and refreshments will be served.

New Float Boats in Massachusetts

As this issue goes to press, word is received of the experimental use of two new float boats, both scows, operating power being airplane motors. The flat-bottom craft are capable of considerable speed and the turbulence of the waves loosens and raises the berries.

Both are somewhat similar to airplane-engine float boats which have been operating in New Jersey and engineers for the United Cape Cod Cranberry Company patterned one boat after Jersey de-

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East Wareham, Mass.

signs, and it is expected additional boats will be built next year for use of NCA members. The other boat was built by George R. Briggs of Plymouth and has the word "Eatmor" on the tail fin, or rudder, which is mostly in the air, yet steers. This was tried out at the State Bog September 30th, and on other bogs. It is described as a refinement of the Jersey idea.

Both boats practically skim the surface, but first tests have been described as extremely satisfactory.

Nescos Offers Fall Fertilizing by Helicopter

After having made tests to determine the practicability of spreading fertilizer by 'copter, New England Cranberry Sales Company is ready to offer this service to members this fall. That fertilizing this fall would be feasible was determined after an experimental fertilizing at the Loon Pond bog, Lakeville, of Arthur D. Benson. This was the second experiment, the first by NECSO having been made at the State bog in August.

Approximately an acre, which was a long and narrow acre, of new planting was covered by the 'copter in three trips, approximately 350 pounds of straight (7-7-7) Ag-

rico fertilizer having been used. The 'copter was that of the Wiggins Airways, Inc., which has been providing the machines for New England Sales 'copter program this summer, pilot "Jack" Connelly. Those present included Dr. F. B. Chandler and "Joe" Kelley of the Experiment Station and Harold Eldredge, Wareham agent for the North American Agricultural Chemical Company of Weymouth, manufacturers of Agrico.

At the conclusion of the tests, consensus of opinion was that there was better coverage than by ground fertilizer spreaders, and the 'copter could be used in a fall fertilizing program to good advantage. It was admitted that the application was not perfect, and that refinements in the material itself and in the hopper gates will probably give better results. The main objective of the tests was substantiated, that is, that 'copter fertilizing is practical and that improvement through experiment will eventually make this practice a highly satisfactory one. 'Copters can spot fertilize, as well as give general coverage, which would

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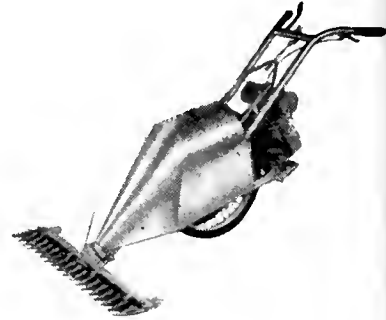
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be much more difficult with a straight-wing plane.

Fertilizing tests have also been conducted by NCA at the R. M. Andrews bogs in South Carver.



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Crowley Reports Eastern Trip to Washington Growers

Long Beach, Washington — A well attended meeting of the Long Beach Cranberry club was held Friday evening, Sept. 10th, in the Freezer Building. Leonard Morris, president of the club, presented a myrtle wood gavel to the club.

Nolan Servoss, Assistant County Agent, told the growers about the weed collection which he is making from the cranberry bogs and showed them how the specimens are pressed and cared for. A resolution was passed by the group to be sent to Washington, D. C., asking for the continuance of cranberry breeding and research work by the United States Department of Agriculture.

Mr. Crowley, superintendent of the Cranberry-Blueberry Laboratory, who has recently returned from the Eastern cranberry-growing districts, gave an interesting account of his trip. His first stop was for a brief visit with Dr.

George M. Darrow of the United States Department of Agriculture at Washington, D. C. In New Jersey Mr. Crowley visited with Charles A. Doehlert of the Cranberry-Blueberry Laboratory at Pemberton. He was shown all

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the experimental work being carried on at the New Jersey Station and met many growers, including one who has a larger cranberry acreage than the cranberry acreage of the entire state of Washington.

With Mr. Doehlert, Mr. Crowley drove to Plymouth, Mass., passing through five states in one day. In Massachusetts the men were met by Dr. H. J. Franklin, Superintendent of the Massachusetts Cranberry Experiment Station. Dr. Franklin, Dr. Chandler and other members of the staff showed them the work being carried on at the Station and elsewhere on the Cape. C. J. Hall, editor of the national cranberry magazine, entertained them at dinner at the Eagle Hill Farm Inn at Plymouth and later at his home in East Wareham. Crowley spoke to between five and six hundred cranberry growers of the Cape Cod Cranberry Growers' Association on cranberry growing on the West Coast. He was also a guest speaker at the Wareham Kiwanis club.

More dusting than spraying is done in Massachusetts for control of cranberry insects, and both heli-

copters and airplanes are used to apply the dust, he told the growers.

While in Massachusetts, Crowley met Dr. F. J. Sievers, Dean of the College of Agriculture at the Uni-

versity of Massachusetts and head of the agricultural experiment stations. Dr. Sievers was an old friend, having been a college professor at Washington State College when Crowley was attending school and

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It is the problem of the cranberry grower to decide how to dispose of the berries he is to have processed this fall.

He wants returns which are satisfactory—in view of present day costs and prices. He wants the assurance of prompt and reliable service.

A SOLUTION which will be satisfactory in **all respects** is to send these berries to a processor who has already achieved a top reputation within the cranberry industry—Stokely's Finest is nationally advertised in 15 National Magazines every month and has a national reputation for its products, and the organization to dispose of them.

Such a processor is

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took classes from him.

At Wisconsin Rapids, Wisconsin, Crowley was met by H. F. Bain, a former colleague, who spent several years on the West coast in cranberry work and is now working with the cranberry growers in Wisconsin. Crowley was a guest of the Bains in their home while in Wisconsin. They went over the many seedling selections which Mr. Bain has in plots. A number of these seedlings will be sent to Long Beach where they will be planted at Cranguyma Farm for trials.

Mr. Crowley found the trip enjoyable and very instructive, but the hot weather, with temperatures of 95 to 100, was with him most of the time. He stated, however, that the hospitality shown him in New Jersey, Massachusetts and Wisconsin more than made up for


the discomfort the weather caused him.

Refreshments were served after

the meeting by Mrs. E. O. Chabot, Mrs. Dave Newkirk and Mrs. Leonard Morris.

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But Two Things Never Change

Just as cranberries will presumably continue to grow on vines in the foreseeable future, these two facts appear just as self-evident:

1. As long as growers continue to control their crops democratically, the cranberry industry will continue to thrive.

2. As reorganized in 1919 and operated ever since, the American Cranberry Exchange is based on the thought, effort, and opinion of every member, large and small.

In a year of confused market conditions such as 1947, this democratic control and interest only in bridging the gap between vine and consumer will again prove to growers that they are capable of managing their own affairs through their Cooperative.

The American Cranberry Exchange, Inc.

The Cranberry Growers' Cooperative

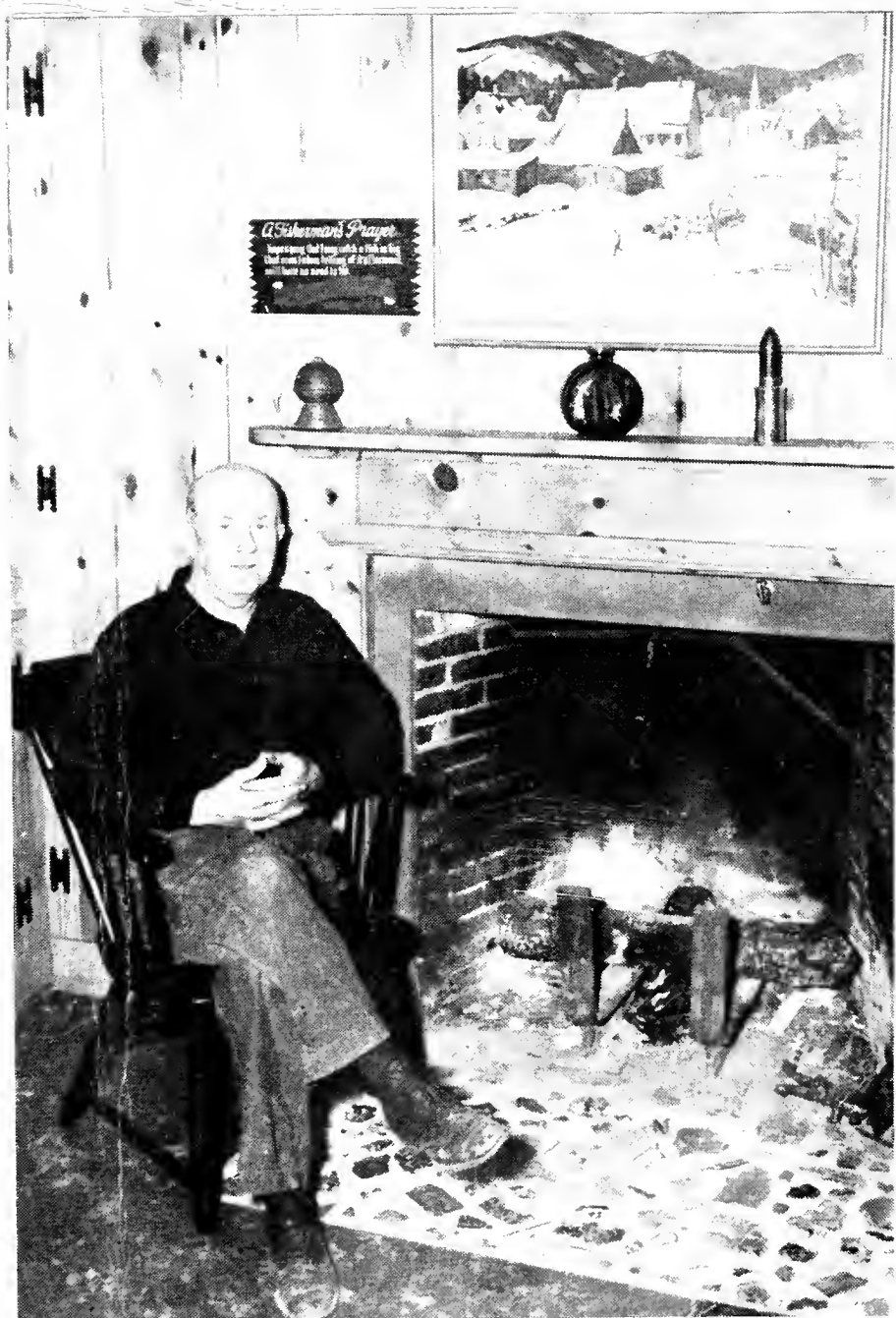
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1947 November

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Most producers of cranberries in New Jersey depend on the GROWERS CRANBERRY COMPANY to market their crops. If you are looking for the best in Marketing and Supplies Service, look to the Growers Cranberry Company, where you will find complete satisfaction, backed by over 52 years' experience.

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Thanksgiving ---

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Members of Wisconsin Cranberry Sales Company sum up the advantages of their co-operative with thankfulness—year after year.

Wisconsin Cranberry Sales Company

A True Cooperative—One Member, One Vote

Build a Market . . . as fast as you Build Bogs!



Growers report that about 1500 acres of new cranberry bogs were planted in 1947. Cranberry production is expanding, and with it the market must expand also.

To make certain that the demand for Ocean Spray always will keep ahead of the supply, NCA is spending \$200,000 for the biggest advertising campaign in its history . . . to win new consumers, and to teach old consumers to eat more cranberry sauce.

In thousands of retail stores all over the country, wide-awake grocers are tying in with this campaign and building Ocean Spray displays like the above one in the Elm Farm Food Store in Brookline, Massachusetts.

All this is making increased Ocean Spray sales to keep pace with increasing crops.

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Massachusetts to Choose the Third "Cranberry Queen"

18 Contestants for Coronation Nov. 14—ACE Offers Trip to New York, NCA Wardrobe and Meeting with Celebrity

For the third successive year a Massachusetts "Cranberry Queen" will be chosen and crowned at the annual Massachusetts Cranberry Queen Coronation, Festival and dance, Memorial Town Hall, Wareham, Massachusetts, Friday evening, Nov. 14, the affair starting at 8 o'clock. Event is sponsored, as in the past, by Wareham Post, No. 220, American Legion and its auxiliary.

This year cranberry growers are getting more into the picture, as American Cranberry Exchange and the New England Cranberry Sales Company will provide a three-day trip to New York and National Cranberry Association will outfit the new queen and hopes to have her meet a celebrity in New York. A gift of \$25.00 by the Wareham Kiwanis club will also be made to assist in the outfit, plus other donations by local business and cranberry men, which will provide a shower of gifts more elaborate than in other years.

Another change this year is that a board of judges will select the queen rather than popular ballot. This will consist of a group of cranberry men with Cledge Roberts, director of the Harbor (summer) Playhouse of Marion.

There will be several contests, these including ticket sale, the winner to receive \$25; \$15 second prize, and \$10 third prize; cranberry guessing contest in which estimates are made of the number of cranberries in a container, and door prize.

Music for dancing will be by Al Reeves of Boston, and there will be several acts of professional vaudeville. General chairman is Alton H. Worrall, chairman Wareham Board of Selectmen. H. A. Suddard is chairman of ticket committee, and cranberry queen entries are made to a committee, Mrs. Clif-

ford W. Collins, chairman, Mrs. William F. Kiernan, Mrs. Lawrence Riihardson, Mrs. Earl Denham, Mrs. Ellis D. Atwood, Mrs. Lester Boynton, Mrs. Fred A. Wing.

Any young woman of Massachusetts may enter other than a winner of a previous contest.

As this is written there are 18 candidates, by far the largest number of entries yet.

Oregon Now to Have Its Own "Cranberry Queen"

Various Organizations of Bandon Area Sponsoring "Queen" Two-Day Program, Including Festival and "Cranberry Bowl" Game

Oregon is to have its first cranberry festival with the choosing of a "Cranberry Queen", it is announced, this to be November 14th and 15th at Bandon. Fifteen persons, representing 11 different organizations of the area, have formed an association and appointed committees.

The program will include the queen contest, coronation ball, cranberry bowl football game and festival. Eligibility requirements for the queen are that any girl must be either a high school junior or senior with average or better grades, must be a resident of the area between Silverton and Port Orford, and be unmarried. She must be sponsored by an organization in the area. Only one organization may officially sponsor each candidate. Queen contestants will each receive a formal gown and floral corsage for the ball. Judges will be three persons from outside the area. Scoring of the contestants will be on the basis of 80 percent for ticket sales and 20 percent for "queenliness", the latter to be determined by the three judges. In this ticket voting there will be a stub with a space for writing in the name of the contestant voted for.

Organizations represented are Randolph Woman's club, Bullards Rifle and Pistol club, Westmost

Grange, Bandon Active club, Veterans of Foreign Wars, American Legion and Auxiliary, Bandon Riding club, Odd Fellows, Masons, and Chamber of Commerce.

Dave B. Philpott is president of the association, William S. Stewart vice president, and Earl McTimmons, secretary and treasurer.

H. D. Duckart Heads Mid-West Cranberry Co-op.

Henry F. Duckart of Wisconsin Rapids has been elected president of the Midwest Cranberry Cooperative at that group's recent meeting at Wisconsin Rapids. He succeeds Albert H. Hedler of Phillips.

Vice president is O. O. Potter of Warrens, William F. Thiele of Wisconsin Rapids secretary and treasurer, and Leo A. Sorenson of Wisconsin the manager. Directors are Fred Lange of Black River Falls, R. R. Pease of Mather. Mr. Hedler, Charles L. Lewis and Guy Potter represent Wisconsin members of NCA on the board of directors.

Announcement was made at this meeting that the Midwest expects to produce about 70,000 barrels of Wisconsin's total crop, which was estimated at 120,000 and is now estimated at 135,000.

WEST COAST KIWANIS CLUB FEATURES CRANBERRIES

A showing of colored slides was given October 6th at the Ilwaco-Long Beach, Washington, Kiwanis club dinner party by Dr. J. H. Clarke of Cranguyma farms, which featured pictures of the farm and other cranberry scenes. These included the building of the Cranguyma bog, cranberry plantings at Coos Bay, Oregon, Grayland, Washington, some in New Jersey and Massachusetts taken by Dr. Clark before he went to the West Coast.

The dinner was featured by a number of the various jellies and jams made by Cranguyma Cannery, Inc., from cranberries, some of which were flavored with raspberries and oranges. Leonard Morris was chairman of the evening.

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of November, 1947—Vol. 12, No. 7

Published monthly at The Courier Print Shop, Main St., Wareham, Massachusetts. Subscription, \$3.00 per year.
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FRESH FROM THE FIELDS

By C. J. H.

Government Oct. Estimate

October 15 release (as of Oct. 1) of U. S. Department of Agriculture Crop Reporting Service:

United States Cranberry prospects declined somewhat during September. Production is now estimated at 743,300 barrels, 13 per cent below the large 1946 crop of 857,100 barrels, but 16 per cent above average.

New England Crop Reporting Service, Oct. 15th released the following for Massachusetts:

"Hot, dry weather during much of September reduced production prospects of cranberries in Massachusetts. By October 1, most growers had finished harvesting Early Blacks with actual harvested yields somewhat below those anticipated earlier. Massachusetts production of cranberries based on October 1 conditions is placed at 470,000 barrels, a decline of 35,000 barrels from the August estimates. Last year's production was 553,000 barrels and the 10-year average 424,900 barrels. On most bogs berries are reported as medium in size. Quality and keeping prospects are moderately good this year. Fruit worm damage is light, although somewhat greater than in 1946. The harvest was delayed, as berries were slow in ripening. Since September 20, frequent flooding of bogs has been necessary to prevent serious frost damage. Available reports show 52 per cent of the crop to be Early Blacks, 44 per cent Howes, and 4 per cent other varieties.

(Continued on Page 22)

Believe Eastern Crop Smaller Than Figured

While the early November release of the Gov't Crop Reporting Service was being awaited, speculation was that the crop in both Massachusetts and New Jersey would run under the October Government estimate; Wisconsin, perhaps a little higher, and the West Coast about as anticipated.

Estimates for Massachusetts yield ran all the way from 400,000 to "not more than 450,000." The latter figure is that of Dr. Franklin, while A. D. Benson, N. E. Cranberry Sales, was saying 425,000, and M. C. Beaton of Beaton's Distributing Agency was "sticking to 435,000." Other estimates were all in this range.

Unofficial guesses in New Jersey were 60-65,000, although some still felt 70,000 would be reached. Wisconsin was said to be now expecting 140,000 and the Coast about 63,000.

Even if these reduced figures should prove to be correct, the total will be larger than the last 10-year average of 639,830.

Oct. Drought in East Ended at End of the Month

The unusual "Indian Summer" weather with the prolonged drought in Massachusetts which began during the summer and was broken October 29 with .59 inches of rain and much more the next two days, had been the bewilderment of cranberry growers (as well as everyone

else in the state). Day had followed day with beautiful blue skies—except for several days beginning October 24th when smoke from the tremendous Maine forest fires and lesser fires in Massachusetts, swept over the cranberry area, so thick that the sun became only a dull, yellow ball. Temperatures were high, much of the time it being "shirt-sleeve" weather. Everything was like tinder.

The same unseasonably warm weather prevailing over most of the country did the cranberry market no good—and, in fact, there was dull demand for cranberries by the end of October. Car shipments through Middleboro on Oct. 27 were 319 as against 497 last year. The price mostly held, although a few small lots here and there were sold for less. N. E. Sales Company Blacks were practically all being disposed of at the opening \$6.75, Manager Benson said. However, he characterized the season as a "tough" one. Beaton's Distributing Agency, Wareham, reported the market as holding up fairly well, and that it probably would have been strong except for the warm weather. The weather was, of course, bad for the berries in screenhouses and in transit, as well as in the market.

On October 22 the National opened its season on Howes, quoting \$7.00 a quarter. On Oct. 16 the Exchange had quoted Wisconsin to its brokers at from \$6.75 a quarter for Badgers to McFarlin "Fancies" at \$7.00. At that time General Manager Chaney was expecting the crop would be approximately 170,000 less than 1946.

ACE announced its opening on Howes Nov. 3 at \$7.00 a quarter,

(Continued on Page 23)

Massachusetts' New Extension Cranberry Specialist on Job

"Dick" Beattie, Now Located at East Wareham, Begins Work with Enthusiasm

J. Richard Beattie, who was named to the newly-created position of Extension Cranberry Specialist for Massachusetts by R. A. Van Meter, acting president of the University of Massachusetts, began his work Oct. 1 with headquarters at the Cranberry Experiment Station, East Wareham. Since the middle of October he has been making his home with his wife and two children at 76 Depot street, East Wareham. Beattie, until he resigned to take up this project, has been county agent of Plymouth County under Director J. T. Brown of the Extension Service with headquarters at the Courthouse, Brockton.

This is a brand new type of cranberry job, combining association in research, field service of the extension type, and something of a "public relations" position between the scientific side and the actual growing of cranberries. Beattie is entering with enthusiasm into this work in which he sincerely hopes he can be of service to the growers of Massachusetts. Yet he feels that he can learn a great deal from the growers themselves, particularly as to what kind of assistance they most want.

"Dick" Beattie is already well and favorably known to many Massachusetts growers through his work as county agent, in which he specialized in cranberry activities. He came to Plymouth County in 1940 as assistant county agent and was made county agent in 1945. Born in Lynn, Massachusetts, he was taken to Guildhall, Vermont, when a very small boy, where he lived on a dairy farm, which gave him pretty much of a farm background (CRANBERRIES, March 1944). He graduated from Lancaster Academy in 1932, Mt. Hermon prep school in 1935, and from the University of New Hampshire with a B. S. degree in agriculture in 1939. In 1940 he received his master's degree. He is an entomologist and forester by training.

Beattie's Past Achievements

As county agent, Beattie hung up a number of achievements which have laid a foundation for his coming work. These include:

Development of an active cranberry program through the medium of two cranberry clubs (which had been organized previously) namely, the Southeastern and the South Shore clubs. These have active growers' advisory committees which make suggestions as to program, with grower participation featured. Attendance has increased and during 1946 average attendance was 127 at six meetings in Plymouth County.

A cranberry root grub campaign was instituted in 1946. Root grub is No. 1 insect problem in Plymouth County, with an estimated 42 per cent of acreage damaged. 85 growers are enrolled in this campaign. They have a total acreage of 5,103. Beattie was appointed chairman of the special root grub campaign committee.

A very successful cranberry school was organized in Plymouth County, there being 198 growers enrolled with an average attendance of 140 at 7 sessions, to date.

There was developed a special insect control reminder program, this being based on information gathered from Dr. Franklin and his co-workers at the Station.

Beattie, working closely with Dr. Franklin, assisted in the regular radio frost warning system and also helped develop an extended forecast to cover an extra 24 hour period whenever possible.

A series of sectional fruit worm meetings has been developed. In 1947 with three meetings, 235 growers were reached. In 1945 Beattie had spent a week at the Experiment Station working on this project.

Labor-saving devices have been discussed at the club meetings through panel discussions. Beattie is also taking 2x2 Kodachrome slides for use at such meetings, as a visual aid to instruction.

Prior to the appointment of Dr. F. B. Chandler to the Massachusetts Station, Beattie worked one

season with Dr. Colby and Professor Donaldson arranging and setting up fertilizer plots.

Objectives He Hopes to Achieve

In pointing out objectives which should be set up for the new position, Beattie emphasizes the strength of the Massachusetts industry. He points to the fact the crop is now conservatively estimated as a \$15,000,000 enterprise and that the state's acreage is now 14,927, and 1,799 acres will be put in in the next three years, according to the recent survey by Crop Reporting Service. He is impressed by the excellent jobs that helicopters and straight-wing planes are doing in insect control and that heavy construction machinery is standard equipment with growers. He expects to see the average production greatly increased within the next ten years, and in some progressive instances doubled. He points to the progressiveness of the industry in marketing and that two aggressive cooperatives and other marketing agencies have eliminated the selling of cranberries as an individual problem.

Mr. Beattie has set out an outline of five major problems for himself to tackle. These are the root grub problem; greater utilization of seasonal help; better forestry practices; reaching new growers to be sure they understand the problems of cranberry growing before they invest their capital; disseminating the information learned at the experiment so it will meet all growers for whom it is intended.

He says:

For root grub, the specialist should work closely with county agents in all ways, assist in meetings and demonstrations, check bogs, visit bogs, and assist in publicity.

As concerns seasonal help, he feels the specialist should help in determining the possibilities of new forest enterprises, such as possibly a "chipping" plant and a timber preserving plant. Cranberry growers have large holdings in timber land, he points out. Incidentally Beattie majored in forestry in college and has always been much interested in the subject.

As a means of educating the new grower to cranberry problems, the specialist should assist in the cranberry schools.

As a means of disseminating information, the specialist, working closely with the Experiment Station, would see that county agents and also growers are kept properly informed on developments. Up to the present time it has been necessary to call upon the research men for this type of information, which has been very time-consuming.

The "job" of the new specialist should be to study and assemble the abundance of information already available at the Experiment Station and see that it reaches the growers by keeping county agents posted on up-to-date information, and that the specialist should assume the major responsibilities for teaching growers the late cultural practices. The specialist should be responsible for an insect collection which could be used at meetings and demonstrations. The specialist would assist the station in collecting field data, and should spend a good part of his time in the field; he should learn the growers' problems and there should be more demonstrations.

To Prepare CRANBERRIES Articles

The specialist should assist the Experiment Station, assist Crop Reporting Service in obtaining reliable reports; assist Conservation Service; Agricultural Conservation Program; National Cranberry Association; New England Cranberry Sales Company; Cape Cod Cranberry Growers' Association; the four cranberry clubs, and any other organization working for good of the industry.

Beattie believes colored slides of cranberry growing have a real place as a teaching technique, also movies. He intends to issue special circulars during the active summer and fall season. "CRANBERRIES" is also gratified that in addition to the bulletins, the new Cranberry Specialist plans to prepare a contribution each month upon special items of interest which could include new experimental work at the Station, announcements of new cultural practices and rec-

ommendations. The first of these will appear in the December issue.

It is an ambitious program which Mr. Beattie has laid out for himself—and the industry should be greatly benefitted thereby.

Cranberries Now Grow Experimentally in Poland

Cranberry vines are now growing experimentally upon a small planting in Poland, CRANBERRIES learns in a letter from Stephen A. Pieniazek, professor of Pomology, Osada Palacowa, Skierniesice, Poland. Prof. Pieniazek writes:

"I am interested in the possibility of introducing to Poland the American cranberry (*Vaccinium macrocarpon*). Wareham cranberry station has kindly provided me with seed . . . the seed came last spring and several fine rows of seedlings are already growing on our grounds. I hope to multiply this material and take it soon to the bog. We have enough of marshy land well suited to the cranberry.

"Our cranberry work is a part of a larger project on utilization of the genus of *Vaccinium*. I am especially interested in American blueberries, so far almost unknown in Poland, and in *Vaccinium vitis Idaea*, a native plant here. It has small red berries, semi-sweet, excellent for juice."

He continued that he had spent eight years in the United States, and had the opportunity of learning a little of the American cranberry industry. Upon returning to Poland last year, he started prepar-

atory work for establishing bogs there.

There is only one species of cranberry in Central Europe, he said, that being *Vaccinium oxycoccos*, growing wild, which is common in Eastern Poland, whence most cranberries were coming from before the war, but present Poland boundaries are such that the cranberry is not as common as it was.

The seeds were sent via air mail from the Station at East Wareham by Dr. F. B. Chandler at the request of the Polish professor.

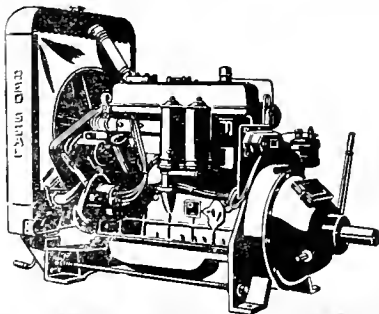
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A "Steel" Man Turns to the Growing of Cranberries

By CLARENCE J. HALL

Edward L. Bartholomew of Wareham, Massachusetts, is a steel man who has "retired" to the operation of 55 acres of cranberry bog. This metallurgist and engineer is one of many men of varied occupations, finally casting in their lot with the growing of cranberries.

Last August Mr. Bartholomew was elected 2nd vice-president of the Cape Cod Cranberry Growers' Association. He was made a director of the New England Cranberry Sales Company in 1945 and became a director of the American Cranberry Exchange last spring. Although he had been a cranberry grower since about 1926, it is only since 1944 that he has given his full effort to the business. In the past few years he has assumed a substantial rating in the affairs of the Massachusetts unit of the American Exchange and this year in the national councils of ACE. His election to a vice presidency of the largest of growers' associations at the annual meeting this past summer has added to his stature in the cranberry industry.

Mr. Bartholomew is one of the firmest of believers in cooperation for the cranberry grower. He is all out for the "one-member, one-vote" form of co-operative. Even so he believes there should be competition. He does not expect, and would not like to see every grower in one big co-operative. "Good, healthy competition is good", he says.

He became a grower of cranberries when he was looking about for some occupation which would be in the nature of an "annuity" for his older years. He decided the ownership of cranberry bogs was the best thing he could find.

Vermont Born

He was born June 30, 1884, at Benson, Vermont, the son of a farmer, so his turning to agriculture when he gave up the steel business was not illogical. He attended prep school at Mt. Hebron at East Northfield, Massachusetts, and was graduated from the University of Vermont with a B. S. in chemistry in 1908.

He first came to the cranberry growing area of Massachusetts in 1908, as a chemist for the Tremont Nail Company, which at that time had open hearth furnaces in steel rolling mills at Tremont. The superintendent then was Forrest Lareher. He was appointed superintendent of this plant in 1918 and made steel for the Government during World War I. It was when this plant was to be closed down and he feared he might be transferred "to Africa" or some other

faraway place, that he made the decision to invest in cranberry bog.

He, however, was transferred to the Beverly plant of the United Shoe Machinery Corporation and was made chief metallurgist of the plant. He worked in this capacity for about 10 years and during this time was very active at the plant. He was also news chairman of the Boston Chapter of the American Society for Metals, and was later elected one of the national directors for the American Society for Metals. He holds several metallurgical patents taken out during this period.

In 1939 he was appointed chief mechanical engineer of the Beverly plant and served in this capacity until he retired. During World War II this plant manufactured 37mm. guns, also other equipment for the Government. At the conclusion of this work he retired to the Cape and cranberries.

During the time he bought his first bog and while he was still with the United Shoe Machinery Corporation his cranberry interests were managed by "Joe" Cahoon of Wareham, a Cape Codder who came up from Barnstable County to Wareham with years of experience in cranberries. Although retired from steel, Mr. Bartholomew's occupation in cranberries has been anything except "retirement" in the usual sense of the word.

The first bog, which he bought in 1926 was a property of the late Joseph Holmes at Pierceville, which happened to be scarcely more than

a long stone's throw from the office of the Tremont Nail company where he had worked. This property is one of 18 acres, built a considerable number of years ago. The late Mr. Holmes was one of the earlier growers of the area and he was a manufacturer of cranberry barrels.

His next bog was one of seven acres which he bought from the late Robert Randall, one of the real pioneers in Wareham growing and a pioneer in making a cranberry juice product which he called "Ruby Phosphate". This bog is at South Carver, near the Smith-Hammond bogs. He bought this about 1928. He next bought the bog of William Tabor of Buzzards Bay, this piece of 13 acres, adjoining the Randall property. In 1931 he bought the Fred Proctor bog, five acres, just above the Holmes bog at Pierceville. Then he bought the 12-acre bog of Merton Griffith, the G. G. Atwood bog at Indian Brook in South Carver. This was in 1936. This bog, however, rather than his, is actually that of his wife, the former Alice Hurley, daughter of the late James J. Hurley, who was a widely-noted sheriff of Plymouth County and owned a coal and oil business in Wareham. His bogs are two-thirds set to Blacks and one-third Howes, and when he rebuilds he is following the now well-established trend of planting more of the early variety.

Remarkable 8-Way Flume

At his "Holmes bog" he has a notable 8-way flume. Two electric motors lift water the first two times from the Weweantit river, 17 and 14 feet respectively. These two Ford engines lift the water 5 and 5 more, making a total lift in all of 41 feet to the Proctor bog.

He can flow from his Early Black bogs to his Howes; from Howes to Early Blacks, from Blacks to the reservoir, and from the Howes to the reservoir; from both to the reservoir; from the river to any one of his three bogs; from the river to the reservoir, and from a combination of any bogs to the reservoir; or from the river direct to the Proctor bog.



Mr. Bartholomew is shown at his desk in the United Shoe Machinery Company plant at Beverly, Mass.

Joe Cahoon

In having "Joe" Cahoon as a foreman, Mr. Bartholomew has a cranberry foreman of the "old Cape Cod school"—admittedly a foreman of reputation. Born in South Dennis on the Cape, he traces his lineage through the Cahoons of earliest cranberry fame, Cyrus, who developed the Early Blacks, and others. His father was Crosby Cahoon, a builder of bogs, even though he owned none himself. Through this occupation of his father, Joe was brought up as a cranberry man's son, and by the time he was 12 or 13 he was weeding and picking on the bogs. But he probably would have been, anyway, as most Cape boys of that time did. Later Joe himself huilt bogs for others.

He came up into Plymouth County about 40 years ago and settled in Wareham. He married Maude Stringer, whose father was a roll-

er in the mill at Tremont. Joe took a job as a cooper making nail kegs at the Parker Mills Nail Company plant, Wareham. After a few years of this he went back into cranberries. He was foreman for William Crowell of Dennis at the latter's bogs in and around Wareham for 14 years. He was foreman for the late Taylor Jefferson on the Elordge bog for four years.

Sixty-eight years old this month, thin and rangy, Joe Cahoon has learned cranberry growing the hard way—through experience. He learned the down-to-earth methods of the older Cape Cod grower, he learned cranberry growing before there was "so much science to it". He himself has never owned any bog. "The changes I have seen", he says, "And the things I didn't know were going to happen which have happened in the

growing of cranberries! If only I had looked ahead way, way back and realized how this business of growing cranberries was going to develop."

Typical as he is of the old school in appearance and manners, he treats his workers with easy familiarity—and keeps them working in harmony and efficiently.

Mr. Bartholomew has taken a rather active part in shaping the affairs of New England Cranberry Sales during the past few years when that cranberry survey was in progress and the "split" developed with the present National Cranberry Association being evolved and the Exchange continuing along the same program it has for so many years.

Believes in True Cooperatives

"A true co-operative", he avers, "for my money is an organization which benefits the small grower.

It is the small grower who needs the true co-operative, such as is the American Exchange. Such a set-up is designed to protect the little fellow. The small or average grower has the 'say-so', not just a few large growers.

"The ACE today is stronger than it ever was. So is New England Cranberry Sales. The majority of the board of directors of the Sales Company are small growers, and that is what we want. We want competition in marketing if it is the right kind of competition. We do not want a monopoly in the cranberry industry."

Cheerful About Fresh Fruit

Mr. Bartholomew is by no means sure that the day of fresh cranberries is going by. On the contrary he has a great deal of optimism for the future of fresh cranberries, but at the same time he made it clear that he is in favor of canning a certain percentage of the crop.

"I do not believe that people are going to live out of cans entirely in the future, at least not for a long time yet. Maybe some apartment house dwellers practically are forced to, but not the general run of the people. Consumers are going to eat fresh cranberries when they can get them."

Lives in Handsome "Steel Man's" House

Although now a 100 per cent cranberry man, Mr. Bartholomew still has his sentiment for the steel business. He lives in a house on Main street, Wareham, approximately 135 years old, which was formerly the home of a steel man, the late William Leonard, who, when Bartholomew first came to the Tremont Nail company was the general manager. Wareham in its ancient days was an iron-manufacturing town and one of the pioneer iron towns of the country.

Bartholomew's son, E. L. Bartholomew, Jr., is now professor of metallurgy at Massachusetts Institute of Technology. Mr. Bartholomew gets a "kick" out of the fact this home was formerly the home of his boss. He is the second steel man to occupy it, and someday he intends to make it the possession of his son, which will bring it into



"Joe" Cahoon, foreman for Bartholomew, poses a moment in front of a line of scoopers at the Holmes' bog. (CRANBERRIES Photo)

the third generation of ownership by a steel man.

This is a large home with 10 rooms, now completely restored to strict Colonial by Mr. and Mrs. Bartholomew. The restoration is complete inside and out. To describe it as a "show place" of the old-fashioned may sound a trifle derogatory—yet it is a "show place". But it is old-fashioned in exquisite taste, and its owners are proud to show it to their friends as an example of what intelligent restoration can accomplish. Practically all the furnishings are antiques (or restorations), some in beautiful original preservation.

There is a hall clock, dating from the 18th century, which was in the possession at one time of President Lincoln's family. There are chairs (in their original condition) which were owned by Mr. Bartholomew's great-grandfather, Prophet Miller, who founded the

Advent church in America. There is a handsome oil portrait of Sheriff Hurley, Mrs. Bartholomew's father, done by George Wing, a former Wareham painter.

There are five fireplaces, every one in working condition, and all different. This includes the one in the study-office of Mr. Bartholomew, which it appears is his favorite room. This room is of knotty pine, with hand-hewn beams, the native wood having come from his property near the Holmes bog. The room was originally the kitchen and the fireplace was blocked up.

Original Fireplace

This fireplace is highly original and planned by Mr. Bartholomew, the hearth being made up of all the materials which go into steel making. These are material which came from the Tremont Nail Company plant at West Wareham. There is limestone which went into the making of slag, pieces of iron

ore; magnasite brick, checker brick and silica brick, hand-hewn hooks and nails. The colors come from the molten silica brick, these bricks having been part of the open hearth furnaces. Pieces of iron rails make up a pair of sturdy andirons.

Furniture in the room includes the office chair of Mr. Leonard and the office chair of Horace Tobey, Wareham's "No. 1" citizen in his day and president of the company.

The metals industry and the growing of cranberries have made up the business life of Mr. Bartholomew. Yet this mingling of the two is, in a way, appropriate to the circumstances, for both the iron industry and the growing of cranberries have made up much of Wareham's business history.

Air-Motor Float Boats in Mass.

Idea, Originating in New Jersey, Taken Up—One Built for George R. Briggs, One for United Cape Cod

Float boats powered by airplane motors, one that of George R. Briggs, bearing the "Eatmor" signature on the tail fin, and the other developed for United Cape Cod Cranberry Company, have created a good deal of interest in Massachusetts this fall. Both these are refinements of boats which originated in New Jersey. The theory of using such a craft, air propelled, was that of the late Franklin S. Chambers of Whitesbog.

With the apparent success of these and the success of the Sempos float boat and the use of some others, float boating has become a permanent factor in the fall harvest. Requiring some skill and experience in operation for best results, "float jockeys" could well be a new cranberry definition.

Briggs Boat

The float boat built for George R. Briggs has been used with complete success on many bogs this fall. It was built and is operated by Gordon Griswold and Henry Savi, employes of Mr. Briggs, from specifications furnished by

Theodore H. Budd of New Jersey, who had developed a similar boat from plans of Albert Haines.

The boat is square ended, 14 feet 4 inches long, and about six feet wide in the center. The sides also flare outward to the top. It is powered by a light four cylinder airplane motor and air propeller and is capable of high speeds in open water. It is operated on the bogs at speeds up to 25 miles per hour, the passage of the hull through the water sets up extreme turbulence in the water, raising all berries that were dropped in picking to the surface. It also raises an unusual amount of dead leaves, litter, etc., from the bottom, leaving it surprisingly clean. This feature is thought by many to be its greatest value.

The boat is extremely flexible and darts over the surface of the bog like a high-powered speed-boat, bow and much of the hull out of water. Drawing only about three inches of water and with a perfectly smooth bottom, it skims over the shallowest-flooded bog without injury to the vines.

It can operate on the largest or smallest bogs and has actually been used on a bog of less than one-half acre, where it can spin around and around on its own axis. Large areas can be done in very little time and as it is quickly loaded and unloaded from the trailer which carries it, it can easily service many acres of bog at widely separated distances in a day.

In a test at the State Bog, which had already been "floated" by the wind when 84 bushels were obtained, 190 bushels in addition were raised in the trial. Working on a bog of approximately 20 acres where 800 bbls. of berries had been picked, the boat recovered 141¾ bbls. of cleaned floats.

A five-acre bog of Arthur D. Benson was done in 20 minutes. Tests indicated to show that 15-7 per cent of the original crop can be obtained and the number of floats from "wind-floating" more than doubled.

This boat, with the bottom designed to have a "rocker" effect, helping to bring up the berries, can operate on the smallest as well

as the largest bogs. It has actually been operated efficiently on a bog of one acre, where it was spun around and around on its own axis. Most effective operation, of course, is on large, open bogs.

The boat does an excellent job of cleaning the bog floor of chaff, as well as bringing up the berries, which will prove one of the important features, it is expected.

UCCO Co. Boat

The float boat which was built by engineers of the United Cape Cod Cranberry Company, after plans which originated in New Jersey, is an Army surplus assault boat, 17 ft. long and about six feet wide, with a flaring bow and square stern. It is made of plywood and has a double bottom. Power is by a 65 h. p. Continental Cub engine, which is mounted about a foot from the stern, with propeller about four feet from the stern. Heavy screen in front of the prop protects the driver from possible accident.

The craft is steered by an all-air rudder. It is said the craft will make up to 35 miles on straight-away on a pond, and on the bog operates at 25-27 miles per hour. It can operate in five inches of water when in motion. Two men load and unload from a special trailer.

Tests show strongly that in every case double and often much more berries are recovered than by natural wind float. On a bog at Halifax of three acres which had been wind-floated, giving 71 picking boxes, the boat stirred up 154 more. On a 25-acre piece which produced 300 boxes wind float the boat obtained 1,450 more, for a total of 3,000, including the scooping. On this 25-acre piece the berries were raised in three-quarters of an hour in which, it is said, ordinarily 8 days would have been required.

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CONTINUED high demand and hence continued high prices for food, seems to be definitely in the cards for the foreseeable future. Barring a now unexpected near-range collapse in this country, this is the continuity in order for possibly the next three or four years.

There is going to be no quick end to the urgency of supplying foods—and materials—to Europe. American consumption will continue strong (with all due respect to our tighten-the-belt policy) as long as Americans continue to enjoy high incomes. And does anyone believe there is going to be a drastic cut in wages soon?

National income is not going down; for one thing because the nation's leading industries are making heavy capital investment in plant rehabilitation and expansion. Capital goods industries are booked far ahead and when this condition occurs there is little to indicate there will be a major business depression. In the foreign field, the worst about Russia has come out into the open, and has been discounted—unless there is suddenly the war "nobody wants", because of some "incident".

While it must be admitted that food prices are high, compared to the 1939 standard, so are all other costst up, and the cost of producing cranberries is at a record high.

IN view of these high production costs on one hand and the consumer consciousness of high costs of all foods on the other, setting this year's fresh fruit price was a tough order. ACE opened its Blacks higher than was felt justified in some quarters. Then along came the unforeseen unprecedented hot October—and dull sales. The final story, however, will not be told until the returns are all in.

THE tremendous shrinkage in what are now quite common estimates of the crop in Massachusetts and New Jersey only goes to prove the old knowledge long confirmed by experience that man may try as hard as he pleases, but to date, Nature is still a leading factor. In Massachusetts this past season growers—to their credit—took to air insect control with great enthusiasm. New Jersey, which often seems in some ways to be even more enterprising in trying new things than Massachusetts, has used straight-wing planes to a limited ex-

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ten for some years. Massachusetts has gone in heavily for float-boating, airplane motor boats having been added to the Sempos boat and others—which again were first used by Jerseymen.

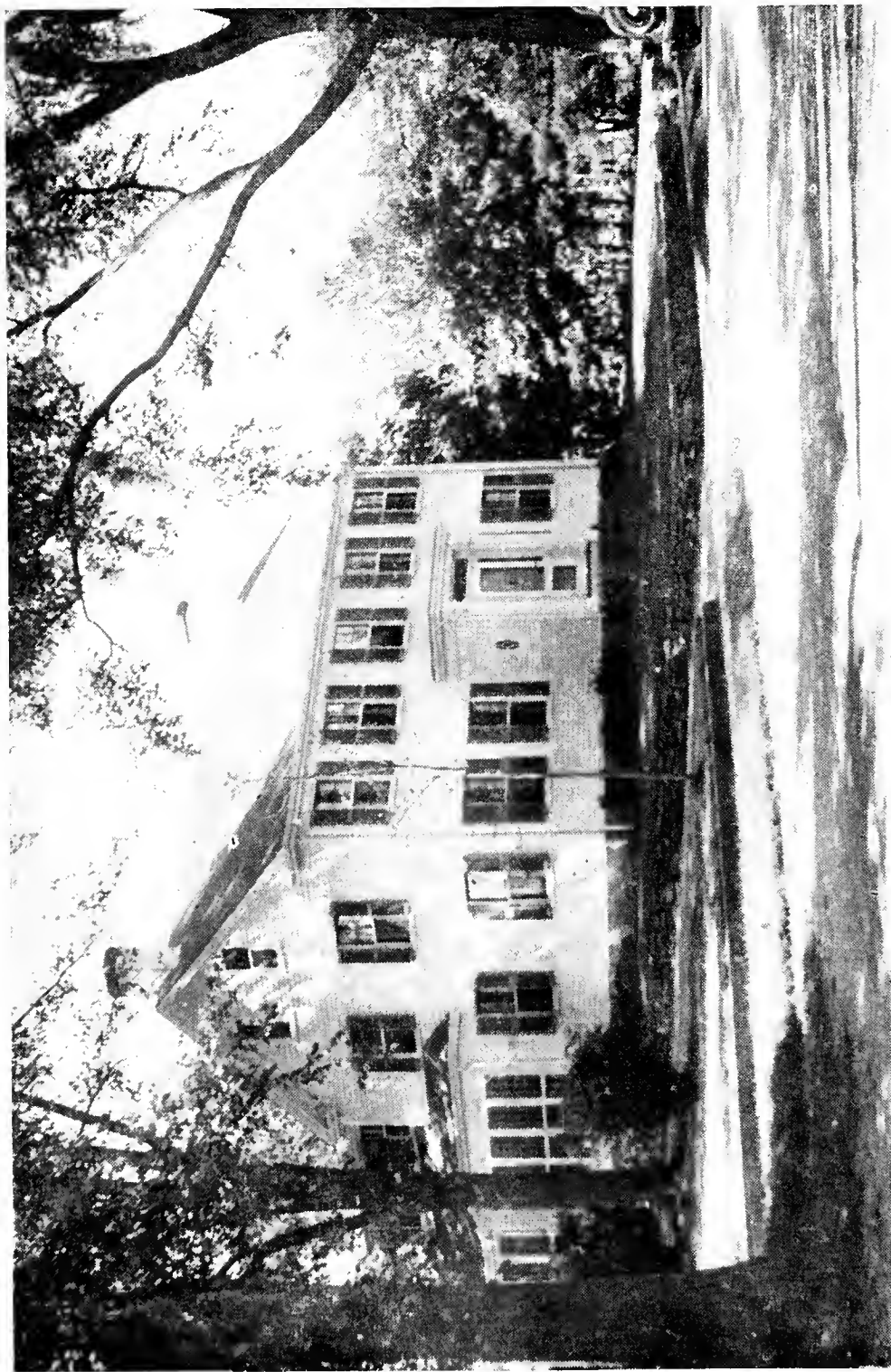
Then along comes this great drought from July on through October which cut any hope of high production for this year. Which, of course, doesn't mean growers shouldn't have used the modern methods to increase their crops. If they hadn't, production would have been less than whatever it turns out to be.

But this drought situation makes doubly interesting the experiments which are now progressing to "trigger" certain types of cloud to produce snow and rain. However, this rain-making by dry ice is developing certain difficulties—the rain (or snow) may fall on an area which doesn't want rain and not where it was aimed, which, it is being learned, opens up all kinds of problems.

Pictorial Section



"Dick" Reattie, new Massachusetts Extension Cranberry Specialist, looks pleased and confident that he will do a good job for growers of the Bay State. (CRANBERRIES Photo)



(CRANBERRIES PHOTO)

The elm-shaded home of Mr. and Mrs. Bartholomew, Main street, Wareham.



Every fall, its sure to harvest rolls around, national publication, arrive in the cranberry areas to gather material for articles. Most of these and reviewers eventually go to the Massachusetts Cranberry Experiment Station, East Wareham. Here is shown Miss Kay Grimm, associate

editor of "EBONY", inter-racial publication of Chicago, getting some facts from Dr. F. B. Chandler. Werner Wolff of Black Star Photo Agency, New York, points his camera their way while they talk. (GERALD BERRIES photo).



George R. Briggs' float boat, Gordon Griswold at the controls, retrieves floats (in the foreground) at Briggs' Billington Sea, Plymouth bog. (CRAN-FERRIES Photo).



Float boat of United Cape Cod Cranberry Company speeds across the flooded bog at Halifax on route 27.
(CRANBERRIES Photo)

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Mr. Seibermann poses behind sprinkler head on his Harwich bog. (CRANBERRIES Photo)

Are Sprinkler Systems Effective ?

Marshall Seibermann, Who Has Had Longest Experience in Massachusetts. Says They Have Saved His Crop Every Year—Harwich Grower is a Native of Texas

Helicopters have hovered over the bogs of Massachusetts this summer, agile as bees or humming birds; straight-wing planes have darted across larger bogs in the intensive air insect control program; a portion of the crop this fall will be experimentally picked by harvesting machines; float boats will be available to recover "bot-toms" which would otherwise be lost. Sprinkler systems will pro-

tect a few bogs against frost danger. How efficient are sprinklers for frost protection, as well as for irrigation?

This question was put to the man who has had the longest actual experience in Massachusetts with sprinklers for frost and irrigation. He is Marshall Siebenmann, owner of the Great Western bogs at North Harwich, where a sprinkled demonstration meeting was held by County Agent Bertram Tomlinson on June 17th.

At the "OK" bog unit of this property, on Great Western road, from which the company takes its name, sprinklers have been in use since 1938. They were installed when United Cape Cod Cranberry

Company owned the property, which Mr. Siebenmann bought in 1942.

During the five years he has operated the sprinklers for frost and irrigation, Mr. Siebenmann says they have saved his crop every year, particularly as regards frosts. The system which Siebenmann operates is that of the Skinner system of irrigation. These are the small rotary heads, eight in number and protect two pieces, making up a couple of acres together.

"Sprinklers are the only thing for frost protection, certainly on small bogs", Mr. Siebenmann says. "They can be the salvation of owners of small bogs such as many on the Cape, relatively small, dry pieces. These never had an opportunity to be protected against frosts before. Sprinkler systems can make a lot of difference on the Cape. Where the acreage is large, and you have to have a good flow-are system, maybe with pumps, for winter coverage, there probably isn't any advantage in sprinklers. But for a bog which cannot be otherwise protected, sprinklers certainly work out fine.

"Last year", he continued, "we put on water to flow our bogs which did not have sprinklers, sixteen times. That is, we got water into the ditches and beginning to go under the vines. Then we found that 14 out of these 16 times it was unnecessary to flow that night, as conditions were warming up. On the bogs which had the sprinkler-Harwich, from there shifted to South Dennis, to Brewster, to Orler we turned them on only twice, and that was for the two nights there actually were dangerous frosts. With sprinklers, in the average frost you can wait until the very last minute when you know, if the bogs are not protected, there will be damage.

"While this may not be the approved method of operation, we sometimes wait until almost daylight, say four o'clock, before starting the sprinklers. We have turned the sprinklers on with white frost already on the vines and have prevented any damage to the crop. Everything immediately gets ice all over when we do this,

but we don't find any injury has been done."

Such delayed action is only possible, he points out, with average or milder frosts, and would not do in the case of a long "freeze." He had in mind the ill-remembered night of May 18, 1944, when there was the "black frost." A minimum of 18 was reached on this bog that night, but the sprinklers saved the crop, although the water was kept on all night.

There are two other sprinkler systems in Harwich besides that of Mr. Siebermann. One is owned by John Hall, who has a Giant Buckner head for a bog of about 1½ acres; the other by Earle Dean, who has five large rotary Buckners. The Hall bog is supplied by water from a pond, while that of Dean is provided by a well.

Water supplies, such as ponds and brooks, are apt to be scarce on the Cape, particularly as the Cape gets thinner toward its outer reaches. Mr. Siebenmann says he is certain the sprinkler systems can aid in the salvation of many of the small, dry bogs on the Cape

which have not made any progress for years. There is plenty of "shallow" water, 15 or 18 feet below the surface, easily reached by wells. These would be ample to supply water for the sprinklers, bringing these bogs into a more "sure" class of production than they ever have been.

Mr. Siebenmann, now growing cranberries on Cape Cod, is a Texan, a native of San Antonio. His business previously was that of an automobile dealer, and he engaged in that business when he first came to the Cape. However, he began buying cranberries in 1934 for M. L. Urann and became interested in the industry. Then he purchased the bogs which had been owned by the United Cape Cod. The Great Western is the only cranberry property he has so far owned.

Associated with him is his son, Marshall, Jr., and it has developed that the younger Mr. Siebenmann has most of the charge of the bog operations, while Mr. Siebenmann conducts the Cranberry Trading post of the National Cranberry Association, and handles other busi-

ness for the National on the lower part of the Cape.

The area in which Mr. Siebenmann operates is from the Sandwiches and Mashpee to the outermost bogs on the Cape at North Truro.

The Great Western is one of the older bogs of the Cape, possibly as much as 75 years old. It was about half Early Blacks and half Howes, but as renovations are made, Siebenmann, like many others, is putting in Blacks.

A second recent advance which Mr. Siebenmann believes will be of great importance to the many small growers of the Cape is the use of the helicopter for cranberry work. This will provide a dusting service, and possibly spraying, which the small grower could not provide for his bog otherwise.

In a single day this summer one of the NCA 'copters, piloted by Roeloffs, covered a total of 189 acres. This was a grueling day, as it lasted from about seven in the morning until nine in the evening. Operations were begun from the Trading Post at North

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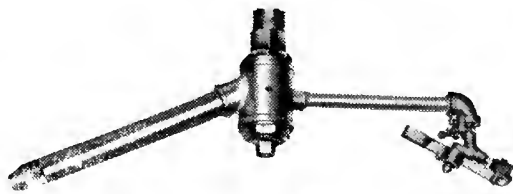
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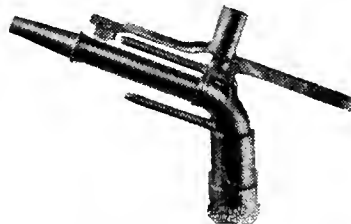
THE SKINNER IRRIGATION CO.

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Catalog No. Controlled Power	Main Nozzle Inch	G. P. M.	Diam. of Coverage in feet	
			Uniform	Total
CP-1	5/16	30.00	145	162
		32.30	150	168
		34.50	155	173
		36.80	160	178
		37.50	165	182



Controlled Power Sprinkler



Long Range Utility Sprinkler

Catalog No.	Main Nozzle Size	Lbs. Pressure at Sprinkler	G.P.M.	Diam. of Coverage	Diam. of Uniform Coverage
LR-3 3" Inlet	1"	80	300	325	300
		90	320	330	305
		100	340	340	310

Other sizes available in both Sprinklers. Write.

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4"x20' lengths	16.40
3"x20' lengths	11.35

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leans to Yarmouth, and to South Harwich.

Texan though he is, Mr. Siebenmann is now a "confirmed" cranberry man and Cape Codder. He is a member of the Cranberry Credit Corporation of NCA; Cape Cod Cranberry Growers' Association and of the Lower Cape Cod Cranberry club.

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NCA
"CHICKEN 'N CRANBERRIES"
CAMPAIGN SUCCESSFUL

National Cranberry Association is obtaining some extremely satisfying results with its "Chicken 'n Cranberry" promotion campaign, the Hanson office reports. In super-markets where the combination was "pushed" with store and advertising displays, the sales of both chickens and cranberry sauce made spectacular gains over sales before the two were promoted as a good food combination.

In one store which got behind the campaign a sales increase of

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RAIN BIRD SPRINKLER MFG. CO.
GLENDDORA, CALIF.

more than 1,000 per cent was reported. The co-operative is using this plan to boost the sales of "Ocean Spray" throughout the year, and hence the marketing of the cranberry crop.

"TURKEY STEAKS"

As a sales promotion for turkeys, "turkey steaks" will shortly be on the market all over the country, according to an article in "Esso Farm News." In making a turkey "steak", a frozen turkey is sawed across the grain, or the whole bird, to make steaks of varied sizes and shapes. Leg and body bones appear in the steaks as if they were round beef cuts. Steaks, generally, where they have been used thus far, have been dipped in batter and fried.

Americans are eating about twice as much turkey as they did a dozen years ago, but in spite of this increase per capita consumption, the turkeys have been getting bigger, the average weight increasing to 17.9 pounds in 1946. Most raisers prefer large birds be-

cause they are more economical per pound.

This is too large for many families, although fine for hotels and restaurants, and cutting the tur-

keys into steak will, it is expected, spread the demand for these big birds in individual steak sales and make turkey more in demand outside the holiday season.

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The New England Cranberry Sales Company

The Cranberry Cooperative which provides at cost a complete service to its members in the production and marketing of their crops.

Eatmor Cranberries

9 Station Street

Middleboro, Mass.

(Continued from Page 5)

New Jersey (as of Oct. 1):

The New Jersey crop is now estimated at 75,000 barrels—26 per cent smaller than the 1946 crop, but 11 per cent above the average. Dry, hot weather during September was unfavorable for the development of cranberries. On most bogs berries are reported as medium in size. Quality and keeping prospects are moderately good this year. Fruitworm damage is light, although somewhat greater than in 1946. The harvest was delayed, as berries were slow in ripening. Since September 20, frequent flooding of bogs has been necessary to prevent serious frost damage. Available reports show 52 per cent of the crop to be Early Blacks, 44 per cent Howes, and 4 per cent other varieties.

Wisconsin (as of Oct. 1):

In Wisconsin production is now estimated at 135,000 barrels, second only to the record crop of last season and 30 per cent above average. Unusually mild weather during the first three weeks of September were especially favorable for development of the cranberry crop. Frost damage was negligible to Oct. 1. Bureau of Agricultural Economics, Portland, Oregon, reported Oct. 15 as of Oct. 1:

Oregon cranberry production, estimated at 17,400 barrels, is the largest of record, and compares with 16,100 barrels last season and the average of 8,750 barrels. Harvest of the Oregon crop started somewhat early this year. In the Coos area, high temperatures the third week of September caused some loss from sun-scald, the loss being quite serious on some bogs. By late September very few berries in the Coos area had been picked for fresh market, but harvesting for processing had been in progress for some time.

In Washington, prospects point to a record large crop of 45,000 barrels—7 per cent above the September 1 forecast, 9 per cent above last season and nearly double the average. Harvest became general in mid-September and is expected to continue through October.

(Continued from Page 5)

with the expectation that the market would firm with the coming of cooler weather.

In the face of the dull fresh fruit market, M. L. Urann of the National announced September sales of "Ocean Spray" as exceeding all records and that when October returns were complete that would have been another record month. He said NCA had received 313,000 barrels of the crop so far and indications were that the Nat-

ional, instead of receiving 50 per cent of the total, would get more than that. He said 22,000 bbls. had been sold fresh so far and it was expected the fresh sales would reach the previously estimated 50,000. He announced it was desirable that 50 per cent of the crop each year be sold fresh, but he did not now believe 200,000 barrels would go on the fresh market. Now he was estimating the crop as slightly less than 700,000.

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He said he felt fresh fruit should have been opened at not more than \$25.00 a barrel and last year the fresh fruit excuse was lack of sugar, and this year, "warm weather in October."

He said September broke all records in sales for Ocean Spray, and October returns, when all in, would be high.

MASSACHUSETTS

The all but rainless, and hot October, extending the extremely dry spell which began in mid-summer, brought a double worry to growers. There was the knowledge of the dull cranberry market, of berries shrinking in storage, and of the almost-record lowness of ponds, streams and reservoirs with the winter-flooding program not too far ahead. Growers, recalling the winterkill of 1944 when there was no water for coverage and such extensive damage was done, feared more and more the possibility of a repetition. However, there was a margin of a number of weeks, and growers well knew most any kind of weather can happen, particularly in New England.

Another factor of the low water supplies was that growers did not feel like risking as much water as they would have liked in recovering floats. There was a good deal of this done, however.

High Sunshine Factor

Rainfall for the month was 3.72 inches, all except a few hundredths having fallen in the heavy storm at the very end of the month. On the other hand, the sunshine factor for the year continued to climb. The October sunshine hours were not available as this was written, but it was estimated it might be as much as 75, and this, piled upon an October first plus of 127 would make an unprecedented total. Number of sunshine hours recorded at Boston to the end of September was 2212, the mean being 2086. As day after day of sun came in October, and particularly in early October when days were still long, the tremendous surplus continued to climb. This would have no adverse effect upon next season's crop. But although the fall bud was reported as exceptionally good on most Massachusetts bogs, nobody was

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inveigled into making any prophecies as to the 1948 outlook—not after this year's extreme variation in early forecasts.

No Frost Damage
Picking was concluded largely by

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the week beginning October 12th and frost was not recorded by Dr. Franklin as having taken any toll in October. There were four nights of low temperatures, but the unseasonable warmth of the month had kept away damaging frost which growers had feared in September, with water at such a low ebb.

NEW JERSEY

Precipitation

Rainfall has been conspicuous by its absence through October. The total for the month through the 26th was only 0.08 inches which, needless to say, is more than slightly below normal—3.38 inches to be exact.

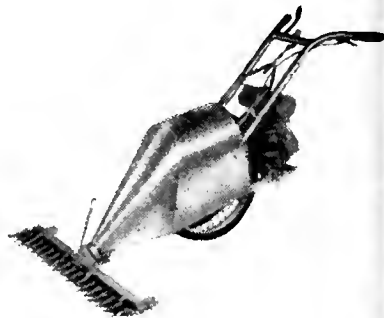
With this very severe drought most bog water supplies were extremely low all fall. It is true there was some loss of crop from frost because of the shortage of water, but fate must have been smiling on the growers for the most part, for it could have been a lot worse.

Naturally there is concern as to how this lack of fall moisture will effect next year's crop. It is undoubtedly doing more harm than good.

Temperatures

With the exception of the first three nights of the month there were no frosts on the bogs of any consequence. Unseasonably mild weather prevailed from the 4th through the 23rd. Frost occurred on the morning of the 25th with temperatures down to 21°. Thanks to perfect harvesting weather before this time all scooping had been finished. Temperatures through

the 26th averaged 61.2° at Pemberton, which is 5° above normal and only about a degree less than the normal mean temperature for May!



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Fire

A disastrous fire occurred on the morning of the 25th when the sorting and storage house of the Chatsworth Cranberry Company was burned to the ground. Destroyed in the fire were 1800 barrels of cranberries, not sorted, all the screenhouse equipment, and a large quantity of bog tools and equipment. Berries were not insured, but screenhouse and equipment were. The Chatsworth Cranberry Company is owned by Anthony DeMarco of Hammonton, N. J. It is one of the larger New Jersey cranberry properties, with close to 200 acres of bog.

Personals

Charlie Doehlert took a much-deserved vacation from the 9th to the 29th. Most of his time was spent at home painting and fixing up the place or being just plain lazy when he so desired.

Phil Marucci transferred his base of operations from Pemberton to New Brunswick for the winter months, where he will be working on problems connected with gaining his Ph. D.

WISCONSIN

October Ended Harvest

The whine of the suction type picking machines was still heard on Peninsula as October ended, although the crop was practically harvested, with an estimated total

production of 9,000-10,000 bbls. or 50 per cent above last year, according to the Ilwaco Tribune.

Harvesting went ahead rapidly the first part of October, under perfect weather, then rains came. The larger growers depended very largely upon water-scooping to get

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in their crops, although they were aided greatly by the popular suction machines, plus several hundred handpickers, who worked on the newer bogs.

The wet weather turned the harvesting job largely over to the suction machines and the hip-booted men scooped in the flooded area, more or less regardless of the rain.

This year the peninsula has seen some new bogs come into bearing to a limited degree, notably the Cranguyma marsh, which was picked for the first time this year. The production there was expected to run up to 800 barrels, with the prospect of five times as much next year, and a continued increase until the 100 acres of new bog begin to yield.

Crowley Pleased by Progress
D. J. Crowley, of the State Ex-

periment Station, is especially gratified by some recent figures from the United States Department of Agriculture which show a steady growth in the production of Washington State bogs at Grayland and in the Peninsula area.

This, he says, had been "paced" by the adoption of the sprinkler systems for frost and drought protection. Production for 1944 was 30,000 barrels; for 1945, 36,400; 1946, 42,000; and 1947 an expected 45,900. Principal production is at

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Grayland, but the Peninsula area has now some 350 acres in good shape, is seeing many bogs planted, and has enough raw lands suitable for cranberries to build up to five times that much.

Milwaukee Journal Tells of "Goldy's" North Wis. "Push"

Former Wisconsin Cranberry Sales Co. Manager Quoted as Expecting That State's Production to Double in 10 Years.

Under a heading "Northern Wisconsin Bog Sales Booming", the Wisconsin Rapids, Milwaukee Journal staff correspondent Oct. 2 tells how the Wisconsin cranberry industry is pushing into northern Wisconsin, under leadership of Vernon Goldsworthy. The article says "this expansion promises to bring employment to 1,000 or more persons, to make use of perhaps 22,000 acres of now worth-

less swamps and marsh, and to double the state's cranberry production."

The article goes on to say: "The 'big push' behind a developing boom in northern marshlands is blue-eyed, sun-squinted Vernon

Goldsworthy, 41, former secretary and general manager of the Wisconsin Cranberry Sales Company, a type of co-operative and a director of the American Cranberry Exchange, a national sales and promotional organization.

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"Goldsworthy, who has owned cranberry bogs in this (Wisconsin Rapids) and the Berlin areas, quit the co-operative after serving it for 12 years. Since then he has acquired 7,500 acres of swampland in Oneida, Vilas and Iron counties. He still is buying, but he won't say where because he is afraid of a price rise."

The highest price he has paid, the account says, is \$5 an acre plus minor timber value on state land. The rest he has obtained cheaper from individuals and counties. Much of the land has been tax delinquent.

Some of Goldsworthy's purchases have been for friends and clients who hire him to develop the bogs and get them into production. Of the 7,500 acres he has pur-

chased, 250 acres are planted and 2,500 have been sold. Only about 3,000 acres of his purchases will be in actual cranberry production, the balance being necessary for drainage.

Quoting Goldsworthy, the article says, he expects 15,000 to 20,000 more acres of northern lands to be bought for cranberry culture. Such a development would eclipse

the Wisconsin Rapids area, where most of the state's 3,000 acres are concentrated. "Goldy" is further quoted as saying he expects Wisconsin cranberry production to double in the next ten years.

The account concludes with the statement that Massachusetts is the leader in cranberry production, Wisconsin is second, and New Jersey in the number 3 spot.

Statement of the Ownership, Management, Circulation, etc., required by the Act of Congress of August 24, 1912, as amended by the Acts of March 3, 1933, and July 2, 1946

Of CRANBERRIES, published monthly at Wareham, Mass., for October 1947. State of Massachusetts, County of Plymouth, ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Clarence J. Hall, who, having been duly sworn according to law, deposes and says that he is the owner of CRANBERRIES and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily, weekly, semi-weekly or triweekly newspaper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the act of August 24, 1912, as amended by the acts of March 3, 1933, and July 2, 1946 (section 537, Postal Laws and Regulations).

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher—Clarence J. Hall, Wareham, Mass. Editor—Clarence J. Hall, Wareham, Mass. Managing Editor—Clarence J. Hall, Wareham, Mass. Business Manager—Clarence J. Hall, Wareham, Mass.

2. That the owner is: Clarence J. Hall, Wareham, Mass.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: None.

CLARENCE J. HALL.

Sworn to and subscribed before me, this 7th day of October, 1947.

(Seal) BARTLETT E. CUSHING.

(My commission expires April 15, 1949)

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- * More members
- * Selling strength

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December, 1947

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Cape Cod and Oregon Choose Their 1947 Cranberry Queens

In Massachusetts, Sharon Casey, Wareham High Senior, Wins and Is Sent to New York by ACE, Outfitted by NCA

Cape Cod chose its "Cranberry Queen" for the third successive year at the annual Cranberry Queen Coronation, Festival and Dance at Memorial Town Hall, Wareham, Friday evening, Nov. 14th. The affair was sponsored by Wareham Post 220 of the American Legion and its auxiliary. It was by far the largest of the festivals held, 1,150 being present.

The winner was pretty Miss Sharon Casey, 17, daughter of Mrs. Harold Bumpus of Onset, one of 16 contestants. Miss Casey is a senior at Wareham High school. This was the largest field yet in the now-annual Massachusetts event, and presented a tough problem to a board of judges consisting of Cleege Roberts, chairman, director of the Harbor Players (Marion summer theatre) and four cranberry growers, Ellis D. Atwood, Gilbert T. Beaton, Edward L. Bartholomew and George Cowen.

The winning of this contest brought the most munificent reward yet offered to a Cape Cod cranberry queen, an exciting four-day trip to New York, where she was feted royally as guest of the American Cranberry Exchange. Her elaborate outfit was the contribution of National Cranberry Association. She received other gifts from local merchants.

The program at Wareham's Town Hall opened with the singing of "America" by Miss Rita Bento of Onset. After this Alton H. Worrall, chairman of the Wareham Board of Selectmen, gave an address of welcome, curing which he mentioned the very desirable possibility of a cranberry queen being chosen from each of the major cranberry areas of the United States, with a "run-off" for the queen of the cranberry industry.

During the evening the 1946 queen, Miss Barbara Costa, was enthroned and the first cranberry queen, Miss Patricia Jefferson, was

Oregon Queen

Oregon's first cranberry queen was chosen the evening of November 14th before 700 spectators at the Bandon grade school auditorium. She is Ruth Kreutzer, who was sponsored by the Langlois Community club. She is 17, the daughter of Mr. and Mrs. Lewis Kreutzer, who operates a farm near Langlois. She is a member of the Langlois Union High school. Born in Bandon, she is 5 ft. 3 inches tall, weighs 128 pounds, with brown eyes and hair.

Miss Kreutzer received her crown of authority from Mayor Rudy Backlund of Bandon, who pronounced her "Queen Ruth 1."

The coronation service was opened by Master of Ceremonies "Art" Dobney, who introduced Wesley Chappell, the latter giving a thumbnail sketch of cranberry growing in Southeastern Oregon. He declared "production has only scratched the surface of capacity", and that the industry merits publicity as a major part of the area's economy.

Judges of the contest were Mrs. Martha Mulkey Purdy of Coquille, Oscar Gulovson of Coos Bay, and Milo Reed of North Bend.

Judges were introduced. Judges were introduced to the audience, and then the queen contestants, all in evening gowns, and wearing corsages provided by the Legion and auxiliary, paraded across the stage and were announced to the audience.

Queens and the judges were then "locked" in chambers by William L. Ross, Jr., commander of the Legion Post, for the decision by the board of judges. During this time, which was about an hour, a professional vaudeville show was enjoyed by the audience.

At 10.30 the winner of the contest was announced by Chairman Worrall. Escorted by Commander Ross and Mrs. John Chandler, president of the Auxiliary, the Queen entered the hall, and the coronation ceremony performed, the 1946 queen placing the crown upon the head of the new queen. The gifts of NCA and others were

The six queen candidates were introduced and they promenaded to a background of music. After the queen had received her crown, John H. Fasnacht presented her with a key to the city of Bandon.

Following the presentation of gifts to the queen, the queen and her court with escorts led the grand march which opened the coronation ball.

The five other contestants in the contest were Janet Helme, Dew Valley, sponsored by Westmost Grange; Jeanette Danielson, Parkersburg, sponsored by Bandon Veterans of Foreign Warrs; Pat Whalen, Bandon's Active Club choice; Virginia Corrie, Prosper, sponsored by the Randolph Community club; Joanne Smith, Bandon, sponsored by Bandon Post, American Legion. These candidates were later declared princesses of the queen's court.

A "Cranberry Bowl" football game the afternoon of the following day and a festival dance that evening comprised the rest of the first annual cranberry program.

So successful was this first Oregon queen contest and festival that the committee which planned it has already begun to make tentative plans for next year.

then presented. Stanley Benson of New England Cranberry Sales Company outlined the plans for the New York trip. Robert Kornfeld, editor of "Cranberry World", house organ of the Exchange, and Mrs. Kornfeld, who arranged details of the New York trip, were present.

The hall was effectively decorated. Balloons and streamers were released when the identity of the Queen was announced. A cranberry punch bar was set up in the lobby through the courtesy of "Ocean Spray". Following the ceremonies, guests danced to a Boston band.

Before starting for New York the queen and her mother were taken to Boston for fitting of the \$150.00 wardrobe presented by National, purchased at two of Boston's smartest shops. The outfit

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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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FRESH FROM THE FIELDS

By C. J. H.

Latest USDA Crop Estimate

Latest cranberry crop estimate, that of U. S. Crop Reporting Service, released November 14th, showed an upward trend as concerns Massachusetts which brings the current estimate to 756,400 barrels for the country.

Total:

Cranberry production in the United States is now estimated at 756,400 barrels. The crop harvested in 1946 amounted to 857,100 barrels and the average production for the ten year period 1936-45 is 638,830 barrels. The 1947 season in New Jersey was unfavorable for cranberries, and the crop of 70,000 barrels is 31 per cent below last year. In Wisconsin, this season's crop of 140,000 bbls. is only 3% below the record large production of 145,000 bbls. in 1946. Cranberry production in the West Coast states (Washington and Oregon) shows a sharp increase, as acreage in those states has been increased in the past few years. Production of 45,900 barrels in Washington is 90 per cent above average, and Oregon's total of 15,500 barrels is 77 per cent above average.

Massachusetts Cranberry Crop 485,000 Barrels

The warm, dry, and pleasant weather of October was very favorable for completing the harvest of the cranberry crop in Massachusetts. Very little damage by frost or freezing occurred in October and after-harvest reports of growers indicate larger yields than expected a month ago. Cranberry production in Massachusetts is esti-

mated at 485,000 barrels this season—a crop 12 per cent below that of 553,000 barrels harvested in 1946, but 14 per cent larger than the 10-year (1936-45) average of 424,900 barrels. Current reports of growers indicate that the color and keeping quality of the 1947 crop are only about average. Growth of berries was limited moderately by dry weather late in the season and the size of berries runs below average. The shrinkage of berries in screening is reported as heavier than usual.

New Jersey Report: (Trenton, Nov. 11)

Cranberry picking was completed by November 1, but growers were still engaged in recovering "floaters" from the bogs. Because of unfavorable growing and maturing conditions which caused an excessive amount of rot this season, the crop was estimated at 70,000 barrels production for the 1947 season.

Portland, Oregon

The West Coast states have large crops. The Washington total of 45,900 barrels is 90 per cent above average, and 9 per cent above 1946. Oregon's crop, while 77 per cent above average, was, however, a little under last year and below early season indications. Production is placed at 15,500 bbls. compared with 16,100 in 1946. Heat damage in the Coos district was more serious than thought a month ago.

WASHINGTON

Not all of the cranberry crop was harvested by November 1 because of heavy rains.

WISCONSIN

Most interesting crop development is news coming out of Wisconsin from C. D. Hammond, Jr., General Manager of Wisconsin Cranberry Sales Company that the total production of that state may reach a figure of 150-155,000 barrels. This, if it proves to be true, would exceed last year's record of 145,000 barrels and be over the latest Government estimate of 140,000, and much over August forecast of 112,000.

Hammond is basing this prediction upon the fact that the Sales Company will handle from 74-75,000 barrels, and information that Midwest Cranberry Co-operative (NCA) will handle 73,000 and that two independents have 4,000 each.

This predicted record production is in spite of the fact that growers this year mowed more than 100 acres of cranberry vines to plant on new marshes. About 90 per cent of this was Searles, and the estimate is made that if they had been allowed to produce would have enabled the state to produce 160,000.

Harvest Was "Smooth"

Harvesting went along very smoothly this season, without any cold weather to interfere. In fact, there were only about four frost nights. Damage from frost was almost negligible. Water supply for water raking was good and labor ample in many sections, although only fair in others.

Next Year's Bud

As concerns next year's crop, budding is very good, and as far as this "token" goes, Wisconsin growers may be on the way for

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Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE
Extension Cranberry Specialist



This is a brand new venture as far as the Cranberry Magazine is concerned, and we hope that it will be of real service to the growers. A word of explanation as to the purpose of these monthly articles might be in order. It boils down to something like this—an attempt to keep growers informed of Cranberry Station and Extension Service news and developments. This will mean a brief account of the various research projects from time to time by the Massachusetts Cranberry Station staff members concerned. We will cover recent events at the Station and in the field such as: Cranberry committee meetings where programs are planned, announcements of special features such as of the cranberry school, developments of the cranberry root grub campaign, plus field observations that we hope will be helpful to the growers.

The many other fields of endeavor will continue to be covered as in the past by Editor Clarence Hall and his contributors. The Cranberry Specialist would like to add here that he is thoroughly enjoying his work and the community of East Wareham where he and his family are making their home. The entire Experiment Station staff have been most cooperative and helpful, which is really appreciated.

RECENT EVENTS AT THE CRANBERRY STATION

County Agent "Joe" Brown of the Plymouth County Extension Service called together the Plymouth County Cranberry Advisory Committee in November. The purpose was to draw up plans for the cranberry club meetings during the winter months. The growers' suggestions will be carefully followed, and it is believed that a

highly interesting winter program will be developed as a result of their discussion. It is expected that this program will be printed in the next issue of this magazine. Members of the committee present included: Russell Makepeace of Marion, chairman, Nahum Morse, East Freetown, George Crowell, Plymouth, Kenneth Garside, Duxbury, Carlton D. Hammond, Sr., Onset, Ferris Waite, Plymouth, Drs. H. J. Franklin, F. B. Chandler, Chester E. Cross, and Joseph Kelley of the Cranberry Station, Joseph T. Brown, County Agent, Philip Haight, Associate County Agent, and J. Richard Beattie, Cranberry Specialist.

County Agent "Bert" Tomlinson called together his Cranberry Advisory Committee the last of November to draw up plans for the cranberry project in Barnstable County. The Cranberry Specialist attended and enjoyed meeting with this group. Many valuable contributions were made. Highlights of the meeting centered around the discussion of irrigation. It was the feeling of the committee that considerably more could be done to improve Cape bogs when more information along these lines was available. There was real interest in combating the weed problem, and this apparently will come in for plenty of discussion during the winter and summer months. The matter of improving credit facilities for the smaller cranberry growers came in for its share of discussion. Those present included: Lloyd Doane, Harwichport, who was elected chairman, Charles M. Savery, Cotuit, Osborne W. Bearse, Brewster, Richard Rich, South Orleans, Bertram F. Ryder, Cotuit, Seth Collins, Waquoit, and Victor E. Leeman, West Barnstable. County Agent Bertram Tomlinson

met the latter part of November with the officers and directors of the Upper Cape Cranberry Club, and a program was drawn up for the winter months from January through April. This committee meeting was well attended, according to County Agent Tomlinson, and we will hear of their program later.

Plymouth County's Cranberry School will be continued for its second year. The advisory committee of this school was called together by Lindsay March, principal of the Middleboro High school, and the Cranberry Specialist. The committee met at Ellis D. Atwood's greenhouse in South Carver. It is believed an interesting program was drawn up when the practical aspects of cranberry growing will be thoroughly discussed. In other words, the emphasis this year will be centered around actual bog operations. Last year, the sessions were devoted to the background or theory of cranberry growing; in other words, securing the fundamentals of soils, weather, water, weeds, and insects. Members of the committee present included: Russell Makepeace, Marion, Ellis Atwood, Carver, Ferris Waite, Plymouth, William Tufts, Middleboro, Lindsay March, Middleboro, John LaForest, Carver, Joseph Brown of the Extension Service, Dr. Fred Chandler, Cranberry Station, and J. Richard Beattie. The time and effort so freely given by the grower members of this committee during the last year and a half has been a real contribution to the industry.

Research Work

Dr. H. J. Franklin, in charge of the Cranberry Experiment Station has completed the revision of the long-awaited Bulletin No. 239 entitled, "Cape Cod Cranberry Insects." It may be some time before this will be in the hands of the growers, since there is a delay in securing the colored plates that are necessary for this bulletin. However, this will be taken care of just as soon as possible.

Dr. Chester E. Cross has set out experiments to determine whether PDB (para-dichlorobenzene) put under sand will kill wild bean when applied in the fall as well as in

es in the spring. Dr. Cross and Joseph Kelley are cooperating on some winterkilling experiments. The Dow Chemical Company has generously contributed five drums of Dowax for the purpose of testing the value of this material. It is hoped that this wax sprayed on the cranberry vines will prevent injury during the winter months. Many cranberry growers with inadequate water supplies will be interested in the results of these experiments.

Dr. Frederick Chandler has been conducting an experiment with the tensiometer (a device for measuring soil moisture) in order to learn the movement of water in bog soils. These results have not been completely summarized, but tend to indicate that water movement in horizontal direction or between patches is very slow. These experiments will be continued on two new sections of bog now being built at the State Bog.

Dr. H. F. Bergman is continuing his very interesting work on fruit rots which were so destructive to our crop. He is now checking the results of his experimental plots for the 1947 season. He urges growers who are interested in the matter of oxygen deficiency to get their testing equipment in shape for use this winter.

Joseph L. Kelley and J. Richard Beattie have been checking the cranberry root grub situation in the county. You will remember there is an active campaign which is attempting to bring under control this No. 1 Cranberry Insect pest in the Plymouth County area. There are approximately 65 growers enrolled in the campaign of which 35 actually carried out control practices during the past year. Each of these growers is being visited to learn of their results, and it is hoped that some valuable information will be secured when this survey is completed.

Coming Events

By the time this issue is in the hands of the growers, the Annual Production and Outlook Conference will have been held in Amherst, December 2 and 3. This year for the first time the cranberry industry will be included at this Production Conference, and a delega-

Atwood Holiday Display Features "Edaville Railroad"

Trains Will Make Special Trips Amid Special Electric Illumination Over Christmas and New Year's

Mr. and Mrs. Ellis D. Atwood of South Carver, Massachusetts, and the "Edaville Railroad" will this year be host to the general public in Christmas-New Year observance. While definite details of the plan have not yet been completed, the outline is ready.

Starting the 15th of December the Edaville train will make special trips from about 4 in the afternoon until 9 at night over the more-than-five mile course of the road around the cranberry bogs. Holiday lights will play an important part in the program, as they did in pre-war, and a big "Merry Christmas" arch is to be erected.

This year's holiday observance by the Atwoods will feature the train itself, plus the electric illum-

ination of growers from the industry will have been present. Each year, this conference is held to consider the major problems of the various agricultural commodities, and to consider ways and means of realizing a solution. A summary of the conference itself will be included in the next issue of this magazine. Those planning on attending include: George Short of Plymouth, Howard Hiller of Rochester, Russell Makepeace of Marion, Orrin Colley of Kingston, Stanley Benson of Middleboro, Joseph Kelley and J. Richard Beattie of the Cranberry Station.

The first session of the Plymouth County Cranberry School is scheduled for December 16. This will be held at Ellis D. Atwood's greenhouse at South Carver and will start promptly at 2 o'clock. These sessions are developed primarily for the new grower, bog foreman, and particularly G. L.'s interested in the industry. Subjects to be covered at this first school session include: "What makes good bog property", by Joseph L. Kelley of the Cranberry Station; "Availability of bogland", by George Short of Plymouth; "What determines whether a bog is worth renovat-

ations. Again South Carver will take the spotlight in the holiday spirit as it did for some years until the war prevented such festivities.

A special feature is to be a midnight ride of the train for the ushering in of 1948. Already Mr. Atwood reports that many have signified their hope to visit "Edaville", with its new railroad station and to take part in the holiday.

During the past year—from January 1—approximately 100,000 persons have been guests of Mr. Atwood on the trains which have been run every week end and on various special occasions.

It is anticipated that the Christmas-New Year festivities will swell this number considerably and that the cranberry property of the Atwoods will be a focal point of interest for guests from far and near.

"What does it take to get started in the cranberry industry", by Joseph Kelley and George Short; "What does it take to get started in the cranberry industry", by Russell Makepeace, Marion.

On January 12, the Upper Cape Cranberry Club will hold its first winter meeting. This will be held at Bruce Hall at Cotuit, starting with a supper at 6.30 p. m. "Marketing the '47 crop", by Marcus L. Urann, will feature this meeting.

MINOT SENDS OUT INTERESTING BROCHURES

Minot Food Packers, Inc., Bridgeton, New Jersey, this past fall sent out interesting and well designed brochures to the trade to boost sales of cranberry sauce, featuring Minot strained sauce and Conway's old-fashioned whole berry sauce.

Addressed to grocers, the brochure carried the message that turnover and profits in cranberry sauce are no longer seasonal, and that powerful, steady advertising is creating year-round consumer demand. Reprints of newspaper ads were shown, and grocers were offered full-color window and shelf sticker sales help.

Andrew T. O'Brien President of Crane Brook Since 1902

Carver Property Built Entirely by "Hand" Labor—Frank D. Costello Now Has Active Management—Mrs. Costello Interviewed Over Radio on "Wife's Angle" of Cranberry Growing.

By CLARENCE J. HALL

Since 1902 the Crane Brook Cranberry Company (Incorporated) has been growing cranberries at South Carver, Massachusetts, and during all that time Andrew T. O'Brien, who will be 84 this month, has been president. The active management, however, since 1938 has been that of his nephew, Frank D. Costello. During most of its period of existence Crane Brook has been mainly "independent" in its marketing affiliations.

Crane Brook is a member of National Cranberry Association, turning over a portion of its processing berries to that co-operative.

Mr. O'Brien built Crane Brook with his brother, James J. O'Brien, who died last winter at the age of 86, together with the late A. D. Makepeace, the "cranberry king" of the previous generation. This was a "50-50" proposition between the O'Briens and Mr. Makepeace. They put in 100 acres. At that time Andrew was president, as he still is, he was also manager and Mr. Makepeace was treasurer. In 1925 the O'Briens bought out the Makepeace interests.

The location of Crane Brook was a cedar swamp from which the timber had been cut and the stumps left standing. Crane Brook, from which the property takes its name, is one of the major streams of Carver, flowing from Federal ponds, southwesterly into the waters of the Wewantit just before the latter leaves the township of Carver.

The T. B. Smart bog, just above the piece the O'Briens and Makepeace built, was bought later, building up the Crane Brook ownership to approximately 149 acres.

The Crane Brook was set entirely to Blacks and Howes, which was a bit unusual in those days, as many growers experimented with small patches of other varieties. Howes was about two-thirds, which is a ratio being changed as sections are rebuilt. Blacks, as in most renovation in Massachusetts, are replacing the Howes.

Mr. O'Brien, who now spends his winters at Verdo Beach, Florida, was on hand this fall for the harvesting of the crop, active, cheerful

and still very much president of the Crane Brook Company, even though details were left to Costello. As a grower of such long experience, he tells an interesting story of the building of Crane Brook in the days before cranberry men had modern heavy equipment to use.

Crane Brook Built by Wheelbarrow

Crane Brook was built "entirely by wheelbarrow, as you might say", he recalls. The laborers, some 30 to 40, were all Cape Verdeans. Most of these had come to New Bedford from their native islands by sailing vessel. Camps were built and the men housed there, although some stayed at the old Shoe String factory. Rate of pay O'Brien remembers as \$2.00 a day, with quarters and fuel free.

"I put in many an acre for \$300", Mr. O'Brien says, "but perhaps it would be better to say the average acre, complete through sanding and vine setting, cost \$600. Every bit of it was done by manual labor; pulling the stumps left when the timber had been cut, making huge dikes and all. It was some different from the way bog is built today."

During the harvest, berries were hauled by a single horse and wagon to the Tremont station, a distance of about 4 miles, each load being made up of 15 barrels, and of course these were barrels, not boxes. The round trip took at least three hours.

Picking Was a "Holiday"

"Crops were picked by a dozen or more families, the harvest crews comprising up to 75 pickers. Many of these came up from the Cape,

principally Centerville, Hyannis and Harwich. These Cape families who came up to pick in Plymouth County were finished by early October, and then many of them returned to the Cape to pick small bogs of their own. They felt the frosts held off longer on the Cape.

"They were paid by tickets, in rolls, and these checks were accepted in the stores for groceries and other supplies just as so much cash. When the season was over such companies as Crane Brook redeemed them for cash from the storekeepers.

"How these pickers seemed to enjoy the work", Mr. O'Brien reminisced. "It was a change and really an outing for them. It was a picnic. It did not seem to be crudgery. These pickers stayed in the camps and really made a holiday out of cranberry picking.

"Snaps were used at first when the vines were new, but there was always a good deal of hand picking. Later the present Massachusetts type of scoop began to come in."

O'Brien

Mr. O'Brien is a native of Boston, where his father conducted a wholesale fish business which he began in 1879. The young O'Brien was in business with his father.

He got his first interest in cranberries when he came to Wareham to visit a trout hatchery of L. B. Handy. O'Brien had always enjoyed hunting and fishing. He tells how "Leck" Handy pointed out some land (now Eagle Holt) adjacent to Handy's own property at South Wareham, and told O'Brien many times this would make good cranberry property. "Leck", O'Brien recalls, was two full years in trying to induce him to go into raising cranberries with him and building this bog. Finally he "succumbed" to Handy's persuasion, and together they built 25 acres of bog, this being at the turn of the century, 1898. This was the initiation of the O'Briens of Boston to the cranberry industry world. Later this property was sold to Handy and the late James T. Hennessy. When O'Brien conceived the idea of building the

larger Crane Brook he decided it advisable to sell Eagle Holt.

O'Brien says he has never regretted going to the cranberry area and getting into this "Cape" business. "I've always liked to be out of doors. Cranberry growing has given me that kind of a life."

"Think of the changes I have seen in the industry", Mr. O'Brien says. "Things are so different today. The only kind of poison we had for insects used to be arsenic of lead, which we used to kill all our bugs and insects. Then we got 'Black Leaf 40'. Then came pyrethrum in liquid form and we used to drag 1,000 feet of hose over the bogs. Then we had pyrethrum in dust and there came the ground dusters. Now we've got the helicopter. We had one at Crane Brook last summer and it did the whole 100 acres of the main bog in three hours.

"The future of the cranberry industry? I'd say the future for cranberries is excellent—if we can get true co-operation. We want the little fellow to have a chance as well as the big fellow. We don't want any monopolies. We don't want a few big fellows to get too big, if we can help it. Competition is life. Monopolies were almost the ruination of America in big business. We don't want any such thing in the cranberry industry. The little fellow is the mainstay of our way of living."

Costello

Mr. Costello, who is a youthful-looking 59, was born in Brookline, but has known something about cranberries ever since he can remember. When he was a lad he visited his uncles on the Cape and early was around Crane Brook. He recalls when the Chaney's first came to Massachusetts to organize the New England Cranberry Sales Company in 1907. Crane Brook had already sold berries to the Chaney's.

It was the very youthful Frank Costello who gave Chester Chaney his first automobile ride around the bog country on the Cape, going from Wareham to Plymouth. Chaney, too, remembers this and the car was a Stearns.

From 1914 until 1924 Costello was away from the cranberry area.



Andrew O'Brien, snapped this fall during harvest at Crane Brook. (CRANBERRIES Photo)

He was then sales manager for the Packard Motor Car Company at Cincinnati. Some years after that he became owner of the Chevrolet Agency in Middleboro. While this agency still goes by the name of Atwood-Costello Company, Mr. Costello is no longer directly connected with it, although Mrs. Costello is a director.

Costello has been a selectman of Carver for the past three years. During the war he was a member of the industry-wide cranberry committee which conferred with the Government in the establishing of cranberry ceiling prices. He is a member of Cape Cod Cranberry Growers' Association, a director of

the Middleboro Co-operative Bank, and a member of South Carver Grange and Middleboro Lodge of Elks.

Improvements at Crane Brook

Considerable improvement and modernization have been in progress at Crane Brook. For one thing the whole lower end of the bog is being rebuilt and will be set to Blacks.

As the property is entirely along the Crane Brook, this was its only water supply with a 50-acre reservoir which was really inadequate, until after 1938. Crane Brook, as far as frost protection went, has really been operated as a dry bog. Size of the crops was more or less

dependent upon whether or not there were severe frosts which could not be adequately protected against. To overcome this situation, in 1938 Costello had a canal dug from Sampson's pond, the water going by gravity through a canal a distance of 600 feet. The ample supply of water now available has done much toward changing the Crane Brook picture.

Costello is now in the process of building a new flume and reservoir which will provide even greater flowage facilities—frost and winter coverage for the whole lower section of the bog. Water from the Crane Brook is to be caught and diverted to a 40-acre swamp along Cranberry road which will become a reservoir. Dikes 12 feet high and 20 feet wide, "driving" dikes, are being constructed. There is a giant flume which required 96 yards of poured concrete, plus a good deal of steel reinforcement. This flume is 40 feet long and 30 feet high, and when completed there will be a combined well, flume and pumphouse. The pump (by Bailey) will be operated by an electric motor, and the two gates will be 7 and 5 feet wide. Flume and dike construction is by Thomas Bros. of Middleboro.

With these and other improvements, it is hoped to raise the production of Crane Brook, which at its highest has been between 6 and 7,000 barrels.

Mrs. Costello

Very much interested in cranberry growing and the affairs of Crane Brook is Mrs. Costello. She is the daughter of the late John E. Atwood of Carver, and Mrs. Atwood. Mrs. Costello is bookkeeper for the Company. She takes pride in the fact that she is the wife of a cranberry grower and feels it her duty to take an active interest in the bog. Mrs. Costello is definitely fond of the outdoor life and has always been an enthusiastic horsewoman, taking part in many horse shows. For a time the Costellos, about 1930, conducted a riding school at Wareham as a spare time activity. Winters they go to Florida, and picked out Lakeland there to spend their first winter, because of the saddle horses.

The Costellos live on a farm, only a short distance from the Crane

Brook property. For many, many years this country estate has been known as "Island Farm." The name comes from the fact that the farm is surrounded on three sides by brooks, one of which is Crane Brook. When Crane Brook Co. bought this property they lived in a farmhouse dating from about 1700 which they bought from Dexter Atwood, father of Ellis D. Atwood. This was at one time occupied by the owner of the Charlotte furnace, at the site of which the Crane Brook screenhouse is located. Where they now store and screen berries, caboose stoves, grates, funnels, etc., were manufactured by the Charlotte Furnace, which was opened in 1850 and operated for several years.

Mrs. Costello's Radio Interview

Last summer (June 2) Mrs. Costello spoke over Station WNAC, Boston, in a "farmer's wife" broadcast series with the Massachusetts Commissioner of Agriculture, Frederick E. Cole, and Miss Gladys Lacroix of the Massachusetts Department of Agriculture.

In introducing Mrs. Costello, Commissioner Cole stated that in the series on the food producing activities of Massachusetts it was said "farm people live where they work, and this is especially true of our cranberry growers." Miss Lacroix added that perhaps the knowledge of cranberries, for many, is confined to cranberry sauce, served on Christmas and Thanksgiving, but that she had always been interested in the history of our foods, "where they were first used, how they changed to be the food we know today. In this case, cranberries, I believe the Indians first used the berries."

Mrs. Costello: "It was from the friendly Indians that Pilgrim women learned that cranberries were edible. Being English ladies, with an English liking for preserves and stewed fruits, these early settlers stewed the cranberries in water, added a bit of sweetening, and called it 'cranberry sauce'. This was the beginning of the combination, wild turkey and wild cranberry sauce."

Gladys Lacroix: "Yes, and this tradition is very prominent with homemakers today. We must not

forget the woman's place in the early history of cranberries."

Women Showed the Way

Mrs. Costello: "Of course not, for we must give the women credit for helping to bring the cranberry industry into being. For the first 200 years the men of the colonies were busy seeking means to make a living. They tried trading with ships, visiting far ports, they tried salt-making by building vats from which salt was evaporated from the salt water. Other industries were the making of turpentine from the sap of pine trees, glass making, smelting and fishing. It is true that some found these industries profitable and continued in their chosen business."

Gladys Lacroix: "And the cranberries were growing in their back yards all the time! Just think of it—a million dollar industry. Well, it took the women to bring the industry to the foreground."

Mrs. Costello: "I guess you are right, because history tells us when the Cape Cod men were turning their hand first to one thing and then to another, wild cranberries continued to grow unnoticed in the moist lowlands. That is, unnoticed by the men, but the women knew where they were growing. Each fall when the berries were ripe, the women gathered up their aprons and with a bucket in hand went to pick the berries for sauce and pie and even cranberry juice."

Gladys Lacroix: "Wait now, my history has missed a step. Did you say cranberry juice? I thought that was a modern product."

Mrs. Costello: "We do think of cranberry juice as a product of this modern juice-drinking age, but in 1683 this tasty drink was served very often."

Mrs. Costello then gave a brief history of the beginning of cranberry cultivation on Cape Cod, starting with the experiment of Henry Hall at Dennis about 1816, up to the present use of such modern inventions as the helicopter.

In connection with the history, Mrs. Costello said that history was one of her majors in school, that she had gone to Bates College in Maine, Washington University in St. Louis, and to Boston University, and having majored in history in economics she finally found her-

self teaching school in rural areas. She said she now enjoyed the rural life as the wife of a cranberry grower and had no desire to go back to the city.

As the wife of a cranberry grower she told her radio audience she was able to enjoy her hobby of growing flowers, she had a garden for their own vegetables, had kept goats, had an angora cat and colie, and could indulge in her special hobby of horseback riding, with many beautiful, peaceful roads and paths to ride along.

She said the most exciting thing in the life of a cranberry grower and his wife was possibly the frosts, and she told of the warning coming in and then the struggle to save the crop if the frost appeared damaging.

To a question from Commissioner Cole as to what is the hardest thing for the cranberry grower to take, she replied:

"I think from the point of view of the cranberry grower the hardest to take is the fact that this is a one-crop business. If the crops fail the books will not balance for the year." She added, "But scientific knowledge is doing away with that hazard very rapidly. More and more, cranberry raising is being placed on a scientific basis."

Crane Brook brought to the O'Briens and the Costellos the kind of life they wanted to lead.



Frank Costello stands beside the new flume being constructed at the lower end of Crane Brook. (CRANBERRIES Photo)

A Christmas Gift Suggestion . . .

Have you thought that the presentation of a subscription to **CRANBERRIES** Magazine might make a welcome gift to your foreman, or some one else interested in cranberry growing?

LONG LIVE THE CRANBERRY QUEEN

At the Cape Cod Cranberry Queen election, coronation and festival at Wareham, Massachusetts, last month, a happy thought, with much possibility, was put forward by the general chairman. It was an idea which this magazine has suggested before. This is the ambitious project of a national cranberry queen, this queen supreme to be elected in a "run-off", after a regional queen has been elected in each principal cranberry state.

Cape Cod has had its annual queen contest and election for three years now. Oregon chose its first this year. Wisconsin, before the war, where the idea of a cranberry queen had its origin, chose one, or a pair of queens some years. So the idea is familiar to three of the five cranberry producing areas. It could even be made international, if Nova Scotia growers selected a queen from there.

Such a plan, if it could be carried out, would obviously require a lot of work on the part of someone, and there would be a fund-raising campaign involved. But the cranberry industry can do things if it tries! It would help make the industry better acquainted; it would provide additional favorable publicity for cranberries. The sending of the Cape Cod queen to New York, handsomely outfitted by NCA, and with ACE providing the trip to the metropolis, where she delivered cranberries to the City Hall, met celebrities, received screen and television tests and made a transcription for broadcast, gained cranberries a good measure of publicity. Long live the "Cranberry Queen."

WE would call attention this month to the new feature which is beginning, and will continue monthly, we hope. This is the material prepared by J. Richard Beattie, new Extension Cranberry Specialist in Massachusetts. While this will, of course, mostly concern activities in Massachusetts, there should be some pointers and suggestions to growers in the other areas. After all, Massachusetts is still the largest producing area and what goes on in the Bay State has a preponderance of interest to the entire industry. Which leads up to the thought which follows.

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AN outstanding factor in this year's production which should be noted is the increase in production in the West, and by west we mean Wisconsin and the Pacific Coast. Time was when the Atlantic Seaboard was completely in the driver's seat as far as the growing of cranberries was concerned. Many "monopolies" which were eastern are now being threatened by western competition. And who can gain say that to the fastest belongs the race?

Which in our opinion does not mean that the East is not to gain in cranberry production in the next few years. We are sure it will. But will not the West make faster gains?

TO all our readers and friends, East and West, CRANBERRIES wishes a joyous Christmas and a Prosperous 1948.

Pictorial Section

Queen Contestants With Judges Just Before the Choosing

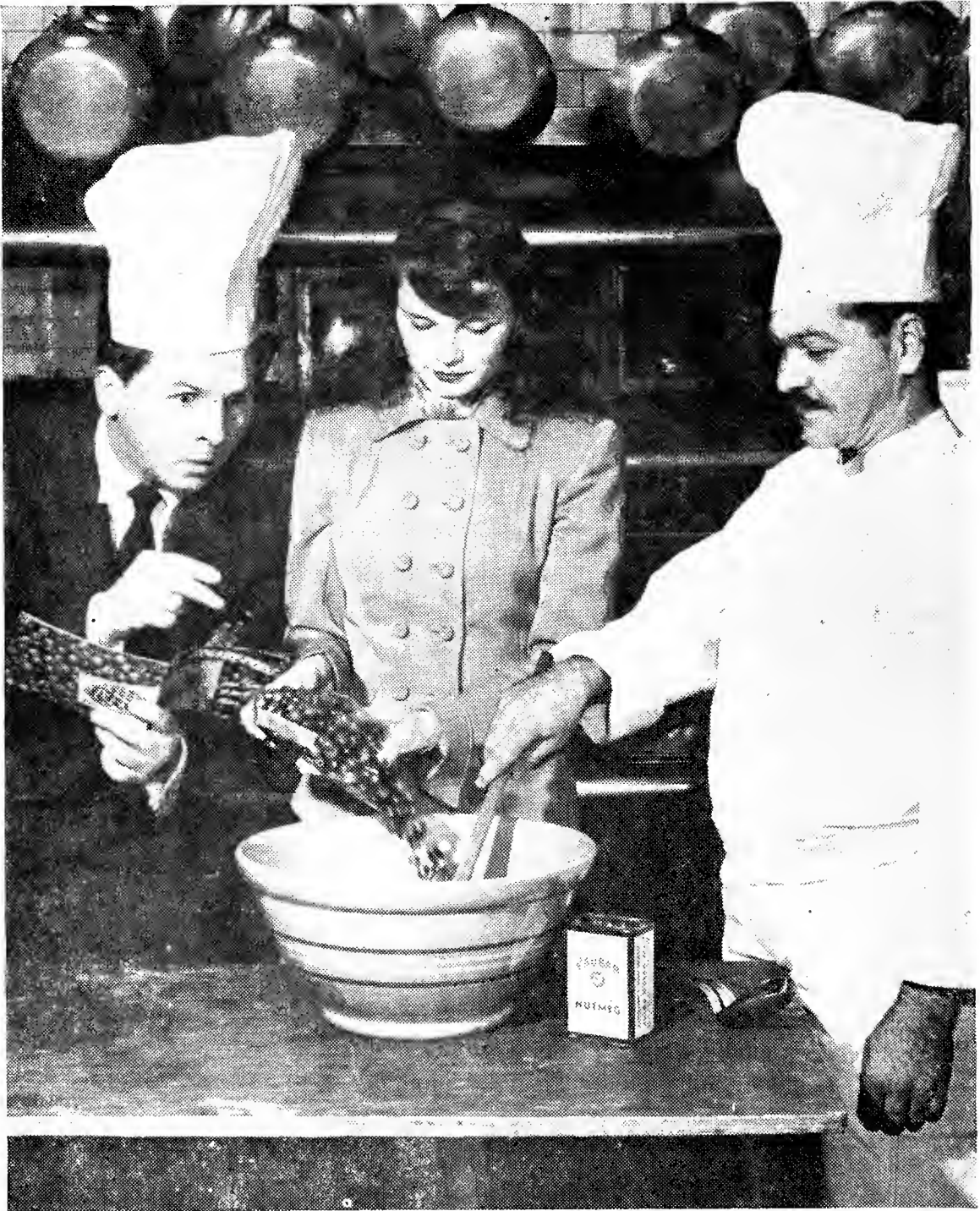
It's obvious why the latter had a difficult task in the selection of Cape Cod's third annual cranberry beauty



Seated, front row: Virginia Fuller, Rochester; Theresa Tuttle, Acushnet; Constance Jenney, South Carver; Emily Gould, West Wareham. Second row: Norma Ferreira, East Falmouth; Mary Florindo, West Wareham; Constance Fignerredo, Marion; Ardelle Purpura, Hanson; Betty Sullivan, Onset. Third row: Rose Gibson,

Onset; Sharon Casey, Onset; Lorna Roissing, Onset; Jean West, West Wareham; Isabel Perry, Buzzards Bay; Winifred Smith, Wareham; Marjorie McKinnon, Onset. At the rear are the judges, Ellis D. Atwood, Edward L. Bartholomew, Gilbert Beaton, George Cowen, Cledge Roberts, chairman of the board.

Queen and Movie Star Give Chef Lesson



Cape Cod's Cranberry Queen, Sharon Casey, is seen with movie star Eddie Bracken, as they give Chef Mike Parades, of the Hotel Gotham, N. Y., a lesson on making cranberry sauce. The photo was taken during Miss Casey's trip to New York as the guest of the New England Cranberry Sales Co. and the American Cranberry Exchange. (ACE Photo)



Above: The Cape Cod Queen, Sharon Casey, presents a box of fresh fruit to the deputy mayor of New York at the City Hall. Below: Miss Casey is shown with "Bob" Kornfeld, editor of ACE's "Cranberry World", at the Stork Club. (Photos, courtesy American Cranberry Exchange)



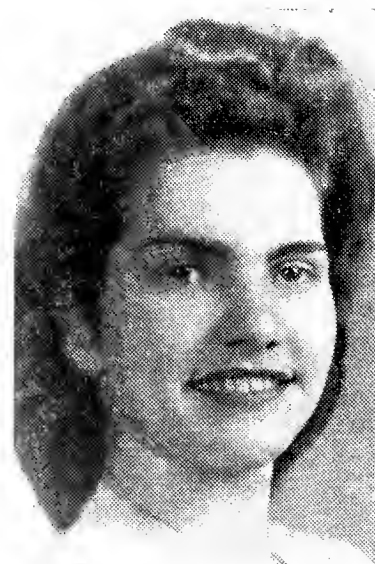
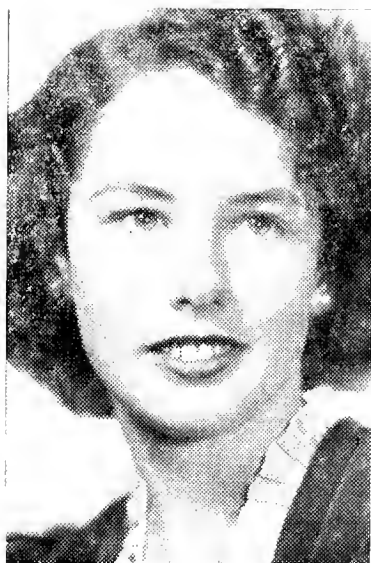
PORTRAIT STUDY

SHARON CASEY

**Cape Cod's 1947
Cranberry Queen**

Below: left, Patricia Jefferson, first queen ;right, Barbara Costa, last year's choice.

(Portrait by Parks)



Market for Fresh Fruit Stiffened

Early November, at the time when American Cranberry Exchange (Nov. 3) opened its price on Late Howes at \$7.00 a quarter barrel box brought a slump in the fresh market, which had been developing during the unseasonable warm weather of October, and with some rather tender berries to be disposed of. However with the coming of sustained seasonal cold and usual holiday demand, the prices firmed the week before Thanksgiving and as December came in the fresh market was definitely satisfactory.

New England Cranberry Sales Company expected to be well cleaned up in the Christmas market before Christmas. There was a markedly better feeling concerning fruit toward the end of the season.

Regarding the processed market, M. L. Urann of NCA said in his November broadcast the consumer demand for canned sauce was stronger than anticipated, and that he looked for good sales all through December.

He said the National expected to receive from its members about 380,000 barrels, whether the total crop would be 750,000 barrels as per the latest Government estimate, or possibly only 700,000. He said that co-op expected to sell fresh 50,000 barrels, and of the total crop he estimated about 450,000 barrels would be processed.



"Pretty as a Picture"—Miss Eleanor Bearce of National Cranberry Association models the gown of the Cranberry Queen. (Photo courtesy of NCA)

May Your Yule Log Burn Brightly



Bringing in the Yule Log is an ancient Christmas custom, and so is the exchange of good wishes among men of good will. To all our friends and customers, "May Your Yule Log Burn Brightly".

HAYDEN SEPARATOR MANUFACTURING CO.

E. C. St. Jacques

WAREHAM, MASS.



To Our Cranberry Friends and Customers

Our Holiday wish to you is that the joyous light of Christmas will continue to gladden your heart throughout the year.

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Santa Claus Is Coming—and by Helicopter

The forward march of progress has not left Santa Claus behind. Eager to keep up to the minute and use the very latest means of transportation, he will travel this season by helicopter.

The occasion will be the annual Christmas party given by M. L. Urann, president of the National Cranberry Association, for children in the towns of Hanson, Pembroke and Halifax. Date set this year for the party is December 20, and all youngsters of the first and second grades and under in the three towns were invited to attend the party at the National's Hanson office, starting at 2:00 p. m. About three o'clock the sky will reverberate with the sound of rotor blades,

and one of NCA's "Ocean Spray-er" helicopters will descend to deposit Santa Claus and his load of gifts. About 400 children are expected to witness this sensational improvement over the old fashioned reindeer-driven sleigh.

Children in Hanson, Pembroke and Halifax are not the only ones who will be visited in this manner by Santa Claus. The towns of Fal-mouth and Medford have already requested the use of one of NCA's two helicopters to transport Mr. Claus to children's parties, and a spokesman of the National reports that the Association is delighted to assist in such a worthy undertaking.

SCOOPS and SCREENINGS

The story of Cranguyma Farm, Long Beach, Washington, was a feature of the Pacific "Parade" Magazine section of the November 2 issue of the Oregon Journal. Besides the story of Cranguyma and the cranberry industry, a number of fine pictures taken from the air, appeared in a double page spread. Farm Manager Joe Alexson was featured in the article, as well as the big sprinkler system, the railroad and women weeders on the bog.

Leonard Morris, well-known cranberry grower of the Long Beach Peninsula, Washington, has been elected president of the Il-waco-Long Beach Kiwanis club. Dr. J. H. Clarke of Cranguyma is one of seven directors.

An interesting ad which we hap-pened to notice in the daily press and also in color in magazines, featured cranberries. This was by a Milwaukee beer manufacturer, which featured a bottle of the product, boxes of cranberries, a cranberry scoop, with the caption, "Scoop of the Year", and the fur-ther information it would indeed be a lucky cranberry picker who found he'd scooped up a cool, sparkling bottle of the manufac-turer's beer. The scoop shown, incidentally, was a New Jersey type.

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Consider your total yearly costs for both equipment and labor.

Use our experience and resources in designing and furnishing your system.

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"Food Marketing in New England", publication of First National Stores, gave Ellis D. Atwood's "Edaville Railroad" and the cranberry industry a good article in its November issue. It commented that every November "Food Marketing" contained an article upon cranberries, and while precedent is not an idol of the editor, "with the cranberry industry we cotton to this particular precedent. The cranberry people now are plugging, in their ads, cranberries as a natural with chicken, and they have done other things to make this native fruit a year-round item. . . ."

"The Cranberry Belt Line" article which follows this introduction is well illustrated with a number of half-tones, and referring to the new station at Edaville says this is as complete in its way as Grand Central Station, with soda fountain, grill, newsstands, souvenir dispensary, and plenty of comfortable chairs. Favorite concoction at the soda bar is a cranberry rappe."

During November the news was

released to the general press by the United States Department of Agriculture that cranberries are undergoing cross-breeding and a better and bigger cranberry with better keeping quality is in the cards. The word also went out that the new berries will score high in appearance—and it will take only 48 of the largest size to fill a cup.

Maybe this particular joke is on us—or maybe somebody else. But it was pointed out to us by Sharp-Eyed "Bob" Hunter of Wareham, who is known to many of the Massachusetts growers, that he couldn't help but wonder what the nutmeg tin was doing by the mixing bowl for cranberry sauce, as shown on

our page 14 of this issue. "Nutmeg in cranberry sauce?....." he remarked. But we might remind, this was sauce made to a queen's recipe, which shouldn't be confused with ordinary sauce.

C. W. Kitchen, executive vice president of the United Fresh Fruit & Vegetable Association, Washington, D. C. (who has spoken to cranberry growers in Massachusetts) in a recent address said that around 20 billion dollars will be spent for food next year and of this amount between 7 and 8 billion for fresh fruit and vegetables. The trend of the time, he said, is for a greater per capita consumption of these. He added the percentage should be

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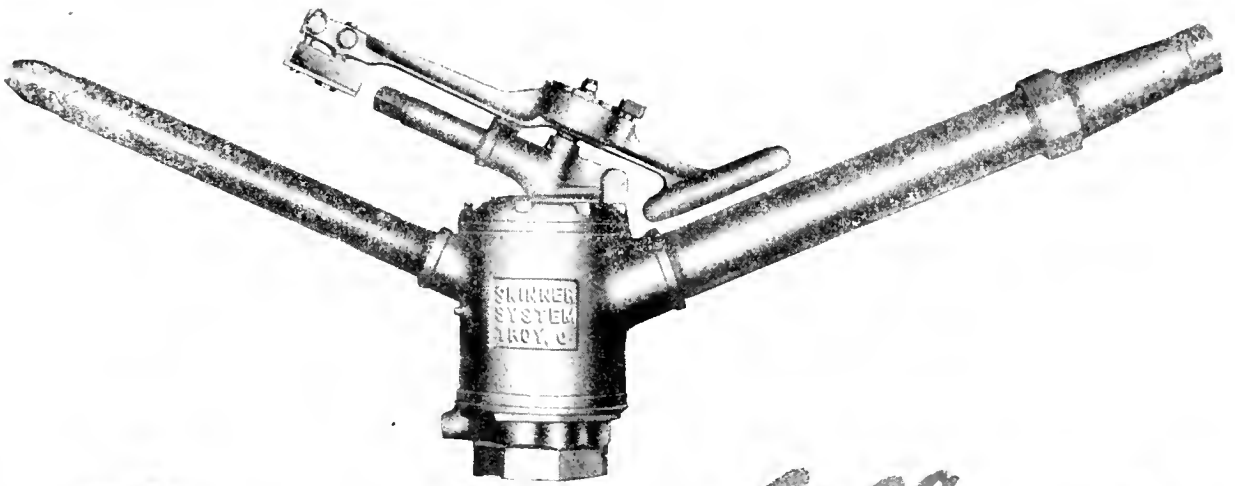
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	80	240	280
	90	254	320
	100	268	336
1"	70	277	310
	80	296	320
	90	314	330
	100	322	354
1 1/8"	70	337	350
	80	360	360
	90	382	370
	100	402	390

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have to discard a Skinner. A positive speed adjustment controls rotation of from 1 revolution in 4 minutes to 1 revolution in 40 minutes. No tools required to make these adjustments. This 5 Star Sprinkler, together with 7 other models, make up the most complete line of agricultural sprinklers on the market today. There is a Skinner Sprinkler for every agricultural watering job. Write today for complete information on how these sprinklers can help you.

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Midwest Co-op to Produce 75,000 of Wisconsin's 140,000

State Organization of NCA Has Increased Membership From 29 to 45—New Office Building Nearly Completed.

(Special to CRANBERRIES)

Wisconsin Rapids, Wis.—Starting with a membership of twenty-nine members in 1946, the Midwest Cranberry Co-operative, Wisconsin Rapids, Wisconsin, the state organization of the National Cranberry Association, Hanson, Massachusetts, has increased in membership to forty-five members. Members of the Midwest Cranberry Co-operative market 100% of their crop with the National Cranberry Association.

In 1946 this group's one thousand acres produced 60,000 barrels of the states' 145,000 barrel crop. With an increase of three hundred acres, half of which are producing and the balance planted, the Mid-

west's 1947 crop will be approximately 75,000 barrels. Eighty per cent of the 1947 crop was shipped out by November 1.

A new one story brick office building located in Wisconsin Rapids will be ready for occupancy the first of the year. Besides offices the building will contain a laboratory and greenhouses where research pertaining to Wisconsin Cranberry marshes will be carried on.

The present officers of the Midwest Cranberry Co-operative are: President, H. F. Duckart, Wisconsin Rapids, Wis.; vice president, O. O. Potter, Warrens, Wis.; secretary-treasurer, William F. Thiele, Wisconsin Rapids, Wis.; manager, L. A. Sorenson, Wisconsin Rapids, Wis.

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Campaign Stresses Use of Cranberries with All Foods—Fowl, Meat and Fish.

Minot Food Packers, Inc., Bridgeton, New Jersey, canners of MINOT Jellied "CRANBERRY SAUCE" and "CONWAY'S Whole Berry CRANBERRY SAUCE", are releasing the largest advertising campaign in their history. Newspapers throughout the country are carrying large space advertisements each week—these increasing in size before the Thanksgiving and Christmas holidays.

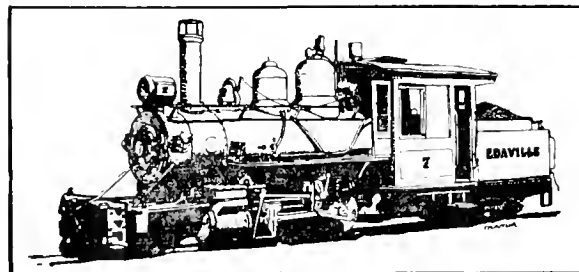
The copy theme stresses the use of Cranberry Sauce not alone with fowl, but with all foods, whether fowl, meat, fish, or others. With the increasing popularity of the delightful flavor of cranberries, William E. Lyke, Sales Manager of Minot Food Packers, Inc., states that more and more this fruit is

Again this year, may we extend to all a very Merry Christmas and a Happy New Year, through the bright beam of "Old Number Seven's" searchlight? Visit us during the Holiday season and enjoy the festive spirit at "EDAVILLE."

Most sincerely,

Elthea and Ellis D. Atwood
South Carver, Mass.

Season's
Greetings



NO 7 - PRIDE O' THE LINE

being used the year 'round. And in line with this broadening sales development of cranberries, Minot Food Packers, Inc., are broadening their advertising program to a year 'round basis to encourage this further use of cranberries in many different ways.

Mr. Lyke further adds that although there was an over-stocking of canned cranberry sauce in the retail trade during 1946 and early 1947, this condition is rapidly correcting itself, due to the fact that many canners who were restricted in their regular lines had packed cranberry sauce during the war years, are now discontinuing this line. He further states that unlike many canners of cranberry sauce, Minot Food Packers, Inc. were fortunate in that they did not carry over any canned cranberry sauce from the 1946-47 season and were completely sold out, and as a result all of the MINOT pack being shipped to the trade this year is their fresh pack.

All food surveys definitely indicate that there is a substantial increase in the use of canned cranberry sauce throughout the coun-

try, and this item is rapidly becoming a standard and popular food to use throughout the year.

Urann Re-elected To Farm Credit Administration.

Marcus L. Urann, president of National Cranberry Association, has been re-elected to the Farm Credit Board of Springfield, for a three-year term beginning January 1, it was announced by the president of the Board. Mr. Urann will serve as a director of the Springfield Bank for Co-operatives, the Federal Land Bank, the Federal Intermediate Credit Bank and the Production Credit Corporation, all units of the Farm Credit Administration. Mr. Urann was first elected to the board in 1938 by the Farmers' co-operative in the Northeast Co-operative.

The board directs a Farm Credit business of approximately \$119,-000,000 in the New England States, New York and New Jersey.

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Cranberry Queen

(Continued from Page 4)

had been displayed at the coronation.

The queen's dress was made of emerald green satin, with cap sleeves and crystal-cut buttons and a petite waist, tied with corded green satin. The skirt was the flaring ballerina style seen in all fashion magazines this fall. For over the dress the queen was given a smoky-gray greatcoat with full back and hood, which the latest style requires. To match the coat there was a gray velvetine hat, sporting a cluster of black feathers at one side. Accessories included sheer gray stockings, black doeskin gloves, black suede shoes, and a black calfskin handbag; lingerie was eggshell satin, trimmed with lace.

On the morning of the 19th Stanley Benson took the queen and her mother to the New York train at Providence and then there began a busy round for the winner of Cape Cod's 1947 contest. She was met at New York by Mr. and Mrs. Kornfeld. This included the presentation of a box of fresh cranberries to the deputy mayor of the city; an 8-minute transcription interview at the National Broadcasting Company studio, the interview being broadcast later on the Modern Farm Program. At the Movietown studio she was accepted by Edith Vyvyan Donner for a part in a fashion short, and later went to the Stork Club where she was joined by Roger Murrer, one of the television directors of NBC, to have a part in one of the plays which went on the next night. She met Perry Como, radio singing star, in the Century Room at the Hotel Commodore, and other celebrities.

National Has Aerial Prints of South-eastern Mass.

National Cranberry Association has had 800 square miles of Plymouth and Barnstable counties photographed from the air, with work now completed and sample prints ready to show at Hanson.

Pictures are clear and accurate and may be "blown up" to 200 or even 100 feet to the inch to reveal small details. They give an entirely new conception of Southeastern Massachusetts if assembled, and individually to given areas.

These can be used by cranberry growers in determining exact acreage, buildings, flumes, dikes, water-courses, shape of bogs, etc. They are also permanent records of the bog at the time the picture was taken. The "contact" prints are 8x8 and cover 4 square miles. National is offering these prints to growers and to members of boards of selectmen, assessors, fire wardens and others in Southeastern Massachusetts who might be interested.

Fresh from the Fields

(Continued from Page 5)

another large crop for '48. Some of the growers have been concerned about unseasonably warm weather, fearing over-growth of buds. Others feel it has been a fine fall for cranberry vines and the amount of sunlight was definitely a favorable factor.

Keeping Quality

About keeping quality of the '47 crop, Hammond reports the Searles Jumbos, on the average proved to

be poor, the Natives fair, and the McFarlins in most instances very good, although there were isolated instances of very poor quality; Howes, as usual, seem to be the



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best keepers of the crop. Yield of
Howes per acre was high.

MASSACHUSETTS

Expect Sufficient Winter Flood

November was a seasonal month, with perhaps a little deficiency in sunshine, but considerable more rainfall than in previous months, a total of 3.41 inches. This was sufficient to remove much of the worries of growers concerning winter flooding this month, that is, as applying to bogs which normally have winter flood. There is not now expected to be much, if any abnormal winterkill because of lack of flowage waters. Highest temperature of the month was 62 on the 4th, and the lowest, 15, on the night of November 30.

On Nov. 26 notices were sent out to growers by county agents on a report prepared by Extension Cranberry Specialist Beattie to flood at once all new bogs (in hills) to prevent heaving of plants by frost action; to flood bogs as soon as the surface is frozen to point of difficulty in breaking with heel of shoe,

and that bogs with limited water supply should have flumes closed to conserve all available water. There was the reminder to flood as soon as low temperatures and high, dry winds occur, and growers were urged to watch the weather care-

fully.
Crop Probably Up
Some of the growers were still in a slight quandary as to the total production the 1947 crop had rolled up, but the latest estimates were accepted in view of the fact

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Howes ran practically up to earlier estimates and taking into consideration the floats which had been retrieved.

delaying the start of pruning. By the week of the 17th, however, most growers had started pruning on those varieties that had dropped

their leaves the most. A blueberry pruning demonstration was held at the field of Ethelbert and Ralph Haines on Novem

NEW JERSEY

Temperature

November was colder than normal through the 24th in South Jersey, with an average daily mean temperature of 43.8°, which is 2.6° below normal. The extremes of temperature in this period were a high of 63° on the 4th and a low of 20° on the morning of the 21st.

Precipitation

Heavy rains during the last four days of October and rather frequent heavy rain during November have alleviated the severe drought conditions that prevailed during the early fall. Water for winter flooding now looks like no problem. Rainfall through the 24th was 5.06 inches, which is 1.81 inches more than the average rainfall for the month.

Blueberry Pruning

Blueberry leaves stayed on the bushes unusually late this year,



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ber 24 under the direction of Burlington County Agricultural Agent, D. L. Kensler. In spite of inclement weather about 35 hardy souls turned out to watch Charlie Doehlert show how it should be done on the different varieties most commonly grown in New Jersey today.

On December 4 a pruning meeting for Atlantic County growers will be held at the field of Joe Testa at Hammonton, and on December 9 there will be a demonstration at the field of Oscar Downs at Lakehurst for blueberry growers of Ocean County.

Notes

E. D. Ballard of Weymouth has done extensive sanding at his New Gretna bogs.

Fred Miller of Vincentown, who has been renovating an old bog, was very pleased with the crop this year.

Charlie Doehlert and Bill Tomlinson spent November 20 and 21 at the Eastern Branch Entomological meetings in Philadelphia,

getting a line on the latest developments in the insect control line.

Lester Collins of the Atlantic

Company and president of the Blueberry Cooperative Association, is planning to escape the rigors of the New Jersey winter by spend-

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ing January and February in South America and South Africa. Travel will be made by airplane.

WASHINGTON

At the end of November weather was mild and comfortably warm and growers were starting in to prune. There were one or two nights of frost during the week of the 17th when temperatures during the night were down to 25 degrees.

D. J. Crowley points out that Washington has produced 50 barrels of cranberries for the first time in history, and the growth to this figure has been steady, stepping up a little each year for the past five years. This, he feels, is a healthy way to grow, rather than a big crop and then a drop back the next year, and as this has not been the case he feels the Washington progress is very satisfactory.

Cranguyma produced a little over 700 barrels this year and so was not a big factor in Washington production, but should be by next year as maturity is reached.

Mr. Crowley has hopes of getting a new office and laboratory building at Long Beach, as the station is badly in need of it. He is not sure this will be accomplished during the winter, but hopes it may be.

Notes

Jimmie Olson and Sumner Fish of Bandon, Oregon, visited the station during November.

Dr. and Mrs. J. H. Clarke of Cranguyma plan to leave the early part of December for Washington, and he expects to visit eastern cranberry sections during the Christmas holidays.

D. J. Crowley of the Washington Cranberry Experiment Station was a speaker at a recent meeting of Long Beach Peninsula Cranberry club, which was attended by about 50. He discussed fungi which at-

tack the cranberry and the effect of winter flooding on bogs.

Nolan Servoss, Assistant County Agent for Pacific and Grays Harbor counties, gave a general discussion on weeds. It was announced weed killing demonstrations will be held later.

President Leonard Morris was in charge, and Al Sunburg acted as

secretary.

Records show that October was the wettest month in the history of the North Head Weather bureau, near Ilwaco. Precipitation that month totaled 11 inches. Previous high was 10.93 inches, which record has stood since 1882. There was only one wholly clear day, three partly cloudy, and 27 cloudy.



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G. EVERETT HOWES—He's Rebuilding Old Cape Bogs.

(Story Page 8)

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FIRST CAPE CRANBERRY SCHOOL BRINGS OUT ABOUT 125

Growers and Would-Be Growers Hear Talks on Bog Costs, What to Look for in a Bog Site, and Availability of Cranberry Land.

One hundred and twenty-five attended the first session of the cranberry school of Plymouth County at the Ellis D. Atwood screenhouse on the afternoon of December 16th and were welcomed by the host, Mr. Atwood, and by J. Richard Beattie, Extension Cranberry Specialist, who conducted the session. William G. Tufts of Middleboro High school, who will conduct the actual G. I. school, briefly reported and made a request for any additional entrants.

The speakers were Russell Makepeace, president of the Cape Cod Cranberry Growers Association, who spoke on "What It Takes to Get Started"; Joe L. Kelley, technical specialist of the Experiment Station at East Wareham, on "What Makes Good Bog Property"; and George E. Short, past president of Cape Cod Cranberry Growers' Association and of South Shore Cranberry Club, on "Availability of Bog Land." None of the speakers were dogmatic in their statements, but spoke rather generally, recognizing that there are indefinitely varying circumstances in the cranberry field, but they did try to give potential bog operators some helpful suggestions.

Makepeace

Mr. Makepeace, giving a hypothetical case and using a black-board to visualize his figures, said:

"My subject is 'What it takes to get started on cranberries. I am honored and at the same time hesitant to be acting as your first school master this year—especially upon so controversial a subject—but here are some figures and opinions upon which to base a discussion:

"The matter can be approached in two ways: 1) how much money have you to spend? 2) how much income do you need to support your self after borrowing?

"In other words, 'what can I get for my money and what should I

do if I have little or none?' Now there must be some assumptions before we begin and I mention three: 1) cost of going bog per acre, \$3,000; 2) production per acre, 35 bbls; 3) price per barrel to you, \$20.00; 4) that you already have a place to live. Let us take a bog of five acres."

He then placed the cost of this at \$15,000, which he emphasized includes pump or reservoir, sand, dykes, ditches, and "we hope, some building or other" He continued that the beginner might borrow \$10,000, having capital himself of \$5,000. He said it would be necessary to have invested \$200 in tools, spray or dusting equipment, \$200; truck, \$800; boxes, \$300, these items totaling \$1,500 which with the \$5,000 in capital plus \$1,000 to live on, brought the total to \$7,500.

He said receipts from this bog at 35 bbls. to the acre and sold at \$20 a barrel, would be \$3,500. The cost would be \$2,625, based on \$15 a bbl. to produce, leaving a net income of 175 per acre or a total of \$875.

He explained why he arrived at the figure of \$15 a bbl. for production, which he admitted was a highly controversial factor and one usually well guarded by most growers. He mentioned sanding, \$50 per year; spray and dust, \$100; general \$100; harvest, picking \$70; screening, \$20; general, \$10; real estate taxes, \$30 (these being per acre figures) and interest at 5%, \$100, a total cost for the five acres of \$225.

"But", he said, "as a business man you've charged yourself nothing for your own money and there should be a charge of at least \$195 (\$6,500 at 3%) or \$325 (\$6,500 at 5%) which allows very little to spare, and we've already left out any possible income taxes."

But, he went on, you can probably earn by working for yourself, doing sanding, general work, part of the harvesting, etc., a total of \$975, which, if you pay nothing on the mortgage, means you live on the earned income from your bog of \$875, plus what you pay yourself, or a total of \$1,850.

"What is the catch, where is all this cranberry money we hear about? Well, you can raise more berries than 35 bbls. per acre, or you can raise them for less; less money borrowed or less maintenance, or you can have more acres."

He concluded with: "These figures are general, very general, but my feeling is to advise you to go to work at regular wages. learn the business thoroughly, wait until the right bog or new property comes up, then see what you can do. And don't forget that you can average less than 35 bbls. per acre and don't forget wages and bog values will fall after berry prices decline."

"Joe" Kelley

The first things to consider in selecting a good location for a cranberry bog are good drainage and ample water supply. You will want at least 15 inches of drainage. If it is less than this your vines are not likely to do well and you probably will be troubled with water seeds, such as rushes and cut grass. There are bogs with poor drainage that have been successful with the use of automatic pumps. However, these require a great deal of care and overhead, especially for small bogs. If you are not certain about the drainage I would have levels taken by a surveyor before you start building, as it is sometimes very difficult to judge the drainage. On some bogs it is necessary to go quite a distance before finding a drop in the levels that would give you the necessary drainage, but with the use of power shovels and bulldozers this work is not nearly as difficult or costly as it used to be.

A location with grass growing abundantly, but without many trees or bushes, indicates a possibility of poor drainage.

Water Supply

The most satisfactory water supply is generally from a pond. If you do not have a pond the next best thing is to see if there is a brook or stream running through the swamp which will give you opportunity for making a reservoir.

(Continued on Page 25)

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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FRESH FROM THE FIELDS

By C. J. H.

U. S. CRANBERRY CROP ESTIMATED AS 8 PERCENT LESS THAN IN 1946

Following is the year-end U. S. Department of Agriculture report of the cranberry crop of 1947, as released from New England Crop Reporting Service, Boston, C. D. Stevens, A. C. Hackendorf, statisticians:

For the United States cranberry production in 1947 was 784,700 barrels, 8 per cent less than the large 1946 crop of 857,100 barrels, but 23 per cent above the 10-year average production of 633,830 barrels. For the country as a whole, only three crops of cranberries in more than twenty years have exceeded the 1947 harvest. In addition to the 1946 crop, these include the production of 812,200 barrels in 1942, and 877,300 barrels in 1937. The Massachusetts crop is estimated at 485,000 barrels, 12 per cent below the crop of 553,000 barrels harvested in 1946, but 14 per cent larger than the 10-year average production of 424,900 barrels. Dry weather during late August and September limited growth. The berries showed fair size and moderately good color. Shrinkage in screening was rather heavy and fall frost damage somewhat larger than usual.

In New Jersey the harvest was unusually complete, with "floaters" being practically all harvested. The New Jersey crop amounted to 81,000 barrels, compared with 101,000 in 1946. Wisconsin had a record-large crop of 155,000 barrels, exceeding the previous record in 1946 by 10,000 barrels. Late growth, delayed harvest, and unusually favorable September and October weather added to the crop size. The West Coast States produced large crops this year—Washington, 48,000 barrels compared with 42,000 in 1946, and Oregon, 15,700 barrels compared with 16,100 barrels in 1946.

Fruit produced in the current season totals 4 per cent less than last season's record, but 20 per cent above average. This total includes deciduous fruits harvested in 1947 and citrus from the 1947 bloom, harvest of which is under way and will continue until next fall. Deciduous fruits total 6 per cent less than the 1946 record, but 12 per cent above average. Commercial apples are 6 per cent less than last year, but about average; peaches 4 per cent less than last year's record, but 32 per cent above average; pears set a new record; grapes are only 1 per cent less than last year's record and 20 per cent above average. Plums and prunes are 15 per cent less than last year and 5 per cent less than average; apricots 41 per cent less than last year and 14 per cent less than average. Oranges are forecast at 5 per cent less, grapefruit 5 per cent more, and lemons 2 per cent more than in 1946-47.

CRANBERRIES
Production in Barrels

States	Average 1936-1945	1946*	1946	1947
Massachusetts	424900	478000	553000	485000
New Jersey	83500	49000	101000	81000
Wisconsin	97500	82000	145000	155000
Washington	24180	36400	42000	48000
Oregon	8750	11400	16100	15700
UNITED STATES	638830	656800	857100	784700

* Revised.

MASSACHUSETTS

The month of December brought more snow than the past few years and was about a degree and a half (Boston reading) colder than the normal. Before the end of the month most bogs at least which usually have winter flowage were covered and there was snow covering on others. There was a condition of snow ice on some bogs, which were bringing in reports of oxygen deficiency.

Precipitation for the month was 4.16", and snowfall in two storms had totalled 6 inches. Coldest day of the month was the 30th, with State Bog reading of 9 above, and the maximum was 58 on the 17th.

WISCONSIN

As the year ended latest news from Wisconsin from C. D. Hammond, Jr., general manager of Wisconsin Cranberry Sales Company, was that the crop was definitely 155,000 barrels, with the possibility it might turn out even a little higher. Figuring Midwest Co-operative (NCA) as having 75,000 barrels and the Sales Company also 75,000, and two independents (Habelman, Frederick Barber) having 4,500 and 4,000 respectively, the total appears to be 158,500.

The first cranberry school of the year is to start in Wisconsin Rapids in January, with the date not set as this was written. Vernon Goldsworthy and C. D. Hammond were to be in charge.

NEW JERSEY

Temperature for December through the 24th averaged 35°. This is within a degree of normal.

(Continued on Page 25)

Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE
Extension Cranberry Specialist



Many people not too well acquainted with the cranberry industry apparently believe that cranberry growers in general migrate south along with the birds shortly after harvest or as soon as the first cold snap is experienced. However, contrary to this mistaken notion, cranberry growers are still busy during the winter months, even though the pressure is greatly reduced. This is the time of year when growers take account of stock, analyze the success or failure of their past season, review their spraying and dusting schedules, repair equipment—and, yes, attend cranberry meetings. They have the opportunity at this time of year to review their production problems and make plans for the coming season.

Speaking of production problems, you will be interested in the important deliberations of your cranberry delegates to the Mass. Production & Outlook Conference held at the University of Massachusetts in Amherst, December 2 and 3. Over 200 farmers, representing better than 60 agricultural organizations, were present. Every agricultural commodity of any size in the state was represented, ranging from hogs to tobacco. There were general sessions at which all groups attended to hear the outlook of agriculture in the country as a whole and to discuss their common problems. The various commodity groups met separately and devoted considerable time and thought to their particular production problems. (While this was primarily a Production Conference, marketing problems will be discussed at a special conference in February which will be announced later). The writer would like to express his appreciation for the time and efforts so

generously given by the Massachusetts cranberry growers present at this conference. Their names appear at the conclusion of the following report.

1948 Agricultural Production Outlook Conference

University of Massachusetts
December 2 and 3, 1947

Report of the Cranberry Committee Introduction

The Cranberry Committee takes pleasure in presenting the following cranberry report. This is the first Production Conference at which the cranberry industry in Massachusetts has been represented. In order to better understand the position of the cranberry industry in State's Agricultural picture, the committee brings to the attention of the conference the following facts.

Cranberries is the largest export crop in the Commonwealth. The gross receipts for the crop in 1946, recognized as a bumper year, realized \$16,000,000. According to the cranberry survey completed this year, we have approximately 15,000 acres of cranberry bogs in the state and raise approximately three-quarters of the world's crop on these acres.

It is the feeling of the committee that the prices received for our crop are in line with the trends of the time when judged from the heavy cost of production. It should be recognized that cranberries are grown in other areas of the United States and that similar trends in increased acreage is anticipated in those areas. It is further recognized that the total increased acreage for the country as a whole will affect the marketing problems. It is the opinion of the committee that this problem will be less acute because of a splendid cooperation between all

cranberry-growing areas in the country.

As to the next ten-year period, it is the feeling of the committee that with the substantial increase in new bog acreage, together with increased yields per acre which will result from the experimental and educational work of the Cranberry Experiment Station and the Extension Service, marketing problems in the near future may become more acute.

Future Prospects

We would like to call to the attention of the conference that the 15,000 acres of bog in the state represent a 9% increase over the 1934 survey of the industry. It is interesting to note that from 1943 to 1947 only 519 acres of new or rebuilt bogs were constructed. According to the recent cranberry survey, 1800 acres of new bogs are anticipated within the next three years. This new acreage represents a further increase of 12% in the acreage within the state.

With the new developments in the industry, such as the dusting and spraying by straight-winged planes and helicopters, plus the extensive use of heavy equipment such as bulldozers, drag-lines and power shovels, plus the results of research and educational programs, yields per acre will show a material increase within the next few years. At this point, the committee would like to express their appreciation for the outstanding work accomplished by the Cranberry Experiment Station under the able direction of Dr. H. J. Franklin and the Extension Service for their valuable contributions to the industry.

The acreage which is being developed by new growers currently at high cost will be at a serious handicap in the highly competitive period ahead. It is recognized by experienced cranberry growers that the cost for new bog construction under present conditions ranges from \$3,000 to \$4,000 per acre, and that it requires four years before a profitable crop can be realized. There is also an additional cost of \$500 to \$1000 per acre for maintenance purposes to the time of the first harvest.

The committee recommends that new growers within the industry

consider these costs carefully before new construction is undertaken.

Problems and Recommendations Insects

Root Grub. Forty-two per cent of our present acreage in Massachusetts is infested, ranging from a light to a heavy infestation. This condition has resulted from shortage of materials and equipment to combat this pest.

The committee recommends that the **Root Grub Campaign** already under way be continued and that the Extension Service continue to acquaint growers with proper control measures as a result of Experiment Station recommendations.

False Blossom. It is recognized that this disease is on the increase within the state. This has resulted from the fact that materials to combat the leafhopper which transmits the disease to the plants have been very tight during the war years.

It is recommended that the Extension Service emphasize the need of adequate control measures in their educational meetings this year.

Gypsy Moth. This particular insect has long been a problem to cranberry growers. We now have an insecticide which is very effective in controlling this pest. At the present time, the insect population is reduced in numbers so that an active campaign to eradicate this pest should be undertaken.

The committee recommends that the Cape Cod Cranberry Growers' Association work closely with the Greenfield Station and the Massachusetts Department of Conservation in developing a program to eradicate this pest. It is understood that legislative measures may be necessary.

Other Major Insect Pests. Girdlers, fireworms, and fruitworms are causing extensive damage annually to our crop. It is recommended that the educational program should be carried out by the Extension Service to acquaint growers with proper control measures.

Weeds. It is recognized that weeds are a major problem within the industry and that more educa-

tional information is necessary to acquaint growers with proper control measures. Dr. Chester Cross of the Cranberry Experiment Station has developed practical control measures, and it is recommended that the Extension Service urge growers to carefully follow these instructions.

Diseases. The problem of fruit rots and diseases that affect the vines should be further studied. Dr. H. F. Bergman of the U. S. Department of Agriculture is a leader in this field, and the committee recommends that his work be continued at the Cranberry Experiment Station.

Proper Use of Fertilizers. We have lacked information on the proper use of fertilizers for many years. The matter of timing and amounts to use are now being worked out by Dr. Frederick Chandler of the Cranberry Experiment Station. The committee recommends that this work be continued.

Quality Berries. There has been the tendency to secure as high yields as possible under the favorable marketing conditions during the past few years at the expense of quality. The value of quality fruit is recognized, and it is the recommendation of the committee that an educational program be conducted to impress growers with the importance of raising quality fruit. The Extension Service is the logical agency to carry on this work.

Better Utilization of Key Workers on a Year-round Basis. The very nature of cranberry growing is seasonal. Many growers realize that it would be to their advantage to maintain certain key workers on a twelve months' basis. The large percentage of the timberlands in the cranberry area are owned by cranberry growers. The committee recommends that further study be given this problem and suggests that there might be the possibility of developing a forest-products or a wood-preserving enterprise which would utilize a portion of this seasonal help during the winter months. It is believed that the Extension Service, through the Extension Cranberry Specialist

and the Extension Forester, could give this further study.

Respectfully submitted,

J. Richard Beattie, Secretary.

Acting Chairman: Howard Hiller, Trustee Plymouth County Extension Service; Technical Adviser: C. D. Stevens, Statistician; Stanley Benson, Secretary-Treasurer South Shore Cranberry Club; Orrin Colley, President South Shore Cranberry Club; Edward Bartholomew, 2d Vice President Cape Cod Cranberry Growers' Association; Joseph Kelley, Cranberry Experiment Station; George Short, Past President of Cranberry Club & Association.

The following growers were invited to attend, but were unable to be present at this conference.

Russell Makepeace, Pres. Cape Cod Cranberry Growers' Assoc.; Ellis Atwood, Trustee Plymouth County Extension Service; Gilbert Beaton, Sec.-Treas. Southeastern Cranberry Club; Frederick A. Eldridge, Jr., Pres. Lower Cape Cranberry Club; Nahum Morse, Pres. Southeastern Cranberry Club; John Shields, Pres. Upper Cape Cranberry Club; Ferris Waite, Cranberry Trading Post.

BULLETIN

Special warning was sent out in early January by Cranberry Specialist Beattie to Massachusetts growers to be on guard against oxygen deficiency in the bogs. According to Dr. Bergman, winter conditions which had prevailed in late December and at the start of January had been such that the oxygen content under winter flood on many bogs had become dangerously low. Growers were urged to check the content carefully to learn whether or not their property was reaching the danger point, which is 4cc per liter.

If the content was low growers were urged it was well to consider drawing off the water immediately, if there were facilities for reflow.

Dr. F. B. Chandler of the Experiment Station has stated that the snow-ice and cloudy skies were rapidly reducing the oxygen content on many bogs. He said some had gone below the three, two and even one point of content. The sun meter at the station showed the amount of sunshine at that time was only about one-quarter of normal for that time of year, and in fact the readings were scarcely more than for night.

Younger Cape Cod Grower Is Sure Of Future In Bringing Back Old Bogs

He is G. Everett Howes, Descendant of Henry Hall, Who Pioneered Cultivation—Feels Cape Prospects Still Bright if Owners Will Only Put Time and Money in the Properties—Has Just Been Made Chairman of Soil Conservation District in Barnstable County.

By CLARENCE J. HALL

G. Everett Howes of Dennis, younger generation grower, is buying and rebuilding old Cape Cod bogs. It is his ambition and intent to continue along this path. He wants to be a "Cape Cod cranberry grower", eventually owning as much acreage as he can get, or as seems practical. As a matter of actual fact, if he or anybody else expect to increase their Barnstable County acreage this will almost necessarily have to be done with "old" bog. It has now come about, as is rather well known, that virgin cranberry land on Cape Cod itself practically just isn't.

No one could have come more logically to the desire to be a Cape Cod cranberry grower than Howes. His surname is one of the very oldest on Cape Cod. His forbears on both sides have been cranberry growers. Henry Hall, who is generally recognized as pioneering the cranberry industry at Dennis, is a fourth great-grandfather of Everett on the maternal side. One of the Howes bogs adjoins, the now run-down bog which Henry Hall built as the original cranberry property, somewhere around 1816 or before.

Everett is the son of I. Grafton Howes, widely-known and respected Dennis grower and a former member of the Massachusetts House of Representatives. Born in 1912, Everett spent two years at the University of Maine, and then was graduated from Wentworth Institute, Boston, having taken up architectural construction. He spent a couple of years in Boston, decided he didn't like office work, the call of the Cape was strong, and he came back and went into the cranberry business in 1937. His first properties were the "Gould bog" in Orleans and the Wixon bog in West Dennis, which he has since disposed of.

Recently the Howes' cranberry interests, father's and son's, some 30-35 acres of small bogs, scattered in Dennis, Harwich and Yarmouth, have been consolidated. This ownership is, of course, not large acreage as many acreageships go, but Howes says, and not in boasting fashion, that he is in the market for more Cape bog whenever he can get hold of the kind of Cape Cod bog he wants.

He is not at all discouraged with the prospects of cranberry growing on the Cape, as his activities and ambition prove. This is in spite of some decline in Cape acreage and

in crops which have definitely not been on the up and up for the past few years.

"Good Opportunity" on the Cape

Quite on the contrary, he says: "There is just as much good bog and opportunity on Cape Cod as anywhere else. But you can't constantly keep taking money out of a bog and not ploughing some of it back. That's really what too many have done on the Cape—year after year. Such bogs as these are run down and declining in production. How can they be anything else?" He is willing to admit the Cape may have a minor drawback in the fact that frequent fogs cut down the total number of sunshine hours. But he is convinced a main reason for the Cape's decline is probably in the ownership of too many of such Cape bogs.

A matter upon which young Howes feels rather strongly is that there is altogether too much Cape acreage with which the owners will do little to keep in normally good bearing condition, let alone improve. "It's a downright shame for so many Cape bogs to be let run down as they now are and nothing done for betterment." He is well aware of an ascribed tendency that about all some owners seem to care

for their bogs is to pick off what berries happen to reach maturity each fall, and otherwise to give scarcely a thought to the properties.

In the very nature of events, he says, the crops keep getting less and less and the bog gets more and more run down until finally it is so far gone as to be completely worthless as a productive piece of property. Cape Cod cranberry growing is the oldest cranberry growing in the world, and some bogs have been "handed down" through several generations until they are now owned by individuals who are really not cranberry growers at heart. "This lack of interest in their bogs on the part of too many has been a too important factor in the Cape's going down in cranberry growing", Howes believes.

Howes' Properties "Old", but Production Increasing

None of the Howes properties are less than 50 years old and they run up towards 70 or more. But Everett has very positive plans to keep them at least as productive as they are now, and to steadily improve the cropping. Asked if he has been able to make any progress in renovation and production, he says, "Absolutely, yes." His production shows an upward trend.

This being 1948, with the value of modern equipment well recognized in cranberry work, and Everett being a modernly-trained and progressive young man, he makes intensive use of modern machinery and modern methods in the renovation of the family bogs. He does this as a matter of course. He himself owns one bulldozer tractor, a Caterpillar D2, a Gravely garden tractor, a Jari power scythe, and has the use of a Cletrac Model HG. This tractor is very light weight and able to travel and work on very, very soft bottom. He not only does his own bog building but hires out his services to others. It is all in keeping with his ambition to bring back these old Cape Cod bogs. Some of his bogs he scalps. On others he believes that scalping is not the proper method.

When he replants he puts in Early Blacks, which now seems to be a well-established modern-day practice in Massachusetts.

Is Sold on Sprinklers

He is absolutely "sold" on the idea of sprinklers for the dry bogs of the Cape, of which there are so many. "Sprinklers can do much to bring back these old, dry bogs", he declares. He has none of his own at the moment, but has plans for putting in sprinkler systems on the two of the Howes acreages which are now dry bogs. Sprinklers, he is certain, will become very useful on dry bogs of the Cape for irrigation during the heat of the summer and equally valuable for frost protection, particularly spring frosts.

He is considering driving wells to obtain water at one bog, and for another plan he is contemplating tapping the Dennis water system, although he will need a booster pump to obtain sufficient pressure for the sprinklers.

Conservation Chairman

Howes has just been appointed chairman of the newly-formed Soil Conservation District Committee of Barnstable County, with Joseph Putnam of Orleans (retired county agent and blueberry grower) as its vice president, and "Bert" Tomlinson, county agent, secretary.

When this system was set up at a recent meeting, Mr. Tomlinson explained it was the opinion of most of the people interested in the project that the Service had perhaps a better chance in Barnstable County for providing a needed service in connection with conservation practices on cranberry bogs than with upland farms because there is very little hillside farming which requires attention. On the other hand there are many locations where better water control is desirable. The words "water control" were used advisedly, because this includes both drainage and irrigation. Many of the Cape bogs are improperly drained, and Tomlinson is certain this is one of the major causes in building up a weed control program in Barnstable County. This Service, with Howes as chairman, should be of especial value to the cranberry growers of Cape Cod.

One of the first group problems presented to the Soil Conservation District was that of providing proper drainage of bogs in the so-

called Mill pond area located in the town of Yarmouth. This pond, incidentally, has also been known as Gun Rock pond and the Weirs to older growers. The project comprises a drainage area of approximately 200 acres and effects half a dozen or more cranberry owners. The engineering survey has been completed and preliminary plans call for joint voluntary action by the land owners. When this joint action is assured, the engineering survey will be completed, giving details of the improvements to be installed in connection with the Soil Conservation Service. Mr. Tomlinson is hoping the necessary cooperation can be obtained so that there can be a practical demonstration as to what benefits may be derived when technical skills and factual information are joined.

Another type of service available on an individual basis by the Service of which Howes is chairman, involves surveying bog property to determine proper grade levels to provide adequate drainage. This type of work is to be handled through a simple signed agreement between the District and the cranberry grower.

The Mill pond in Yarmouth, Howes says, has come in recent years to contain salt water rather than fresh, although Everett's father can remember when horses drank fresh water from an outlet stream.

Both Howes and his father own pieces of bog adjacent, one being of three acres and the other of four, these being a part of about 60 acres of bog which surround the pond, and which Howes explains should be able to use water from this source if it was fresh as it formerly was. Howes believes that silt gathering in the Bass River, to which the outlets run, has blocked and backed up the streams and that the hurricanes of 1938 and 1944 have contributed to make this body of water no longer suitable for cranberry purposes.

Mill Pond is a body of water of 15 or 20 acres, but about 25 feet deep, fed by springs in the bottom of the pond itself and adjoining. Some of the very earliest bogs on the Cape were built about its shores. As part of the conserva-

tion program Howes believes that if this particular pond, with its never-failing water supply, can be freshened, and with water table lowered, it could be made a factor which would help to bring up production in this particular area. This would apply not only to the present bogs along its margins but to others which have now gone completely out of bearing. These currently worthless properties could be revived.

Old Bogs Must Be Renewed

This emphasis of Howes upon restoring old bogs could very possibly be misconstrued by growers of Plymouth County, Wisconsin, or other areas where there is considerable virgin cranberry land available. But it might bear repeating that the true situation on Cape Cod, the birthplace of cranberry growing, is there is almost no new land on which to build cranberry bog. Therefore any improvement in the Cape's cranberry status must come chiefly from improvement of the present acreage. This has to be through better soil conservation practices, the rebuilding of worn-out bogs, the use of sprinkler systems—in short, the willingness to put work, money and care into these old bogs that they may bear well again.

Cranberry growing when the maritime activities of Cape Cod went to pot with the coming of steam ships and the dull years after the Civil War was the salvation of the industrial Cape. Cranberries and Cape Cod have ever since been all but synonymous. If the Cape is to continue its place in the cranberry sun, the ambition, energy and willingness to restore the "old" bogs of Cape Cod, as Howes and some others are striving to be, will be a major factor.

Howes is recognized as one of the more forceful and serious of the younger growers. During the war years of 1943-45 he was president of the Lower Cape Cranberry Club. He recalls the difficulties of trying to conduct meetings under the conditions of gas rationing and particularly of arranging of food for the suppers which were served to the members. He has continued to remain active in Cape cranberry affairs.

THE INDUSTRY PROGRESSES

THE year just ended has undoubtedly seen the cranberry industry farther along the road in utilization of modern methods and equipment than ever before. For one thing aircraft has definitely become a factor in cranberry growing. Who would have accepted that as a fact a decade ago?

The helicopter made its bow this past summer in Massachusetts cranberry work. The using of helicopters was probably the greatest advance of the year. These machines created tremendous interest among the growers. They did a good job in insect control, even though their use in cranberry work has not yet been completely perfected. The small fixed-wing plane has become an adjunct in insect control, also.

To get down out of the air and to earth—the Western Picker was tested on Eastern bogs for the first time. Success achieved was not 100 per cent, but progress is being made toward a cranberry picker. There seems little doubt that **eventually** the crop will be mechanically harvested.

Then there were the developments in the business of gathering floaters. In addition to the Sempos boat put into operation for the first time the year before, there were the two airplane motored and propelled boats placed in use by George R. Briggs and United Cape Cod Cranberry Company. The recovery of otherwise wasted bottom berries has currently become a facet of cranberry harvesting. There was progress in water control—in prefabricated flumes and modern engineering. Sprinkler systems have a part in the plans of the cranberry grower. The use of modern mechanical equipment continues to increase. New insecticides, such as DDT, are in the picture.

Cranberry growing has become more complicated than it was in the days of the pioneers or even than it was just a few years ago. It has at the same time, we believe, become more efficient.

All this seems bound to add up to bigger crops in the immediate future. The industry, in order to continue to prosper, will have to sell more cranberries.

RIVALRY MAY BE GOOD

ANOTHER year has gone by with two major cooperatives serving the growers—and competing for their berries. Is

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the situation healthy, or isn't it? Possibly it is. We apparently have an expanding industry. Rivalry, if conducted in the right spirit, can be a spur to best effort. Growers are getting service from their respective co-ops and also from independent outlets as never before. Both the co-ops are disposing of fresh and processed fruit. The fresh fruit staged a "comeback" this past season. But with one co-op primarily a fresh fruit organization, or at least in the past, and the other processed, at least in the past, we feel we have detected an inclination to depreciate the fresh market on one side and the processed on the other. This shouldn't be. As has been so often said, the industry needs **both** methods of marketing.

Pictorial Section



(Coos Bay Times, Oregon, Photo)

The photo above (delayed too late for last month's issue) shows the coronation of Oregon's first cranberry queen, Miss Ruth Kreutzer of Langlois. The colorful ceremony touched off the perpetuation of an annual event in the productive

growing area by the arm of the sea in Southeastern Oregon.

The queen was crowned by Mayor Rudy Backlund of Bandon, shown at left, and looking over the proceedings is the master of ceremonies, "Art" Dabney.

SANTA CLAUS DIDN'T FORGET THE CRANBERRY INDUSTRY



Ellis D. Atwood waves a greeting from the end of the Santa Claus train.

(CRANBERRIES Photo)

25,000 Ride at Edaville Over Yuletide

The first of the old-style pre-war Christmas-New Year's displays by Mr. and Mrs. Ellis D. Atwood was held at the South Carver (Mass.) bog, this observance being built around the Edaville R. R. Starting Sunday, December 14th, the Christmas train made daily trips in the late afternoon and early evening until after New Year.

Some 25,000 traveled over the 5.42 miles of narrow-gauge track in long trains which wound along the snowy bogs and through the snow-covered trees. A fulling moon added to the beauty of the ride, and as the roof of each car

was covered with Christmas and flood lights, the train made a brilliant spectacle. Along the way were huge, lighted Christmas trees and displays of reindeer cutouts, a hobo sitting on a stump, another on a flat car on a spur siding. These were picked out by the floodlights.

More than 6,000 lights in all were used around the screenhouse, station, and other buildings. Approach to this fairyland was through a huge "Merry Christmas" arch. The warm station, brightly-lighted, with its lunch bar, was the center of interest.

Host Atwood, with Mrs. Atwood, were on hand to welcome visitors, Mr. Atwood making one appearance dressed as Santa. Christmas music from loud speakers was heard continuously. At midnight on New Year's eve the train made a special trip.

'Copter Carries Santa to Three Mass. Towns

Santa Claus arrived by helicopter at three towns in Massachusetts this year through the courtesy of National Cranberry Association. One was the annual Christmas party given by M. L. Urann for all children in the first and second grades and under in Hanson, Halifax and Pembroke, at the NCA Hanson plant.

Chief Pilot Fred W. Soule circled the ship over the plant and made a slow landing, and as he did this the children could see Santa in his bright red suit, sitting in the open cockpit. Some 500 children enjoyed this party, which began with music by the Hanson Boy



(N. C. A. Photo)

Pilot "Slim" Soule
and Santa (Sherman
L. Whipple 3rd.) Arrive
at Ocean Spray, Hanson

Scout Band, and there were several short movies. Gifts were distributed and refreshments served.

Mr. Urann greeted the children as they arrived, and helped Santa distribute the gifts. Employees of the Association served as hostesses.

The other two parties to which "Slim" Soule piloted Santa were at Falmouth and at Taunton.



(CRANBERRIES Photo)

Ellis D. Atwood as Santa Claus invites a rather awe-stricken, but eager little passenger to a ride on the Christmas Train.

Helicopter Delivers Magazine



The Ocean Spray helicopter was used to deliver copies of the Saturday Evening Post containing a feature on the Massachusetts Cranberry industry, to Alton H. Worrail, chairman of the Board of Selectmen. At the left, Sharon Casey, 1947 Cranberry Queen, is seen arriving in Wareham with Pilot Fred Soule, to make the presentation to Mr. Worrail, which is shown at the right. (CRANBERRIES Photo)

Cape Cod cranberry queen, Sharon Casey, made three flights in the "Ocean Sprayer" helicopter, delivering autographed copies of a cranberry picture story in the Saturday Evening Post to town and city officials December 30 and 31. To the officials she also presented Christmas gifts of Ocean Spray cranberry products.

The first flight, on the morning of the 30th, was from the Ocean Spray plant at Onset to Wareham, where she presented the autographed magazine to the chairman of Selectmen, Alton H. Worrail. The landing was made at a small park just below the Narrows bridge. A considerable crowd had gathered to witness the event. It was a bitterly cold day, and this was the first time Miss Casey, who is 17 and a senior at Wareham High school, had been in a 'copter. She enjoyed the flight, but was forced to admit it was a rather

frigid experience, sitting in the open cockpit of the machine, which was piloted by "Slim" Soule, chief pilot for NCA.

Later in the day she was flown to New Bedford, where she was landed at Marine Park and met by Mayor Harriman, who received the autographed copy and the gifts. M. L. Urann and Miss Stillman of NCA were present at the ceremony and Mayor Harriman presented the symbolic key to the city to Mr. Urann.

The following day the queen was flown to Boston, landing at the Logan International Airport, where she made the presentation of the Post and a scoopful of cranberry products to the lieutenant governor of the state.

The Post edition, dated January 3, had a two-page spread entitled "Cranberry Harvest", with full color photographs by Art Griffin.

Jean Nash Heads Wisconsin Cran- berry Sales Co.

She Is First Woman to Lead
A Co-operative in the In-
dustry

Wisconsin Rapids, Wis.—Miss Jean Nash of Wisconsin Rapids, the daughter of the late Mr. and Mrs. Guy Nash, who operates the Biron Cranberry Company, established by her father, has been elected president of Wisconsin Cranberry Sales Company. She is the first woman ever to hold this office, and is the first of her sex to head a cranberry cooperative in the country. She succeeds William F. Huffman, who has been nominated for a one-year term on the board of directors of the American Cranberry Exchange.

Last year Miss Nash was elected a director of Wisconsin Cranberry Sales Company, which was also a first.

Other officers chosen at the meeting of the Elks club were: vice president, Vernon Goldsworthy; C. D. Hammond, Jr., secretary and treasurer.

The officers were elected by the Board of Directors after the following had been named to that board by the company members: Dan Resin, Warrens; Keith Bennett, Mather; Tony Jonjak, Hayward; Newell Jaspersen, Cranmoor; Rich-

ard S. Brazeau, Wisconsin Rapids, Miss Nash and Goldsworthy.

Those nominated for one-year terms on the Exchange directorship besides Mr. Huffman were: Harold DeLong and Craige Scott, both of Mather, and Bernard C. Brazeau.

By a unanimous vote, Guy O. Babcock of Wisconsin Rapids was elected to the position of director emeritus with life-time tenure. The tenure of the members creating this position was for his faithful service during many years as a director and former treasurer of the co-operative. The resolution raising Mr. Babcock to this honorary position highly praised his work and interest for so long for the benefit of the Company and of the parent affiliate, ACE.

A notable change this year was in making all the terms for directors one year, rather than for three, two and one year terms, as has been the custom for many years. This re-established the original practice of single year terms.

Heard at the meeting was C. M. Chaney, general manager of ACE, and executive vice president. He said all berries of Wisconsin handled through ACE had been disposed of at satisfactory prices and there was a continuing demand which could not be met. The season of '47, he continued, had differed considerably from other years because of the uncertainty of marketing conditions in the

early weeks of the selling season. This had been due in large part he declared, to the unseasonably warm weather which prevailed into early November. However, he said that when the selling season got under way with the change in the weather to normal cold, the Wisconsin crop was disposed of in a shorter time than ever before.

Lester Haines, assistant sales manager of ACE, reported briefly on the season's activities, and the Sales Company's annual reports of operations were given by Huffman and Hammond.

With business disposed of, at 6.30 a turkey supper was served at the Golden Gate, and despite inclement weather this was one of the largest assemblies in the history of the Co-op. Door prizes and gifts of Stokely Foods, Inc., were awarded. B. C. Brazeau was toast master. Guests introduced included Jack O'Brien and William Staire, representing Stokely; E. L. Chambers, Madison, state entomologist; L. F. Garrett of Garrett Holmes & Company, Kansas City one of the largest distributors of Eatmor cranberries throughout the Southwest. Garrett spoke briefly upon the fine relationship between his company and ACE.

A testimonial gift was presented to Past President Huffman by Miss Nash in appreciation by the members in the energy and active interest he had devoted to the co-op's affairs during the year and

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alf he served as its active head. A floor show followed and general dancing.

Leo Sorenson, manager of Midwest Cranberry Co-op, spoke of types of fertilizer being used on the cranberry marshes and methods of obtaining more effective results.

C. D. Hammond, Jr., manager of Wisconsin Cranberry Sales, discussed the need for better dissemination of weather information to cranberry growers.

Midwest Co-op Holds Annual Fall Meeting

Members Hear Reports...To Have New Headquarters in February

(Special to CRANBERRIES)

Wisconsin Rapids, Wis.—The Midwest Cranberry Association held its fall meeting at the Elks Club here Wednesday afternoon, Dec. 10, with approximately 75 members and guests in attendance. Principal speaker was Marcus Urann, Hanson, Mass., president of the National Cranberry Association. Also representing the national organization on the program were Miss Ellen Stillman, director of advertising, Gordon Mann, eastern sales representative, and M. S. Anderson, western sales representative.

Urann declared the 1947 national crop of cranberries to be 700,000 barrels, or about 56,000 barrels less than the United States Department of Agriculture estimates, the speaker explaining the difference as being caused by shrinkage in the warehouses of growers.

Predicts Expansion

Of the 700,000 barrels, Urann said the National Cranberry Association received 380,000 barrels, representing 54% of the national crop—an increase of 26% over 1946. He predicted that it would be "only a few years" before the National Cranberry Association will handle 75% of the total crop, which will give the growers complete control over the sales of the nation's crop."

Plans are being made by the National company to sell one-half of its berries fresh and one-half canned in 1948. Urann reported, adding that half of the fresh berries are to be shipped in cellophane bags. Plans are now under way to install two packaging machines in the new building to be erected on property of the Midwest Co-operative on Twelfth Avenue.

Reports on Advertising

Miss Stillman told the members of the advertising campaign carried on by the National Association, reporting that \$200,000 has been invested in magazine and newspaper advertising. She said a plan for promoting the sale of cranberries at meat counters in conjunction with the sale of fowl has met with considerable success.

Reporting on sales, Mann and Anderson recounted their experiences in selling canned and fresh berries, and said that before the end of the year they expect to dispose of a total of 60,000 barrels of fresh berries.

H. F. Bain, Wisconsin Rapids Cranberry Specialist, gave a very detailed and interesting report on shrinkage tests he conducted this fall. He expects to continue this work again next year.

Leo Sorensen, manager of the Midwest Association, reported that the members delivered to the N. C. A. 75,000 bbls. of an estimated 150,000 barrel Wisconsin crop. He further reported that the new Midwest office under construction here would be ready for occupancy by February. A 50 per cent increase in membership during the past year, with 45 growers now members of the association, and a 25 per cent increase over last year's Midwest crop were also cited by the manager.

A report was presented at the afternoon business meeting by Edward Bieleniski of the University of Wisconsin apiary department, concerning a proposed plan for a cranberry-beekeeping project.

Approximately 130 members and guests gathered at the Elks club for a dinner in the evening, at which Urann again was the principal speaker, the after-dinner program being followed by a social hour.

75 in Attendance At Annual Meeting of Wisc. Growers

Wisconsin Rapids, Wisconsin—At the annual meeting of Wisconsin Cranberry Growers' Association a group of nearly 75 heard five speakers discuss various problems facing the industry of Wisconsin and the means that are being utilized to solve these problems. They elected G. A. Getzin to succeed Henry F. Duckart as president; Robert Gottschalk, vice president; and L. A. Sorenson, secretary-treasurer. The new office holders are all of Wisconsin Rapids.

Prof. H. R. Roberts of the University of Wisconsin, College of Agriculture, explained some lately-developed methods of weed control. These were the results obtained during the past growing season and he told of even more complete control in the future.

Of particular interest was a warning by State Entomologist E. L. Chambers that another hot, dry summer will bring a serious threat from grass-hoppers. He pointed out this menace has been building up for the past two or three summers and that growers must expect trouble next summer if present weather forecasts hold true. He traced the development of insecticides from Paris Green to DDT and described the efforts by the state and federal governments to control crop damage caused by insects.

Henry F. Bain discussed research and experiments he is conducting for the three Wisconsin growers whom he represents, in an effort to control and eliminate certain diseases affecting cranberry vines.

Keith Work Resigns As Assistant to NCA Pres. Urann

H. Keith Work, who for nearly two years has held the post of assistant to M. L. Urann, president of National Cranberry Association, has resigned to return to his native California. No plans for his successor have been announced.

American Cranberry Growers' Assn. to Meet January 31

Executive Committee of New Jersey Group Lays Emphasis on Plan to Encourage Expansion of Government Cranberry Research.

The A. C. G. A. Executive Committee met at the Cranberry and Blueberry Laboratory on December 15 to draw up plans for the Annual Meeting on January 31, 1948, and to act on any other necessary business. As is the custom, the Annual Meeting will be held in Camden at the Walt Whitman Hotel, starting at 10.30 a. m.

The Executive Committee laid emphasis on the movement just started by the Long Beach Cranberry Club of Washington to encourage expansion of cranberry research by the United States Department of Agriculture. At present the entire load must be carried by Dr. Bergman and Mr. Wilcox. The Long Beach growers feel that the Department's cranberry breeding project should be continued, rather than dropped for a while.

Speaking for the American Cranberry Growers' Association, the Executive Committee heartily en-

dorses this feeling. A subcommittee to coordinate effort was appointed, consisting of D. M. Crabbe, chairman; Enoch F. Bills, Theodore H. Budd, Sr., F. A. Scammell and James D. Holman. This committee will meet January 3 to make suitable plans. Mr. Budd assured the committee of full support from the American Cranberry Exchange. Mr. Bills stated that the National Cranberry Association will be glad to support such a project.

Blueberry "Open House" Held in New Jersey

More Than 100 Attend Annual Event at Pemberton.

The 16th Annual Blueberry Open House of the N. J. Cranberry and Blueberry Research Laboratory was held on December 20th at Pemberton with Charles A. Doehlert as chairman. Over 100 blueberry growers and other persons interested in blueberry culture attended.

William E. Tomlinson, Jr., of the Cranberry and Blueberry Laboratory opened the meeting with a talk on a proposed spray experiment to control all possible stunt

disease carriers in certain blueberry fields to see if stunt can be controlled in that manner, even though the actual vector is not as yet known.

Philip E. Marucci, also of the Cranberry and Blueberry Laboratory, gave the results of leafhopper trapping in New Jersey, North Carolina, Massachusetts and Michigan during 1947, and the possible bearing of these catches on the spread of stunt in these different areas.

William H. Boyd of the N. J. Department of Agriculture summarized the results of blueberry inspections for certification of freedom from stunt disease in 1945, 1946 and 1947. In 12 fields that have been inspected each of these three years it is gratifying to note that there has been a reduction of stunt in 7 fields in both 1946 and 1947, with only 2 showing an increase in 1947.

Mr. Frank Soraci, also of the N. J. Department of Agriculture, informed the growers of the revisions in the Stunt Inspection requirements for 1948.

Philip E. Marucci brought the growers up to date on past work and results with transmission tests for possible carriers of stunt disease, as well as summarizing this year's tests and methods employed.

Dr. Firman E. Bear of the N. J. Agricultural Experiment Station discussed fertility problems in sandy soils and their relation to blueberry culture in New Jersey.

Dr. J. Harold Clarke of Cranguma Farms, Washington, gave an interesting resume of present blueberry-growing operations on the West Coast from California to British Columbia, with comments on the future possibilities of this area as blueberry producers.

William E. Tomlinson, Jr., gave a summary of 1947 insect pest conditions in New Jersey, along with results at controlling the blueberry fruit fly or maggot with reduced rotenone content dusts.

Charles A. Doehlert closed the meeting with a discussion of the 1948 Extension Program for the blueberry industry.

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Long Beach Club Holds Second Anniversary

Al Sundberg Elected President—Game Warden Gives Talk on Damage Being Done by Deer and Beaver.

Long Beach, Washington—The regular meeting of the Long Beach Peninsula Cranberry Club was held Friday evening, December 12th. This was the second anniversary of the club, only necessary business being transacted.

Election of officers for 1948 was on the schedule and the following officers were unanimously elected: president, Al Sundberg; vice president, Elwell Chabot; secretary, Mrs. W. H. Morton; treasurer, Mrs. Don Tilden. These new officers will take their chairs at the January meeting.

Mrs. Funke, president of the club, announced that the club now had a membership of 37 families. Representatives from about ten families organized the club two years ago.

Mr. Hoggatt, game warden for Pacific County, was present and gave a short talk on damage being done by deer and beaver to the cranberry bogs. He informed the cranberry people that if deer were damaging their berries, they could

get a permit to shoot the deer. He also told the growers that a beaver trapper would be here soon.

After the business meeting a party was held in honor of the club's birthday. About seventy people attended and wore paper

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caps, blue for the boys and pink for the girls. Each person who registered made a guess at the number of berries in a jar placed on the table. Charley Nelson, a past president of the club, won this contest by guessing the exact number of berries. The men had a contest blowing up balloons, and the ladies had one throwing cranberries into jars.

Ice cream, birthday cake and coffee were served after the games. The tables were decorated with Christmas flower arrangements and birthday napkins were at each place. "Happy Birthday" was sung and each of the new officers gave a few remarks.

The committee in charge of the party were Mrs. D. J. Crowley, chairman, Mrs. Warner Smith, Mrs. Bob Ostgard, Mrs. Leonard Morris, Mrs. Guido Funke, Mrs. Ralph Blair and Mrs. B. B. Saunders.

New Office and Lab for Research At Long Beach

Construction to Start Early
In This Year—Cranberry
Breeding Program to Be
Enlarged.

Long Beach, Washington—Back in 1922 research work was started on cranberry problems in Pacific County. The original headquarters was located in a garage at Cranmoor, then owned by Mrs. H. M. Williams. D. J. Crowley, then fresh out of college, and H. F. Bain, also on his first assignment with the United States Department of Agriculture, spent most of the season travelling from one bog to another in an effort to determine what the cranberry problems were.

Experimental work was done on various bogs on the Peninsula. In those days the growers were enthused about experimental work on their bogs, provided it saved them some money and didn't injure the crop. Frequently, however, they found the results of some of the sprays were unsatisfactory and may have done more

harm than good. Experiments frequently work out that way.

It was decided therefore that it would be more satisfactory to have a permanent headquarters and the present site on Pioneer Road was acquired. It was officially designated the Cranberry-Blueberry Laboratory. Most of the small outlying research stations were designated as laboratories and have been so named until the past few weeks.

At a recent meeting in Pullman of the Board of Regents of the

State College of Washington renamed all the branch stations and laboratories. The Station at Long Beach was officially designated as the Cranberry-Blueberry Experiment Station. This name has been used by the growers during most of the time, as it was somewhat easier to say than the other title.

The present plan calls for the construction of an office and laboratory headquarters early in 1948. The program of breeding work with the cranberries and blueberries will also be enlarged.

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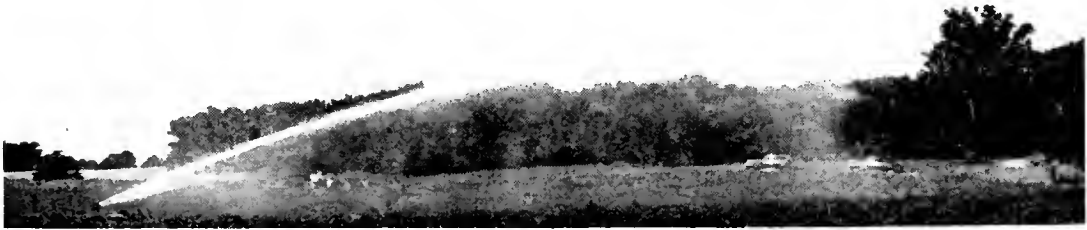
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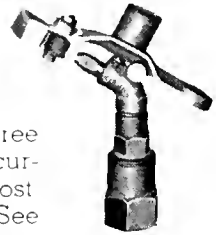
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Flume Project Successful

Applying modern, scientific methods and using prefabricated flumes as planned by a hydraulic engineer, has proven extremely gratifying to George R. Briggs. Last spring Mr. Briggs had Russell A. Trufant of North Carver, hydraulic consultant

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and cranberry grower, lay out a project for the improved water supply of the lower 30 acres of his Indian Brook bogs, Manomet (Plymouth) Massachusetts. Flumes used were of corrugated pipe, bituminous coated and paved, some with sliding gate headers (hand-wheel type, described in CRANBERRIES, March 1947) and others with half-circle flashboard headers—a modification of the Paul L. Whipple flumes described in CRANBERRIES, May 1947. Incidentally, the Briggs project furnished the occasion for the development of the half-circle flumes by Mr. Trufant.

A season of use has demonstrated to Mr. Briggs' satisfaction that the installation of the whole project and the use of these modern flumes was a wise move.

The series of bogs to which the modern engineering methods and the new flumes were applied, was a remote section of his bogs which could not be easily flowed from the former reservoir arrangement. First, Mr. Briggs had a canal dug approximately 6,000 feet long—in-

cluding both forks of a great "Y". This big ditch is 12 feet deep for the first 1,000 feet. The canal leads from a 70-acre pond with ample water. A shovel, a crane, and two bulldozers were used in the making of this major cranberry water-course.

Two prefabricated flumes with sliding gates, the flumes having 36 inch pipes, control the water from its source at the pond. At the "Y" there are two half-circle flumes which can turn the water in either of two directions, as desired. Other similar flumes control the flow from the canal into the various bog sections. These half-circles are 48-inch size, with 36-inch pipes. The canal detours around a low piece of bog in its path, and a 12" over-and-under set of flumes and drains is provided there.

With the new system, the whole 30 acres of bog can be flooded for frost in about three hours. Previously this had been a matter of many hours, and even then the results were often far from satisfactory. Other bog often had to be slighted in order to flow this



NEW YEAR'S
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rea. Now it is almost a question what to do with the water when it gets there, the volume is so great.

One advantage of the arrangement is in the rapidity of frost protection. Actual flooding can be delayed until the last minute, saving the water now used on frosts that merely threaten. If the old-time rule that "three flows equal one frost, three frosts equal one freeze" still holds, this avoidance of unnecessary flooding is important.

Another advantage is that with a more ample supply of water trapped the flood need not be held more than a single night during a prolonged frost period, as protection can be quickly and surely attained a second and a third night if necessary.

A third major advantage is that the winter flood can safely be let off earlier in the spring, with the faster and more adequate water supply. This latter point, Mr. Briggs feels, is of the greatest importance. He expects to increase production on these bogs because of these advantages.

In all, so far, Mr. Briggs has used 9 flumes, 7 of them half-circles, at these Indian Brook bogs. He has 7 more of the modern flumes which take care of 30 acres at the East Head bog in Carver, and he will have one at a bog at South Meadow, Carver, which recently came under his care. He has also had the benefit of Mr. Tru-ant's advice on two other canals, less impressive, but none the less vital to the areas served. He likes the assurance that if a canal is built as specified it will flood a certain acreage in three hours, even after it is half-choked with weeds. While anyone knows water will flow down hill, few know how much will flow down a particular hill in a particular channel, through particular flumes, culverts, etc., in a given length of time.

"These prefabricated flumes are vastly superior to old-style concrete or wooden flumes in ease of installation", Mr. Briggs says. "I have no reason but to believe the maintenance will be inexpensive. In laying out a project, I would strongly suggest consulting a hydraulic engineer, who really knows

how the problems should be handled."

This installation is one more demonstration of the progressiveness of growers—and one more proof there will be larger crops of cranberries to dispose of in the immediate future.

SCOOPS and SCREENINGS

NEWSWEEK, issue December 8th, in an article on Arthur Godfrey, the broadcaster, called him not know just what cranberry-bog tonsils may be, the reference to

them was apparently not unflattering—at least in the instance of Godfrey.

We note from ACE's "Cranberry World" that Vernon Goldsworthy, ACE director, personally presented a box of "Eatmor" to the acting governor of Wisconsin, and also a box to Wisconsin Senator Alexander Wiley. "Goldy" always man-

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ages to get around—particularly in any cranberry industry. Good cranberry publicity! Once he presented a box to then Vice-President Henry A. Wallace.

The Hammonds of Wisconsin, "Del" and "Marge", were expecting to leave during the first half of January for a trip to New York to visit American Cranberry Exchange headquarters, to the cranberry section of New Jersey, and then into southeastern Massachusetts, of which they are natives. Their parents, Mr. and Mrs. C. D. Hammond, Sr., of Onset, Mass.,

were expected to arrive at Wisconsin Rapids over the holidays and would take care of the three small Hammonds.

We welcome the Oregon GIs attending the cranberry school at Bandon, who subscribed to CRANBERRIES as a group. We hope we can make the contents of this publication well worth their investment. We'll certainly try.

December issue of "News for Farmer Cooperatives" carried for its front cover a grocery display featuring fresh Eatmor cranberries, with a lengthy article by Chester M. Chaney, entitled "Sauce for Members as well as the Ganders". The article traced the history of the formation of the State sales companies and of the Exchange to the present. It told of the way the companies serve their memberships and of how the Exchange is working with processors in taking the canning stock off the market.

A Word From U. S. Treasury Concerning Investment

(Editor's Note—The following was especially prepared for CRANBERRIES by the U. S. Treasury Department, Boston office, Alfred C. Sheehy, deputy director.)

When returns from the crop begin to come in, the producer is

frequently concerned with the problem of their best present use. Suggestions present themselves as to increasing acreage and thus adding productivity; about the re-



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acement of worn or out-dated equipment; of renovating present bogs; or even of taking an extended trip to those lands where overcasts and rubbers are forgotten and swimming and golf enjoyed during the winter months.

We cannot quarrel with the idea that any of these courses has merit and is a highly desirable pursuit. However, may we, in all sincerity, make the observation that a pretty good and extremely safe program is to invest a substantial portion of the returns in United States Savings Bonds.

These bonds are safe; they give good yield; they mature in ten or twelve years, according to the series selected by the purchaser. They mature at a time when, we venture to predict, the dollar will be nearer to its actual purchasing value than it is today and when the principal and interest will buy substantially more than it will at today's inflated prices.

Your banker is well posted on this form of investment. Why not talk it over with him?

Fresh from the Fields

(Continued from Page 5)

The lowest temperature, 13 degrees, was recorded on the morning of Dec. 25 and 29 each.

Precipitation was sufficient during most of the month until the great snow of December 26th (although nothing like the severity of New York City and vicinity) deposited a fair amount for the South Jersey cranberry area. The snow fall measured 7.0 inches, unmelted, and when melted was 0.67 inches, which made the total 2.15 inches, which is only a third of an inch below normal for December.

Winter Flooding. Because of the absence of severe weather this month there has been a minimum of winter flooding. Water supplies in general are good, so that those growers who can do so are waiting until flooding is actually needed.

Sanding. The weather has, of course, been very favorable for bog work and for sanding, of which there has been a good deal this fall. New Jersey growers are continuing to develop and increase the efficiency of sanding with plank trackways. Rogers Brick has worked out a good combination, using a tractor loader and three low trailer wagons. One driver does all

the hauling with a Model A Farm-all tractor and six men spreading on the bog keep this equipment moving briskly. When sanding is done the equipment is useful for other farm work.

CRANBERRY SCHOOL

(Continued from Page 4)

In making a reservoir decide what you want for bog and what for reservoir. In the past, mistakes have been made by making

too much bog and not enough reservoir. It costs a lot more to make a bog than a reservoir, and you can always put more into bog after you find that you have ample water supply.

If you use a natural pond of more than 10 acres you will have to get permission from the state to use the water for your bog.

If you have a reservoir, be careful not to flood anyone else's property.

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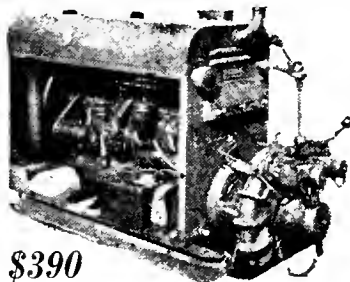
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In buying a swamp for a bog, if possible buy a lot more land around it than you think you will need, for it may be difficult to purchase it after your bog is built.

There are considerable differences in temperature on frosty nights on bogs in different locations. Perhaps it would be well to look into this some, especially if your water supply is limited.

Ground Cover—Soil Tests

I do not think it is necessary in the eastern part of the state to

take soil tests for acidity to determine land that is suitable for growing cranberries.

Generally the best indicator land covered with leather leaf "brown brush", laurel, ced

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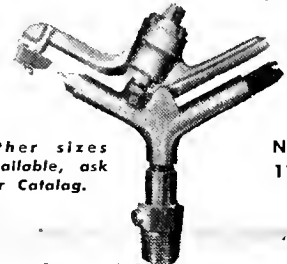
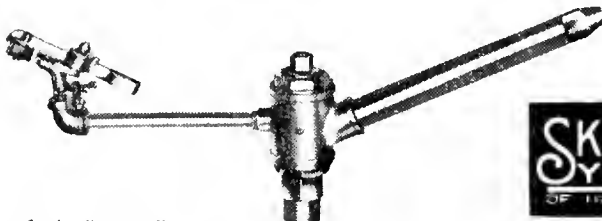
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		100		32.30	155			60	135	115	21.
CP-1 1/4	1 1/4"	85	1/2	64.00	180	9/32"	7/32"	40	130	110	21.5
		100		72.00	190			50	135	115	23.5
		125				70	145	123	28.2

swamp maple, wild cranberries or blueberries.

There should be at least a few inches of peat. Occasionally I find cranberries, especially the Howes variety, doing well on cranberry bogs that have a clay sub-soil instead of peat.

Sand

Sand that is best for sanding and making new bogs should be about the grade used in mixing cement. It used to be important that this supply was around the edge of the bog, but now with power shovels and trucks to haul it, it can be hauled from considerable distance and taken to the location of the bog where it is to be used. If the distance is not too great, many claim they can have it carted as cheaply as they can have it taken from the sand banks around the bog.

Size of Bog

Everything else being equal, small bogs pay better dividends than large ones. They are cheaper to harvest and easier to spray, dust and sand. They are also easier to protect from frost.

There is in the process of being built, and going to be built in the next three years, approximately 1800 acres of new bog in Massachusetts, and a considerable acre-

age in other states. At the present time labor and equipment are high and difficult to get, and it is necessary to wait four years for returns on your money invested.

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Sliding Gate Reservoir Flumes—the kind that let you sleep on frosty nights.

Dog-leg Reservoir Flumes—for Oxygen Enrichment.

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With this large acreage going in, and not knowing what the price of cranberries will be in four or five years from now, I would not consider at the present time putting in new bog except in the most favorable locations.

In looking for a location for a bog, first plan on how much money you want to spend. There generally seem to be more large swamps for sale than small ones and it is often difficult to put in a small acreage in a large swamp, for it usually requires a lot of dikes, and sometimes dikes cost more to build than cranberry bog.

I do not recommend building bogs from swamps where there is no water supply as it costs about the same to build, and the valuation is only about one-half as much as a bog with a good water supply.

There are a few locations with a limited water supply that are doing well with an overhead sprinkling system, but I think the price of an overhead system, at the present time, is around \$500 an acre completed. If you are thinking of using an overhead system, make sure you have a good water supply before you attempt it.

Many interested in building bogs of their own plan to do most of their own work in their spare time, but as it costs \$3000 to \$3500 an acre to make a bog, that means at least 3000 hours an acre and one person would not accomplish much under these conditions. I think if he went to work in a two or three acre swamp the first part of it would be pretty well grown up before he reached the last of it.

Short

Mr. Short spoke briefly and very much in general, saying the Massachusetts cranberry area is reached in less than an hour's ride from Boston to the southeast and in a little more than an hour's ride north and west from Boston, although, of course, the very great

bulk was in the former area. He referred to the availability of land in Rhode Island and Connecticut, where there is some development of old bogs.

In reply to a question he said he did not believe bogs far away from the cranberry center in Plymouth and Barnstable counties were necessarily less desirable because of the distance. He based

this upon the more modern methods of bog building and maintenance with the equipment of today. Distance from the recognized center he did not consider as of importance.

Beattie announced that the next session of the school would be January 6 and would continue twice a month, on the first and third Tuesdays.

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February, 1948

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Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE
Extension Cranberry Specialist



The matter of oxygen deficiency in the winter flooding is creating considerable interest and discussion among cranberry growers in Massachusetts. If during the past weeks the number of visits to the Cranberry Station, phone calls, requests for oxygen testing equipment, and the number of bogs on which winter flow has been withdrawn are indications of interest, Dr. H. F. Bergman's careful winter studies over a period of many years are really bearing fruit. Not many of us realize that Dr. Bergman has carried on studies of the oxygen content in water as far back as 1918, at the Mass. State Bog. Injury to bogs resulting from late holding of a deep winter flood was reported by Dr. H. J. Franklin as early as 1916. The seriousness of the problem was recognized along in 1928-29, when Dr. Bergman really began his intensive studies of winter water here at the State Bog.

It seems in order at this time to review the oxygen deficiency problem and analyze carefully the situation on our own individual bogs. The information on taking samples, equipment for making the oxygen content determinations being carried on by cooperatives and other cranberry organizations— is available for those who are interested, but more about that later.

Let us first be sure that we understand just what we are discussing. In other words, what is oxygen deficiency? What conditions cause it, and what are a few of the methods for relieving the problem? Well, first let's discuss oxygen deficiency itself. To better understand this term, it might be well to review briefly how a plant functions. Take the cranberry plant itself. This plant (so the botanist tells us) respire or breathes just as hu-

mans, animals, or fish. Plant and animal life have the facilities for combining the free oxygen of the air or water, depending upon their habitat, with sugars and other materials in their systems, to release energy for the performance of the various life processes and give off carbon dioxide and water as waste products. Now the cranberry plant, along with others that have the green coloring material in their cells know as "chlorophyll", makes its own sugars and starches in a process know as "photosynthesis". In other words, with favorable conditions the cranberry plant utilizes the carbon dioxide in the water with sunlight and chlorophyll, thereby building up energy for later use, and makes up its own sugars and starches. In this process, oxygen is given off as a by-product.

These two plant functions, respiration and photosynthesis, continue the year round but are somewhat reduced during the winter periods as might be expected. However, when we have heavy accumulations of snow and ice which shut off sunlight—as is the case with cranberry vines under the winter flood — this process of photosynthesis is greatly reduced. The plant continues to use up the available oxygen in the water in its breathing or respiration until the supply is exhausted, causing oxygen deficiency. Well, this is more of a detailed explanation than was intended, but this is an attempt to outline this rather complicated process so that the writer can understand it himself.

60 Inches of Snow in Some Areas

It might be well to review the situation now confronting us. Winter flowing began in December and early January. (Water wasn't too plentiful in many reservoirs.) From

December 23 on, snow began falling over most of the state, with the exception of parts of Barnstable County, and has continued ever since with monotonous regularity. At the writing of this article (January 23), we have the extreme of better than 60 inches of snow on some bogs in the northern part of the state to practically bare ground on the Lower Cape. The ice varies from 15 inches plus, to two or three inches on the same areas mentioned above. This snow and ice, plus a very definite lack of sunshine have all combined to create a condition that really has many growers scratching their heads. Many growers are making oxygen content determinations daily. Incidentally, these samples should be taken daily to secure a true picture of conditions during critical periods, according to Dr. Bergman. Reports of the dissolved oxygen content that have come into the Station the past few weeks range from zero to approximately 8.0, expressed in cc. per liter. As you know, Dr. Bergman now considers that a dissolved oxygen content of 4 cc. per liter is the danger point. He states that no injury will occur just as long as the dissolved oxygen content of the water remains at a level high enough to supply the oxygen demand of the more active parts of the cranberry vines. Injury may occur if oxygen content falls to 4 cc. per liter for two or three days.

The question now arises as to what effect the lack of oxygen has on our vines. Dr. Bergman again is our source of information. He tells us that experiments have shown that we can expect dead stems, loss of leaves, dead terminal buds, dead flower buds, failure of the flowers to set fruit after pollination, and greatly retarded development of the flower bud. That briefly summarizes the types of injury that may occur of an external nature. Certainly this is an impressive array of possible damage under certain conditions on our bogs.

What to Do?

The whole problem is a complex one, and just what we can do about it as growers is a logical question.

(Continued from Page 24)

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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FRESH FROM THE FIELDS

By C. J. H.

MASSACHUSETTS

January 1948 will go down as about the "meanest, most vicious" month in Massachusetts and in fact most of the East in many years. At no time during the month did the temperature rise above 42 degrees, which was the maximum reached at the State Bog, East Wareham on the 9th. The lowest was an official 7 below on the closing morning, the 31st. Unofficial readings went much lower, a Lowell Cranberry Co., Middlesex county had minus 31 on one day in Acushnet where a number reported minus 18 degrees. Even at that, the southeastern area, which is the cranberry district, got off rather easily compared to other parts of the states, and this was particularly true of Cape Cod itself and Wareham, as concerns snowfall.

Snowfall during the month totaled 2.16 inches which equalled 7.10 precipitation. Snow remaining at the end of the month was 6.67 inches. The season's total at Boston had been 60 inches, but figures for the Blue Hill Observatory, near by Boston showed a total of 100.3.

Oxygen Deficiency

Of course the greatest concern of the growers was that in regard to oxygen deficiency in the winter flood. On the 31st Dr. Franklin dehad been snow ice and snow on ice clared it was "pretty bad." There on the bogs all the month and the sunshine factor was exceedingly low as it had been in December. Sunny days were very few in number.

Much Water Pulled

Warnings had early been issued to the growers and many more

than ever before pulled out the flood from under the ice. It has been estimated that at least 50 percent of the acreage which normally has winter flood had been drained. Some bogs merely had snow covering which is of course highly satisfactory. One bog, that at Burrage, owned by the United Cape Cod Cranberry Company, containing more than 100 acres and is managed by "Markey" Urann was purposely left with its 30-inch covering of snow, although other bogs around it were flooded as usual. This may prove an interesting check for deficiency damage between this and the surrounding acreage.

"Angles"

Dr. F. B. Chandler told growers that vines keep excellently in snow or in ice, where respiration is lower than in water, which is often warmer, while the temperature of the ice is a constant 32. He said there might be other factors involved in drawing water than oxygen deficiency. One would be from the angle of insect population on the bogs next season. He said a though could be given to the fact that fruitworm and other insects might be increased if the normal winter flood routine is broken up by water drawing. However, he said this angle was rather unknown and if insects did increase there would be the helicopters to aid in their control.

NEW JERSEY

Old-fashioned Winter

It has been a real old-fashioned wintry month in South Jersey. Temperatures have averaged sev-

eral degrees below normal, and precipitation, especially snow, has been way above normal. The average January daily mean temperature at Pemberton through the 25th was 27.26°, or 6.24° below normal. Precipitation, melted, amounted to 4.72 inches, which is 1.28 inches above normal. Snowfall totaled 13.5 inches. This is 6.2 inches more than the average January normal snowfall for the State.

Fear Oxygen Deficiency

Flooded bogs were frozen before Christmas and have been covered with snow-ice continuously since December 26. This is the longest period of such coverage in New Jersey for at least 13 years, and brings up the possibility of widespread injury from oxygen deficiency. Notice was sent out by R. B. Wilcox on December 31 to all cranberry growers to take necessary precautions. The warnings were sent out through the County Agent, the National Cranberry Association and the Growers' Cranberry Company. A number of growers have drawn the water from under the ice, but many who lack sufficient reservoirs have hesitated to do this. Some testing of the oxygen content of the flood water is being done.

10 to Unofficial 20 Below

On the morning of January 19 the minimum temperature recorded at the Cranberry and Blueberry Laboratory was -10°. Unofficial readings in several blueberry fields ranged from -12° to -20°, with the majority reporting -14°. No check of fruit bud injury has been made as yet, though some injury may be expected in the colder fields at least.

(Continued on Page 24)

ESTIMATES OF CRANBERRY PRODUCTION

By Henry J. Franklin

Some cranberry growers who have failed to inform themselves carefully have at times refused to submit estimates of their crops in connection with the annual forecasts of production made by the Bureau of Agricultural Economics, claiming that these forecasts often over-estimate the crop and so mislead the trade to their disadvantage. To satisfy his curiosity in this matter, the writer has obtained the records of these estimates, so far as they are complete enough to really show anything, for this state and for the country as a whole, and they are presented in the tables herewith:

Table 1 shows the Massachusetts cranberry crop was underestimated 20 times in August and overestimated only seven times, the average August forecast in the 28-year period being an underestimate of 29,000 barrels. Practically all the overestimates were in relation to small crops, and the table seems to show that August drought was involved in most of these cases. While it is, of course, desirable that these forecasts be accurate, it is hard to see from the data given here how they ever could have harmed the growers materially up to this time.

Table 2 shows that the September forecast of the national crop was an underestimate 14 times and an overestimate only seven times, the average of these forecasts being 33,000 barrels less than the average of the crops realized. Here again the overestimates were of small or medium crops and so could hardly have harmed the growers.

An examination of the tables shows that both the Massachusetts and national crops were consistently under-estimated during the early part of the 28-year period, and that in recent years the August estimate has been above the final about as many times as below. During the 13-year period, 1934-46, the Massachusetts crop was underestimated six times and overestimated seven times, the average of

these forecasts being 15,000 barrels less than the average of the crops realized. During the same

13 years, the national crop was underestimated seven times and overestimated six times; the average being 19,000 barrels less than the average of the crops realized. Ac-

TABLE I
MASSACHUSETTS CRANBERRY ESTIMATES, 1919-1946
(thousands of barrels)

Year	Aug.	Oct.	Nov.	Dec.	Final Revised	Final Departure from Aug. Estimate	August Rainfall (Inches†)
1919	350		340		395	+45	7.44
1920	300				309	+9	2.72
1921	205				208	+3	2.53
1922	290	290			337	+47	9.14
1923	320		350		451	+131	2.46
1924	300	300	280		339	+39	7.13
1925	400	385	385		447	+47	2.37
1926	420	425		430	438	+18	2.86
1927	380			370	385	+5	9.37
1928	325		325	325	348	+23	1.40
1929	375	385	395	395	421	+46	4.62
1930	395	382	380	380	395	0	2.40
1931	440	445	450	450	460	+20	4.44
1932	360	360	360	360	415	+55	4.55
1933	380	390	425	470	506	+126	3.73
1934	335	295	290	290	290	-45	2.17
1935	335	300	300	300	332	-3	1.55
1936	370	370	370	360	346	-24	5.79
1937	400	410	475	485	565	+165	4.31
1938	370	300	300	300	325	-45	1.41
1939	425	450	465	465	490	+65	3.36
1940	340	340	325	325	322	-18	0.87
1941	430	485	510	510	500	+70	3.55
1942	490	490	525	525	572	+82	6.55
1943	495	495	485	485	492	-3	3.83
1944	230*	165	160	160	159	-71	1.17
1945	470	470	470	470	478	+8	2.92
1946	535	550	550	550	553	+18	12.87

Average = +29.

*Revised to 205,000 barrels on September 1.

†Averages of rainfall at Middleboro, Plymouth, and Hyannis.

TABLE II
ESTIMATES OF CRANBERRY CROPS OF THE UNITED STATES
(thousands of barrels)

Year	Sept.	Oct.	Nov.	Dec.	Final Revised	Final Departure From Sept. Estimate
1922	511	556	561	562	597	+86
1923	585	566	619	610	686	+101
1924	541	530	517	523	610	+69
1925	624			530	609	-15
1930	579	563	570	571	584	+5
1931	628	640	649	651	654	+26
1932	527	527	520	525	580	+53
1933	573	579	626	668	699	+126
1934	507	467	442	443	445	-62
1935	532	485	487	487	516	-16
1936	531	531	515	515	504	-27
1937	648	691	776	786	877	+229
1938	530	461	457	457	474	-56
1939	629	667	668	671	704	+75
1940	553	571	570	571	571	+18
1941	679	725	749	743	725	+46
1942	756	743	785	787	812	+56
1943	738	721	691	686	688	-50
1944	420	357	365	377	376	-44
1945	644	634	640	649	657	+13
1946	728	815	833	846	857	+69

Average = +33.

curate estimates are more beneficial to growers in the long run than estimates that are either consistently too high or too low. The record of recent years shows that the cranberry estimates are reasonably accurate and give growers reliable information on the size of both the Massachusetts and national crops.

Plymouth County Clubs Open With Three Speakers

M. L. Urann Tells of Marketing—Beattie of Production Problems in 1948—Dr. Chandler Reports Briefly on Experiments—Wisconsin Movies by "Del" Hammond

Opening Plymouth County Club meetings of the '48 season were held at Rochester, January 27 and Plymouth January 29, and even the high-piled snow did not cut into attendance too much. The suppers which usually follow the meetings were abandoned for January, however, because of the severe weather conditions.

At Rochester Grange Hall, Director J. T. Brown, Extension Service, presided in the place of President Nahum Morse, who was unable to be present because of illness in his family. Chairman at Plymouth was Russell Loring.

First speaker was Cranberry Specialist Beattie, who briefly outlined "Special Problems in 1948." Root Grub is still the number one pest on Plymouth County bogs, he said, with other insect problems being chiefly girdlers, fireworms and fruitworms. He said that in Barnstable County there was planned a program to eradicate the gypsy moth which, if it can be accomplished will be a great advancement.

False Blossom Increasing

Of diseases, he said, false blossom is on the increase in the state again and a campaign must be undertaken. The spread of the disease was shot forward during the war by materials and help limitations

and now must be combatted once more.

Concerning weeds, he said there are excellent weed charts prepared, and that growers should possibly better acquaint themselves with various weeds so that they could follow the recommendations of the charts.

Turning to irrigation he told how there could be a good deal more done along this line. There are still 824 acres of dry bog in the state, 2,000 acres with only winter flowage and 1870 which have only about one frost flow, or a total of some 4700 acres which should have better irrigation facilities. He touched briefly on the "confused" problem of fertilization and finally spoke of the great advancements which were being made in weather studies at the East Wareham station, and said these studies might have particular significance in controlling some cranberry diseases.

M. L. Urann

Principal talk of the afternoon was by Marcus L. Urann, head of National Cranberry Association. Reading from his diary, Mr. Urann went back to the meeting of NCA directors, August 20, 1947, to explain the National's stand on prices for the crop of 1947. It was decided, he said that the time of selling most anything for most any price had ended with the year 1946. "People began to be more fussy as to quality and especially as to price. We sensed that shadow of events at that time."

He continued, the industry had really lost "grower control" in the fall of 1946 with some 30 independent processors in the market. This control must be regained, he urged. There had been a swing from fresh fruit to processed, but this swing must not be permitted to develop too rapidly, he said. NCA was trying to prevent that. Last fall's crop with the carry-over from '46 was practically a million-barrel crop to be disposed of.

NCA expected to handle 350,000 barrels of the potential crop, he went on, but actually handled 390,445.

He said, in setting the NCA processed price he expected the independents to eut prices, and they did. He said the directors wanted

Ocean Spray to sell for 19 cents, and he had hoped the differential between canned and fresh fruit would not be too great. He said NCA brought out the 12 ounce cellophane pack which provided just enough for one meal for four people which was the average family. He discussed the "Chicken 'n Cranberries" campaign which has a 10-year objective of making this combination as popular as turkey and cranberries.

NCA expected to handle 50,000 barrels fresh of the '47 crop, but actually handled some 51,000. He said he believed a ten percent shrinkage had taken place in the '47 crop and most of this had been after the berries were in the market, which was not good.

'48 Year of Decision

For his forecast into 1948, he said this was "the year of decision." The industry must have grower control and if it has this, growers have no fear of disposing of a crop, however large, at fair prices. He said NCA would have a carry over each year of 100,000 bbls. 50,000 to be sold during the spring by June to keep cranberry sauce in the market and 50,000 to start canning in early fall to reach the early fall market. He said with advance orders now on the books NCA would not have a large carry-over by the time the next crop came in, but he had made careful estimates and as far as he could estimate there was a 425,000 barrel carry over in freezers and cans into 1948 and so in 1948 the crop will exceed a million barrels to be disposed of.

In 1948 conditions will also be less favorable than they have been in the past few years. He said he felt cranberries would not be exported to any extent to help the European food situation as cranberries are a semi-luxury, but that a thought might be given to that source of outlet. "If we could create a little demand overseas, even though our own market has scarcely been scratched, it would help that much."

Dr. Chandler

Final speaker was Dr. F. B. Chandler of the Cranberry Station, who made a report on fertilizer developments in 1947. He spoke

(Continued on Page 23)

CRANBERRIES GROW TODAY AT THE FORMER DANIEL WEBSTER ESTATE

Although the Great American Orator Settling at Marshfield, Massachusetts, Apparently Had No Thought of the Culture, Bogs Were Built There and Are Operated by Walton Hall Estate.

By CLARENCE J. HALL

History and cranberries are enticingly intermingled in the cranberry bog property operated by the Walton Hall Estate at Marshfield, Massachusetts. This location was the residence of Daniel Webster, 1832 to 1852. Managed by Lincoln Hall, son of the late Walton, and known as the Walton Hall Est., this enterprise overlays the property of the great American statesman and orator of the last century.

History and cranberries are enticingly intermingled in the cranberry bog property operated by the Walton Hall Estate at Marshfield, Massachusetts. This location was the residence of Daniel Webster, 1832 to 1852. Managed by Lincoln Hall, son of the late Walton, and known as the Walton Hall Est., this enterprise overlays the property of the great American statesman and orator of the last century.

Webster acquired these broad acres, on which was a big country homestead, in 1832. Even before Webster took over, these acres had had an interesting history, about which more will be told a little later. It was not until 1886 that any cranberry bog was built there, as far as is known, and it is perhaps safe to assume that the great Daniel never had a thought of a cranberry development on his property. In his day he could look across wide salt marshes toward the bay, a mile and a half away. Now these marshes are cranberry bog. Tall trees mostly obscure the bay view.

Bogs on Marsh Reclaimed from the Sea

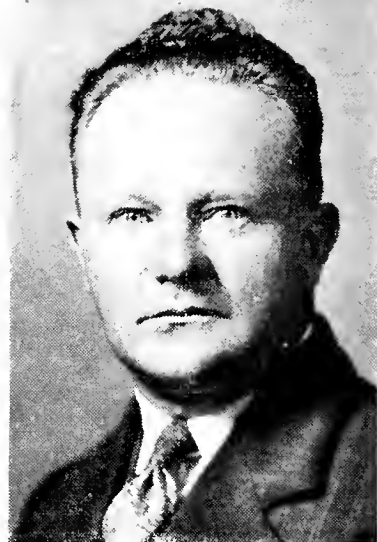
These bogs are actually on land which was reclaimed from the salt marshes which Webster so admired 100 years ago. This reclamation came about in 1870, when a group of residents of Marshfield, who owned a total of 1500 acres there, had a dike built to hold out the sea. The marsh was freshened.

There were no bogs in this area at all in Webster's time, and as a matter of fact, this present bog is practically at the northern limit of

cranberry growing in Plymouth County. If Daniel could rise today from his grave on the hillside which is the historic Winslow cemetery on Webster street, he would look out over about 100 acres of cranberry vine. Near one of the Hall bogs are the remains of a wharf where Webster kept his small boat which often took him through the salt marsh—now cranberry bog—to the open bay for his salt water fishing trips.

When Webster decided he wanted to make his home at Marshfield, he bought this property from members of the Thomas family. History relates that William Thomas, Gentleman, had been granted the tract of about 1600 acres by the General Court in 1640-41. It had descended to his great-great-grandson, one Nathaniel Ray Thomas, who was a noted loyalist at the time of the American Revolution. There were other loyalists in Marshfield, and at the request of these loyalists a company of Queens Guards under Capt. Balfour was sent to Marshfield for their protection. They were quartered on the estate of Nathaniel Ray, which was later to become the property of Webster. Nathaniel Ray, as the Revolutionists became victorious, fled to Boston and later to Nova Scotia, where he died in 1787.

Lincoln Hall, who is well versed in Webster and other local history, and who wrote an article in the Marshfield booklet published at the tercentenary celebration in July, 1940, "Daniel Webster as Marshfield. Knew Him", says that it very



LINCOLN HALL

nearly came to pass that the first battle of the Revolution was fought at this site, rather than at Lexington and Concord, when was fired "the shot heard 'round the world".

It seems that plans had been made by General John Thomas, a Revolutionist and no relative of Tory Nathaniel Ray. Thomas had a regiment of militia and was prepared to attack the guards quartered at Nathaniel Ray's home, one day before the battle of Lexington. However, the word got out that there was a cannon there, and because of this single fact the attack was not made.

Much of the estate of the Tory Thomas was confiscated, but a portion of it came into the possession of his son John, who was not a loyalist, and it was this portion which was bought by Webster.

Webster Duplicated English Estate at Marshfield

Born in Salisbury, New Hampshire, and having studied law at Dartmouth College and entered the legal profession in 1813, Webster was elected to Congress as a Federalist. He had set up law practice in Boston. In 1822 he was elected to Congress from Boston and in 1826 became a United States Senator, later Secretary of State.

After he bought the Marshfield property he went to England, where he visited great estates of the English nobility. He appar-

ently came back with the idea of duplicating such an estate in Marshfield. He had artificial ponds built, one of these of about 10 acres today being one of the reservoirs for one of the Hall bogs.

This was where he kept a small boat called the "Lapwing", and he gave orders to his foreman, Porter Wright, that the American flag was to be kept flying at the mast of this boat, day and night, until he died. He imported llamas from South America, and many birds from foreign countries. He had herds of pure-bred cattle. His great cowbarn is now used as the storage shed and screenhouse for berries grown on the Webster farm.

It happened to be a rather bleak, wintry day when your reporter visited the Daniel Webster bogs. Lincoln Hall was at work at the screenhouse, formerly the Webster cowbarn.

Mr. Hall proved to be a veritable fountain-head of Daniel Webster lore. He had facts and figures at the tip of his tongue. His comments—although there is no relationship between the Websters and the Halls—were as fluent as if they had come from the great orator himself. He has a humorous, piquant touch to his remarks. As a member of the New England Cranberry Sales Company, Mr. Hall has not always agreed with all the policies of that co-operative. Although a loyal member, other members have learned at meetings that he expresses himself sharply.

"If Webster Had Only Taken Up Cranberry Growing—"

History records that Webster died in debt. Hall's observation was, "If he had only taken up cranberry growing, instead of being a lawyer, this wouldn't have happened."

Halls Acquired Property in 1884

The Halls, that is, Walton Hall, who died in 1927, bought the Webster estate chiefly because he was steeped in the tradition of Webster and the neighborhood, and was an ardent admirer of the great man who came to make him home in Marshfield. He got the property in 1884 from Caroline Webster, the widow of Fletcher, son of Daniel. This was but a few years af-



DANIEL WEBSTER

ter she built the present big house on the exact site of the old Webster home which was destroyed by fire in 1878. With it were acquired a good many of the original possessions of Webster, together with Webster's collection of butterflies, and other pieces of furniture which bore Webster's name. It was only this past fall that many of the items were divided among members of the Hall family.

Walton Hall, remembered by many of the older growers, particularly of Plymouth County, had "pegged" shoes as a boy, as his father before him had been a maker of shoes. Later he became interested in textiles, and had mills in Connecticut. He "did pretty well for himself" in the mill business, Lincoln says, and Lincoln followed in his father's footsteps by going into textiles himself. After being graduated from Bates

College in Maine, Lincoln attended New Bedford (Mass.) Textile School. He saw service in the first World War. Trained as an accountant, he was assistant treasurer in the City Mills at New Bedford from 1921 until 1930, when the mills were liquidated. Not long after the death of his father, he became manager of the Walton Hall Estate, a trust, and began to operate the bogs at Marshfield and was custodian of the Webster place.

When Walton Hall had bought the property, it consisted of about 160 acres, but this was later increased to 1,000. Walton Hall built 130 acres of cranberry bog on the reclaimed marsh land, 70 of which were on adjacent land, not originally owned by Webster. This property was known as "Stump Meadow". These bogs were all, it may be repeated, upon the marsh re-

claimed from the sea, and Lincoln Hall frankly admits this is not the equal of good maple or cedar swamp for growing cranberries. It was mud bottom and the salt is still there below the surface on certain locations. Neither could the bogs be built in the best grading because of such bottom.

Lincoln Hall since his father's death has completely rebuilt 40 acres, setting these to Early Blacks. This was during the depression of the '30s, and he says, "It was about the only bright thing I ever did in my life. Costs were low, and growers don't believe me when I tell them it didn't cost \$500 an acre."

Walton Hall was one of the charter members of New England Cranberry Sales Company, and was one of the few in Massachusetts who sold cranberries to the Chaney's just before the formation of the co-op. He was also a director. Lincoln Hall has always retained the membership in NECSCO.

Lincoln, besides operating the Walton Hall estate, manages a bog of nine acres owned by his wife. The Halls live on Caswell street, only a short distance from the Webster place. That the Halls should have bought the former home of Webster is a rather logical development. The family has been in this particular historic community for upwards of three centuries. Mr. and Mrs. Lincoln Hall have two sons, both of whom served three and a half years in the war, and one daughter. The sons are John, who is taking his Ph. D. degree at the University of Illinois under Dr. Neil E. Stevens, head of the botany department, and well-known to many cranberry growers the country over, and Styles V. The daughter is Barbara Hall Coffin.

This location of the Halls and of the Webster bog is old and historic country, as age goes in America. The fertile fields and wide meadows of Marshfield were a natural attraction to the first settlers who moved out of adjacent Plymouth. The first reference as to settlement appears to have been as early as 1632. The famous Governor Winslow house is about midway between the Hall and the Webster

places. It is in the immediate vicinity that Harry Hornblower, trained archeologist and treasurer of Cape Cod Cranberry Growers' Association has put in spare time to make excavations studying Colonial and Indian relics.

It is said Webster visited Marshfield many times before he settled there, often driving down from Boston. He liked Marshfield for its hunting and fishing, its agricultural possibilities—here he could combine all three interests.

Webster's little law office on the estate escaped the fire which destroyed his home. He undoubtedly roamed where the bogs now are and possibly thought out some of his great orations there, such as perhaps his most famous—his reply to Robert Haynes of South Carolina, when the latter eloquently defended the idea of nullification in the Senate. The peroration of Webster's reply, closing with the words, "Liberty, the Union, now and forever, one and indivisible", are still almost as venerated as those of Lincoln's Gettysburg address.

Webster's Last Speech at Marshfield

The last public address of Webster was made at Marshfield July 24, 1852, three months before his death, when he stood in the open, nearly on the lines dividing his estate and the Winslows. He told his friends and neighbors: "Many, when they come down here through these pine woods and over these sandy hills to see us, wonder what drew Mr. Webster to Marshfield. Gentlemen, I tell them it was partly good sense, but more good fortune. I had got a pleasant spot. I had lands about me diversified. My fortune was to fall in with a kind neighborhood. . . . I had entered into a sort of well-understood covenant that I could talk with them of farming and fishing. . ."

But keen agriculturalist that Webster was, there seems to be no legend that he ever talked cranberry growing, or gave a thought to the culture. Since he was leading the life of a country squire from 1832, it is entirely possible that he read the agricultural journals of the day, and from that time on there were many and frequent

references to the new idea of growing cranberries. He must have read of Henry Hall and other beginning cranberry growers. The culture had begun on the Cape then, and in Middlesex County, too, but there was probably little talk of it in that rather remote end of Plymouth County. However, Webster was a frequent visitor to the inn at Sandwich on the Cape which today bears his name. In the tap room there, it seems he must have heard mention of the experiments which had begun on the Cape, at Dennis and elsewhere.

Webster never seems to have made any effort to get into this new form of agriculture. Nevertheless, it has come about that his old farm is now the site of cranberry growing, the project is named in his honor, and a bronze tablet to his memory stands in a stone wall, not far from entrances to the bogs.

18 GIs in Oregon Cranberry School

The Cranberry School of Oregon, given under the G-I Bill of Rights, now has eighteen members. The school opened the first of July, 1947, and now has five months to go on the first of the two-year course.

Jimmie Olson and Ray Bates are the instructors. These men follow a prescribed course as given in other cranberry localities. They also call in speakers in specialized fields which pertain to the course.

Most of the G-Is are young married men who have purchased land and have their plantings underway.

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Second Plymouth Cranberry School

Second cranberry school session for Plymouth County, conducted by "Dick" Beattie, at the screenhouse of Ellis D. Atwood, South Carver, January 6th, brought out probably the largest attendance yet, approximately 165, including the learning cranberry growers and those of many years of experience. There were youngsters and gray heads coming from considerable distances in spite of snowy, icy roads.

Opinions expressed at the conclusion of the school were that this was one of the most informative held. Especially favored in this comment was Walter E. Rowley, engineer, of West Wareham, who spoke upon the laying out of cranberry bogs. Mr. Rowley is a partner, and planned the lay-out of the new bog at Middleboro which has an eventual potential of 150 acres and which was described in the article upon L. B. Handy in the October issue of CRANBERRIES.

The two other instructors were Frank Butler of the Makepeace interests, a cranberry man of many years of experience, who spoke upon flumes, their construction and dikes, and Ferris Waite of NCA, who told briefly of the increasing trend toward prefabricated flumes. All three were worthwhile contributions to cranberry information, both for the new and experienced growers.

Rowley

Mr. Rowley began by saying that every bog presented an individual problem and therefore he was giving no figures but was presenting a general outline which could be applied to any location.

The first principle, he said, was to know your own swamp; to get a general mental picture of the whole layout. This could be obtained by (1) walking around the entire location; (2) by walking through it; (3) very good additional information could be obtained in this present day by flying over it. He stressed that it was very important that each prospective builder should have a clear, mental picture of the entire situation.

"Get it focussed in your mind."

When you have that, a topographical survey is desirable. This should include (1) swamp and upland line; (2) location of hills; (3) location of brooks, if any, the width of these brooks and the depth; (4) grade of swamp; (5) the general features of the swamp, type of growth upon it, depth and type of mud (or peat), type of hard bottom, the latter especially near the shore.

Availability of Water

Then, he said, the availability of water should be considered. He said it might be possible the area would take in two water sheds, and the "divides" should be known. As concerns springs and brooks, he said, the brooks would be of two types, spring fed and those which just take care of the run-off surface water. The volume of flow should be determined as far as possible, is the flow obstructed, flow diverted and flow release. He said the actual growth-bottom should be studied, trees, grass, depth and closeness of the peat, or mud, clay, sand. Rainfall should average about four inches per month in the Massachusetts cranberry area, he said. The location of any nearby ponds and rivers should be taken into consideration.

Favored Upland Canals

As for flowage, gravity is considered by far the best method, if this is possible. He said the builder should take advantage of any physical features of the terrain which would provide flowage at the least construction cost. He mentioned dikes. He discussed distribution of water to the planted areas. He said he felt an upland canal around the bogs is very satisfactory and has many advantages. The most common way in Massachusetts, he said, is a main ditch disposition. By this method the ditch has to be deep enough and wide enough to provide for any freshets. Among the advantages of the upland canal is that any bog unit may be flowed at will.

He discussed sprinklers, pipe lines, aqueducts and pumps. As to the main ditch, he said, this should be in the approximate center line of the swamp, and it should be dug to depth of maximum drainage,

and it should be wide enough to distribute frost flow quickly and to take care of any freshets.

The location of the lateral ditches, he continued, would be dependent upon the bottom, for a peat bottom from 150 to 200 feet apart; for a close bottom, 60-75 feet apart. He said ditches should be where springs are, if there are any in the bog.

Ditches should be three feet or more deep on hard pan, width two feet, to 30 inches sloping to the bottom.

Bench Marks Desirable

He stressed the importance of establishing "bench marks" in a bog, this being a point from which levels can be established. This "bench mark" could be a mark in a concrete flume, a mark in a boulder, a spike in the base of a stump. He said the "breaks" of the property should be determined, that is, divides in the way the water runs. He said the grading should be done within these breaks; this can be done either by the water method, familiar for many years, or by instrument.

He told new builders they must expect settlements in the bogs—where old brooks and old ditches had been filled in, and at stump holes. He said fill should be adequate to allow for this. He preferred to crown the sections for proper run-off of water.

Many questions followed his talk, showing that the school had followed it closely, and this brought out considerable additional information.

Butler

Mr. Butler's talk was chiefly a "technical" one, and he began by saying he could only hit the high spots with the time at his disposal. Then, with illustrations and pointer, he discussed the three main types of flumes: (1) wooden box flumes; (2) reinforced concrete flumes; (3) open flumes, the latter most commonly in use, and which have tremendous capacity.

"Get Flumes Low Enough"

He said he personally liked to use concrete flumes, and the A. D. Makepeace Company had these in size from less than one square foot in opening to 55 square feet.

(Continued on Page 17)

THE YEAR 1948 comes in with probably greater concern and thought being given to the proportion and marketing of the crop of next fall than in a number of years. M. L. Urann, who has been anticipating when there will be the "million-barrel" crop to dispose of, has told Massachusetts growers next year's crop will "exceed 1,000,000." That figure, of course, includes a carry-over in berries in cans and frozen, which it seems may exceed that of last year.

In addition to the large carry-over of the past two years, there are beyond any question going to be a lot more cranberries grown each year in the immediate future. The statement has been made that Wisconsin production is to double in the next decade. Even at this early stage of the game, we hear of one prediction from that state that present outlook is for a crop considerably larger than last fall's 158,000. As has been said before, acreage is swelling in the Badger State, there is a lot of small, "individual" acreage going in on the West Coast. The increase in production in Oregon and Washington may be relatively small, but still it will raise the country total. There is some new and a lot of renovated bog which will be bearing in Massachusetts, and improvement is being made in many Jersey properties. Modern equipment, more scientific knowledge and the fact that growers everywhere are becoming better growers, can only add up to larger production.

This certainly raises the problem of greater selling effort. Mr. Urann says the trend is definitely toward preference for canned cranberries. C. M. Chaney has stated there would not have been such a big carry-over if proper attention had been paid by all factors to the fresh fruit market last fall—cranberries which are not frozen or canned and add to the carry-over could have been disposed of fresh and out of the way. There is a conflict of opinion here and a conflict of effort. The two major co-ops should make total crop disposal the No. 1 objective, certainly with present prospects.

There has been talk put forward, first by Mr. Chaney of a "cranberry Institute" which would promote disposal of cranberries by advertising without regard to brand name, just as "cranberries." This could supplement brand advertising, which

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is desirable, too. In this plan, however, there seems to be some regional jealousy cropping up, even if the two co-ops and independents could get together on such a program.

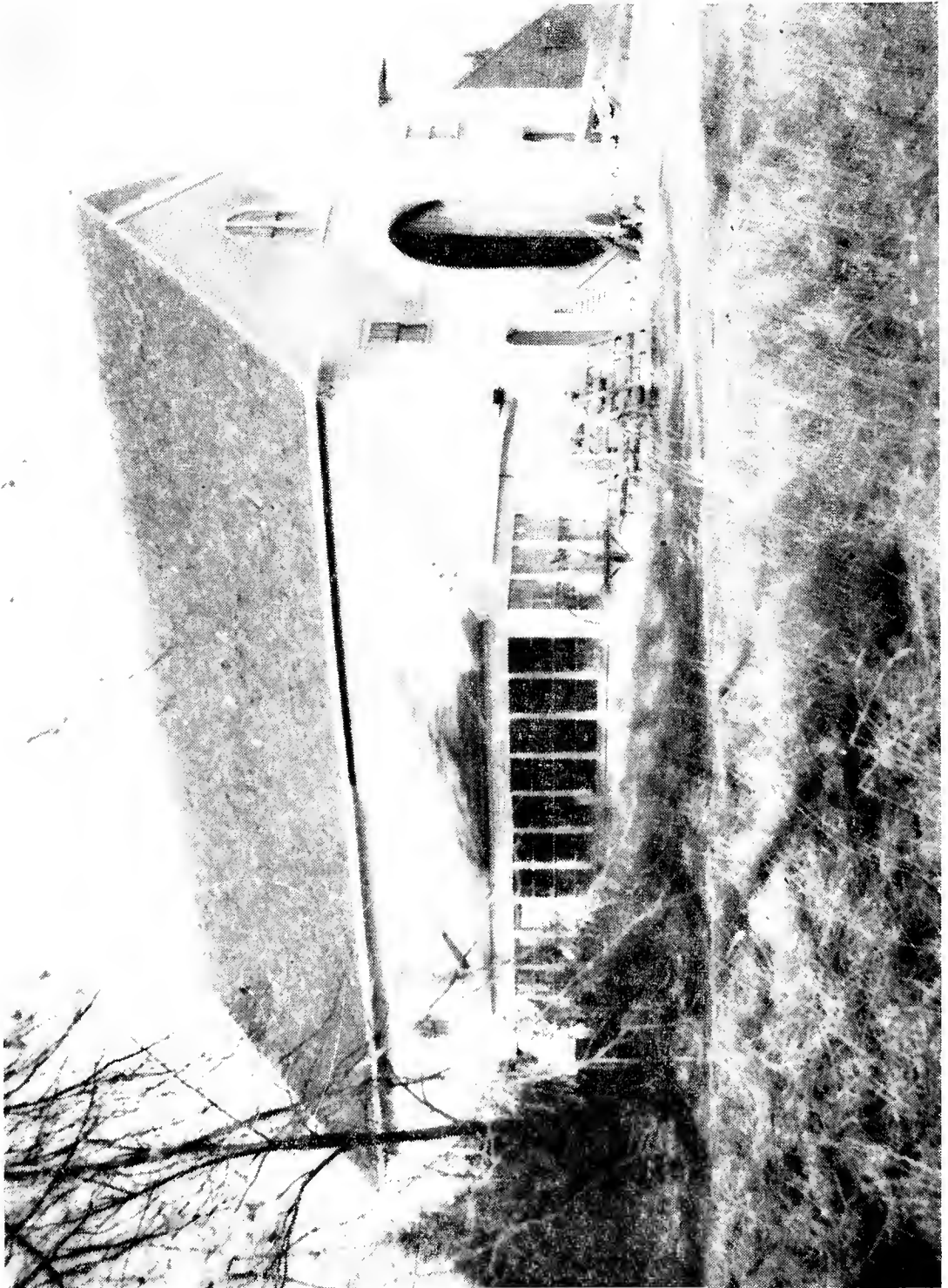
With the spending spree of the country in the first flush of post-war having passed, the cost of living at an all-time high, pennies of necessity being watched closely by nearly everybody, the cranberry industry will be facing an increasing problem this year.

IN the East, this has been the kind of winter our grandfathers and great-grandfathers talked about. The country-side, buried in white snow, is doubtless beautiful, but it's not good for this automobile age, and the way life is today we can't simply "hole up" while the thermometer is zero and the roads are ice and snow.

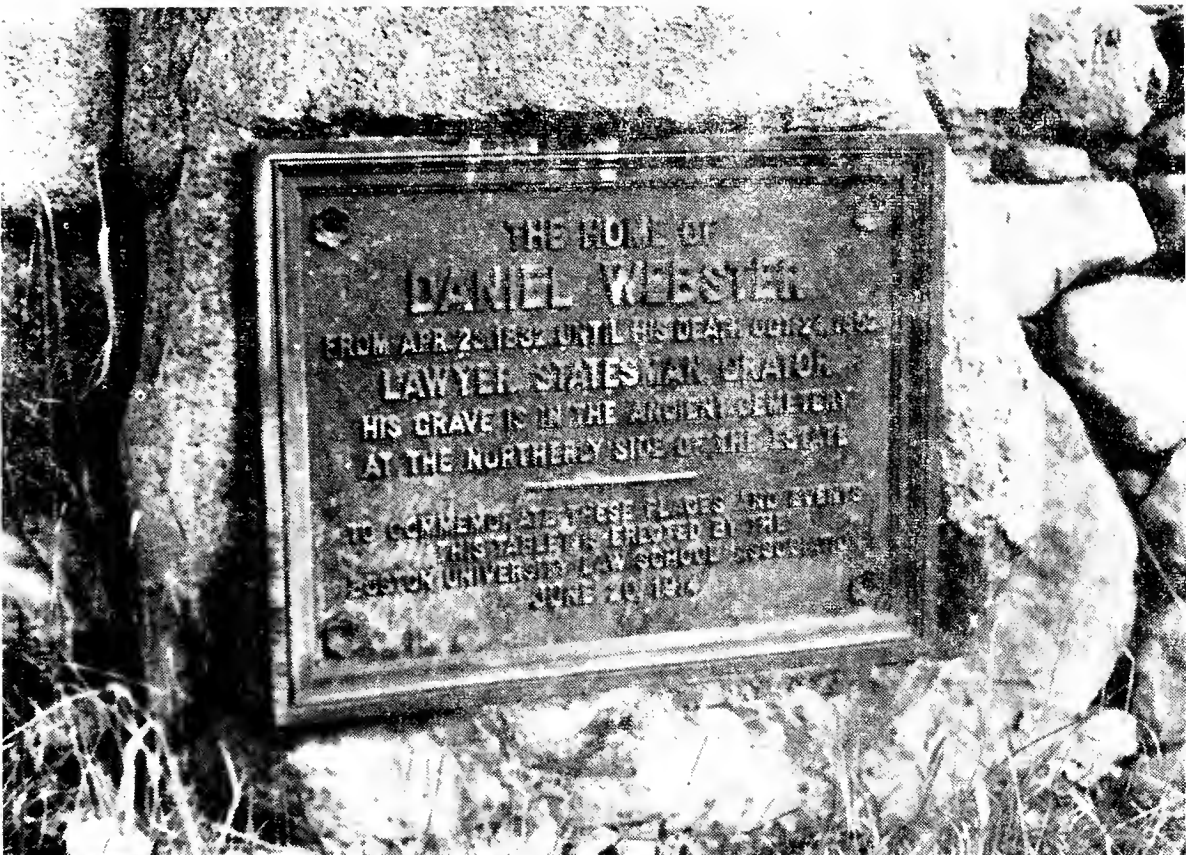


Mr. and Mrs. Ruel Gibbs of Massachusetts crowned "King and Queen" in Arizona.

Mr. and Mrs. Ruel S. Gibbs of Wareham, Massachusetts were crowned "King and Queen" of the cranberry world in an informal ceremony at the El Rancho Corona in Tucson, Arizona, where they are spending the winter. The particular occasion was their 25th wedding anniversary. The party was given by Mr. and Mrs. William W. Crone, who are shown with them. Guests included Mr. and Mrs. Roy Potter, cranberry growers of Wisconsin Rapids, Wisconsin. Gifts included a silver dollar minted the year of their marriage. (Photo Courtesy Tucson News Service.)



Above is the present screenhouse of the Walton Hall Estate hogs, which formerly was the cow barn of Webster. Opposite page, above is the Daniel Webster tablet near the entrance to the bogs. Below is the little law office of Webster, still much as he knew it.



Cranberry Queen In "Own Right"— Miss Jean Nash



Photo courtesy of Wisconsin Rapids Daily Tribune

We've heard a lot about "Cranberry Queens", but we are privileged to carry this recent photo of a cranberry queen "in her own right", as Miss Jean Nash was termed in a recent article in the "Country Gentleman". Personally operating the 74 acres of marsh of the Biron Company, previously headed by her father, the late Guy Nash, Jean has earned that title and also her recent election as president of Wisconsin Cranberry Sales Company—being the first woman ever to lead a cranberry co-op. Incidentally, she is a third generation grower, her grandfather, Thomas E. Nash, having been one of the earlier Wisconsin pioneers in 1876.

Miss Nash attends to cranberry growing, from early morning to late at night. It is only once a year that she takes a relief from the cranberry business when she usually heads for Sun Valley, Idaho—and skiing. Fond of most athletic sports, and graduated from LaCrosse as a physical director, she likes the out-of-doors and leading the out-door life of an active "cranberry queen".

Cranberry Co-op News Wins an Award

Miss Louis Day, news editor of "Cranberry Co-operative News" received an award in behalf of the news, awarded in the 1947 Massachusetts Industrial Publications contest, sponsored by that organization and the Associated Industries of Massachusetts.

The News was among 71 entries of house organs published in Massachusetts and was one of 17 winners. The contest is sponsored each year to encourage and promote effective industrial journalism in company publications. Publications were rated for layout, editorial content and accomplishment of purpose.

In the photo Miss Day is shown receiving the certificate of award from Roy F. Williams, executive vice president of the Associated Industries.

(Photo courtesy National Cranberry Association.)



PLYMOUTH SCHOOL

(Continued from Page 11)

Like the previous speaker, he stressed the fact that it was desirable to have a good bench line at the flume. He said regarding flumes to be sure to get them low enough. "I have heard many growers say a flume was too high, but I have yet to hear one say a flume has proven to be too low."

As concerns dikes, he spoke of the advantages galore of a "driving" dike, if it is possible to build one. He discussed the digging of the core and then methods of filling, these being: (1) wheelbarrows; (2) railroad and gas shovel; (3) bulldozer; (4) tractor with a scraper and truck. Of the various methods he said, if practical, he preferred to use a railroad. He said the old style was to use turf for the outside, but lately the Makepeace Company had been using clear stones, and with this construction he'd seen no wash, no repairs, and no muskrats went through.

In conclusion, he said, "Keep in mind these are only one man's ideas."

There was some discussion as to advantages of "blowing" the core, rather than digging, and it was mentioned that under some conditions this might be preferable. The discussion also brought out that the best material for the core was a loamy sand.

Mr. Waite

Mr. Waite, in speaking of the coming into use of the prefabricated flumes, said that many of the ideas from cranberry operations improvements have come from within the industry, and this was one. He said he felt three men were most responsible for this development—M. L. Urann, who several years ago conceived the idea of using a flume already prefabricated, R. A. Trufant of North Carver and Paul Whipple of Plymouth, who carried the idea into actual practice with adaptations and improvements. He discussed the different types now developed by these two. (More information will be given on these flumes in a subsequent article.)

In concluding the meeting, J. T. Brown, director of Plymouth Coun-

ty Extension Service, introduced five ex-GIs who are now working on soil conservation problems in the county.

Third Plymouth Cranberry School

Third cranberry school for Plymouth County growers at the Atwood greenhouse, South Carver, the afternoon of January 20th, continued the "building" of a mythical cranberry bog. This discussion had been begun at the first meeting, with Russell Makepeace talking on the costs of bog building, "Joe" Kelley speaking upon selection of a bog site, and George E. Short discussing availability of cranberry land. The second meeting had seen Walter E. Rowley, civil engineer, speak on the laying out of a bog; Frank Butler tell of flume and dike building, and Ferris C. Waite tell of modern prefabricated flumes.

Closing the course in the "building" of this bog for the GI or some other grower were Gilbert T. Beaton of the Beaton Distributing Agency, who took the property and sanded it and set the vines. Carl B. Urann, grower of long experience, who has renovated, or rebuilt, "countless" bog acreage, gave a sound talk on bog renovation. Despite the fact roads were heaped high with snow, the attendance was large, when Cranberry Extension Specialist Beattie called the meeting to order.

"Gibby" Beaton

Mr. Beaton said that assumedly a good bog had been roughed in, graded and was ready for the sanding and vine setting, and he hoped he could continue the good work of finishing a fine bog, "which I hope will produce a good crop in four years." He brought with him samples of three types of soil, coarse sand, fine sand and clay. The coarse sand was the most desirable, by far, he said, "sand that talks to you". In the first sanding there could be quite large stones in it, in considerable numbers, and it need not be screened. This would be sand of a good cement grade, he said. The finer sand is better for re-sanding. "Then we come to clay. If that is all you have

around your location, I'd forget about building a bog there."

"Clay will grow a fine crop of one thing," he said, "and that is weeds."

He said that good sand could be trucked in and he would truck it considerable distances, rather than put on clay. "Of course, this would add greatly to the cost, as sand trucking is expensive."

In the "old days", he said 6 or 7 inches of sand was spread in this first sanding, but now the trend was down to 3 or 4 inches. This might be due to the fact that there isn't such heavy bottom being generally used today because good bog land is getting scarce, although it is still available in places.

He estimated that 135 yards of sand will cover one acre one inch thick, and that to spread an acre four inches deep will cost between \$300 and \$400. He discussed ways of getting it on, stressing bog locomotives and shovels. He said a good job of grading can be done with water, if it is done properly, and instrument grading is of course accurate. As had Mr. Rowley previously, he said he preferred to keep the center of each section high, so the water would run off, and there will not be a puddle in the middle of the section.

Getting down to vine setting, he said the old style was for 14-inch square spacing, but this is dropping to 12 in general usage now. "12 by 12 and 1 in the center is popular at present." For methods of planting, he said broadcasting followed by a coating of sand brings the vines in fast but takes more vines, and the bog would have to be kept wet, which would bring in more weeds.

A very favorable method, he said, is that by mechanical setting, such as that used by "Bob" Pierce, (which was described and illustrated in October issue of CRANBERRIES). This was by a converted Ariens-Tiller. He said this device which utilized broadcasting and then pressing in the vines by disks followed by spool rollers to anchor them seemed to him a very logical and satisfactory way of setting out a bog. More vines were used, but the cost of setting was cut down. Vines last year cost \$10

a barrel, and for hand set 10 bbls. per acre were used, whereas the tiller method would take 15 or more.

He said that in planting vines, the vines should be kept submerged or moistened from the time they are cut until planted, or they would be too dry. This he considered important.

Again comparing the "old days" with present trends, he said bogs were mostly set on a 50-50 basis, that is, Early Blacks and Howes, with now and then some "odd" varieties. Since canning came in, the swing has been almost exclusively to Blacks. "I am wondering seriously," he continued, "if we should not begin to swing back to Howes more generally. Howes bring more money in the Christmas market, they are a good berry and they weigh much more than Blacks, and we are selling by weight now to the canners."

He said insects had to be considered once the bog was planted, and he advised flowing as a means of control. Weeds should be considered very seriously the first two years, probably especially the second year more than the first.

New bog should be flowed early in the winter, he said, so the vines would be heaved out, and the water kept on until late spring. He said his custom was to pull the water off about April 1 for a "breather" and then reflow until June first, which was what he

called a "late water bog."

An extended question and answer period considered a number of interesting factors. One was, should a new bog be fertilized, or in fact any bog. Mr. Beaton was in favor of fertilizer on hard bottom, and fertilizer helped in bare spots, but he had "rather see a vine come along on its own", if possible. Dr. F. B. Chandler agreed that probably most bogs did not need fertilizer. Another factor brought up was the increasing use of old and well-rotted sawdust to fill in spots of old bogs to be renovated. This is a substitute for peat, as good peat is getting scarce; it is a very satisfactory substitute, as experiments are apparently proving. Another topic was planting through paper to keep the weeds down. By this method some use a resin paper through which the vines are pushed and then sand is spread. It was generally agreed this keeps down perennial weeds, but not so the annuals.

Bogs Cost \$3,000 to \$3,500

In conclusion and in later discussion by Mr. Urann and others, a conclusion seemed to be reached that the cost of building a bog to the period of vines set was between \$3,000 and \$3,500 in Massachusetts, which took in no account of further expenses until the bog came in the fourth year, nor of screen house facilities, also of pumping facilities. These might bring the cost of a bearing bog up

to \$4,000, it seemed to be agreed.

Carl Urann

Mr. Urann said there were many methods of rebuilding old bog. First he considered restoring bare spots, due to weeds or other causes. For small spots, he said the best method was with shovels and wheel barrows, and the process to be that of "turning upside down the bog soil". That is, to dig a hole and take the top from another area and put that in the bottom of the hole—to simply reverse the positions of the top and bottom soils. In wide areas to be rebuilt, he said the same process could be carried on, but in this bigger operation clam shell shovels would be the things to use. "Turn your bog over by mechanical means, rather than manual labor."

He said the United Cape Cod Cranberry Company, of which he is president, had used Roto-tillers with good success, and also bulldozers and tractors. He said on one bog 18 inches of sand were found and this was Roto-tilled to a depth of about 8 inches, no bottom being found. After the tilling, 400 pounds of fertilizer to the acre were used and then two inches of sand spread and the vines set. He said this method has done as well as anything he ever tried, and berries had been picked the second year. Ploughing was another method of rebuilding worn-out bog, and also disk harrows. He said he liked the "double set" method for setting vines, provided the bottom

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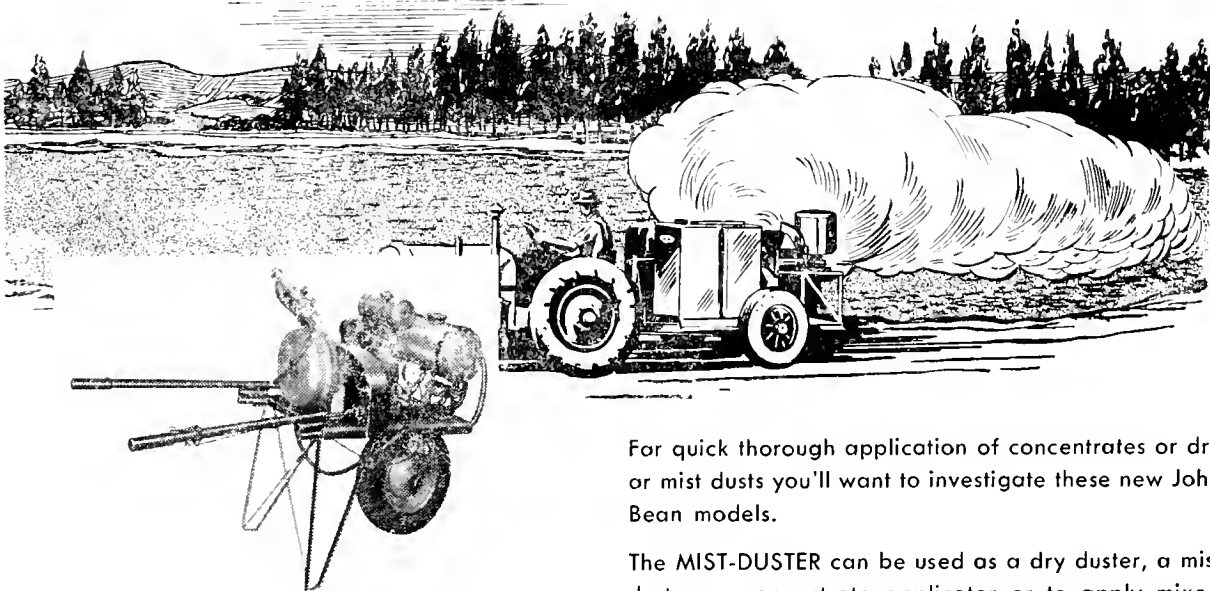
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was not too rich. If it is, there will be too much vine growth.

Asked how much he would spend for rebuilding bog, Mr. Urann said he didn't see why just as much shouldn't be spent as in building new bog, if necessary, and he wouldn't hesitate in the least at spending \$2,000 an acre.

Cape Cranberry Schools In Session

Cape Cod Cranberry School, conducted by Barnstable County Agent Bertram Tomlinson, opened Tuesday evening, January 13, and the second, Tuesday evening, January 27. Good attendance was present at both, including a number of GIs.

The program had no formal speaking program, but consisted of a series of prepared questions from the floor, with answers. There were also, of course, many spontaneous questions brought up.

Cranberry Specialist "Dick" Beattie was present, accompanied by "Joe" Kelley at the first meeting, when the topics were "Winter Flooding", "Spring Practices" and "Sanding". The second was Beattie again, with Frank Butler of Wareham, and the topic was "Flumes and Reservoirs", similar to that at the Plymouth County School. The meetings will be con-

tinued the second and fourth Tuesdays of each month this spring.

CCCGA MEETING— EXHIBIT APRIL 21

Directors of Cape Cod Cranberry Growers' Association met at the State Experiment Station, February 4 and made plans to hold the spring meeting of the association April 21. This will be similar to the trade exhibition which proved so popular last year, President Russell Makepeace announces. More definite plans will be made at another meeting of the board, March 15.

SCOOPS and SCREENINGS

While the East and midwest were struggling through snow and trying to keep warm during the first part of January, there came this enticing report from Bandon's "Western World", telling of the weather in the Southeastern Oregon cranberry area:

"Communities on the Oregon Coast, at least the Bandon area of Coos County, have been enjoying uncommonly mild winter weather. There have been no killing frosts, and numerous flowers

are in bloom, some from late fall and some from early spring. At the same time (Jan. 8) a number of fresh vegetables are still being taken from the gardens.

"A cursory survey of gardens in Bandon and surroundings finds in bloom the following: calla lilies, grape hyacinths, primroses, narcissi, snapdragons, heather, snowflakes, yellow marigolds, domestic azaleas and pansies."

(Editor's Note—Bah? But they can't have fun throwing snowballs like we can.)

"Del" Hammond, General Manager Wisconsin Cranberry Sales Company, and Marge Hammond, visited Massachusetts in late January, arriving at Wareham, Jan. 23. They drove east, encountering plenty of snow, after reaching the New York state line. Cape Cod native that he is, and after not being phased by Wisconsin Rapid's 50 below zero of a few days before he left, Del's teeth were chattering at a mere 20 above at the State Bog, East Wareham. Like all Westerners, he said, "It's the dampness, it's the dampness". Give me Wisconsin's 38 to 50 below, dry cold." (Editor's Note, again: "We'll still take Cape Cod zero to 20 above)."

* * * * *

Out on the Long Beach Peninsula in Washington during January there was a landscaping tour by the Extension Service specialist in ornamental horticulture. The tour was sponsored by a garden club and the Kiwanis club. Such a tour may be O. K. for the Pacific northwest at that time of the year, but scarcely for New England, New Jersey or Wisconsin.

As growers are now much interested in chemicals—chiefly agriculture—it may be interesting to pass along the "Filler Facts" information put out by University of Massachusetts, that New England's first chemical industry—namely brewing—was established in 1620 simultaneously with the landing of the Pilgrims.

From Wisconsin Cranberry Sales Company comes the story of a member who says he would like to call his cranberry property something different than "bog" (Eastern designation), "marsh" (Wis-

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consin) or "plantation." He had thought of "cranberry fen." Del Lammond took the trouble to look into the dictionary for definition of "fen" and found it meant low, marshy land, or a marsh, and that on it grows in some areas a berry called "fenberry, or cranberry." So "cranberry fen" seems quite appropriate and in fact we seem to recall reading somewhere that that has been an English definition for land where wild cranberries grew.

MASS. SUNSHINE LOW

Sunshine at Boston, Massachusetts, was but 124 hours for the month of January as compared to a normal of 143. This 19-hour deficiency would have been much

greater except for the last six days of the month, when 40 hours were "made up."

**JERSEY CRANBERRY
GROWERS ANNUAL MEETING**
Annual meeting of American
Cranberry Growers' Association

was held at Walt Whitman hotel, Camden, New Jersey, January 31, when a very interesting program was given. A more detailed account is expected to be given next month, and also of the annual blueberry growers' meeting at Pemberton.

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Ray Bates Again Heads Coos Co-op

Bandon, Ore.—The Coos-Cranberry Co-operative met on Saturday evening, January 9, at Masonic hall, for the annual meeting. The officers elected for the ensuing year are: Ray Bates, reelected president; Kennedy Baker, vice-president to replace A. B. Woodworth; Elmer Gant, secretary-treasurer;

directors, Charles St. Sure and Raymond Wilson.

The remainder of the evening was given over to discussion of the marketing conditions and other matters of importance.

Blueberry Growers Of Mass. Meet

Fourth annual meeting of the Southeastern Massachusetts Blueberry Growers Association was held at East Wareham, January 26, Alphonse Dahlen being elected president to succeed G. T. Beaton. Walton Truran, Jr. was chosen vice president, Mrs. Mabel Kelley secretary and treasurer, Lyman McKenna and George Briggs, directors.

Forty-seven members and guests were present at the supper and meeting held at Wareham's Coffee Shoppe. J. Richard Beattie introduced the principal speaker, Prof. W. H. Thies of Massachusetts University. Prof. John S. Bailey also spoke and C. D. Hammond, Jr., meeting is to be in March.

"Cranberry World" Wins Third Prize

New Publication by ACE
Given Award by National
Council of Farmer Cooperatives.

The "Cranberry World" has run off with third prize in the national competition among publications of farmer cooperatives. The prize was awarded by the National Council of Farmer Cooperatives at its recent convention at Chicago. Five hundred publications were eligible.

"Cranberry World" is published by the American Cranberry Exchange.

A monthly publication only 14 issues old at the time of the award, the "Cranberry World" competed with older, more elaborate publications. The prize was awarded for a combination of devotion to the interest of the publishers, to the cooperative movement, and the members.

Said C. M. Chaney, Exchange general manager, "We are sur-

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The New England Cranberry Sales Company

is a cranberry growers' organization, governed by growers, all of whose votes are equal in determining the policies of the Company.

The Growers' Service Department, **operated for the benefit of** members during the past five years, is steadily increasing in value to growers. It is now managing properties for grower-member, distributing bog supplies, and assisting generally in all types of bog work.

The New England Cranberry Sales Company offers a complete service to its members in the production, packing and marketing of their cranberry crops.

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prised and pleased to win this prize. We were not out to win a prize, but to keep our members better informed, to substitute fact for rumor. We wanted to interest growers, their wives and families. We wanted them to know more about their cooperative, and we wanted them to have the latest information on cranberry growing. If we deserve a prize for this effort, I am proud to accept it."

Nescos to Hold Regional Meetings

New England Cranberry Sales Company is planning a program of meetings in the several Massachusetts districts, to be arranged under the auspices of the Contact Committee of the company. These will be night meetings, beginning with a supper at 6 o'clock. All members are invited to attend and to bring other growers who might be interested in discussing cranberry matters, with special reference to the methods and policies of the co-op. The first meeting was scheduled for February 5 at Middleboro.

PLYMOUTH MEETING

(Continued from Page 7)

briefly, saying there had not yet been time enough to make any definite determinations. He said his job was to study cranberry problems from the "surface of the ground down." He has formal projects involving soil studies and water problems. He had set out 253 fertilizer plots and was studying the nitrate, phosphorus and potash actions. Also he was working to some extent upon five minor elements.

"As only one year has gone by, it would be very foolish of me to try to tell you any definite conclusions as yet," he said. He did point out that some of the minor elements might prove to be useful in disease control, and that there was a trend developing that phosphorus might possibly be used to cut down berry rot. He said this looked hopeful and he was to continue this study.

Introduced at the Rochester meeting by Mr. Brown was Harold Woodwood, associate county agent

of Bristol County, the latter saying that as cranberry growing was increasing in his county, extension service was to begin a program to aid that industry. John Mott, of soil conservation was also introduced by Mr. Brown, and in conclusion Brown spoke earnestly of the importance of better soil conservation in the future as so much of the country's top soil is already depleted.

Concluding feature of both meetings was the showing of colored moving pictures of general Wisconsin marsh scenes by "Del" Hammond, general manager Wisconsin Cranberry Sales Company. Grow-

ers found these pictures, with Hammond's comments extremely informative.

Mr. Urann Speaks At First Cape Cod Club Meeting

First Cape Cod Club meetings were held at Bruce hall, Cotuit, with supper, January 5, and at Carleton hall, Dennis, with supper, January 8. M. L. Urann was the principal speaker, who told of marketing conditions in 1947 and a forecast into 1948, as he did later

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before the Plymouth County growers.

Miss Ellen Stillman spoke on the NCA advertising program; H. Gordon Mann on sales; and Ferris Waite, growers' relations, was also called upon.

The meetings were called by County Agent Bertram Tomlinson, and a sound film was shown. It was a story of wild life and its conservation, and showed this tied in with soil conservation.

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(Continued from Page 5)

Blueberry Meetings

On January 19, 20 and 22, meetings were called in the three blueberry counties by Dan Kensler, Burlington County Agent; Dick Hartman, Ocean County Agent; and John Brockett, Atlantic County Agent, in the order given, to discuss blueberry insect and disease control and provide the growers with advance information on proposed changes in the control program for the coming season. W. E. Tomlinson, Jr., discussed insect control problems and answered questions from the floor. C. A. Doehlert answered questions on blueberry problems in general.

A similar series of meetings will be held in February to review the Cranberry Chart with discussions of changes proposed for 1948. The Burlington and Atlantic County growers will meet February 19 at Pemberton. The date for the Ocean County meeting will be set in the near future.

Research Associate

Philip E. Marucci resigned as holder of the F. V. Coville Fellowship on December 31, 1947, and has accepted a full time position as Research Associate at the Cranberry and Blueberry Research Laboratory. He will devote most of his time on blueberry virus vector problems.

J. Newton Clevenger Dies

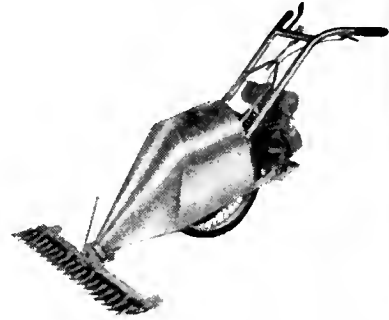
On December 30, 1947, J. Newton Clevenger, one of New Jersey's oldest active cranberry growers, died at the age of 80. The owner of extensive cranberry acreages in the Sheep Pen Hill section of Pemberton, he was active in the management of his property until a very short time before his death.

WASHINGTON

There has been considerable activity in the cranberry bogs this winter. The winter has been very mild with comparatively few frosts, but much rain and quite a bit of wind of the 60-mile type.

Among the recent bog purchases has been the purchase of the old Dr. Paul marsh and the Alger marsh from the Patterson brothers by Ostgard and Sundberg. The lat-

ter have started improving these properties. Ted Holway, a prominent oyster man from Oysterville, has purchased the old Henderson marsh, which had been neglected since the death of Mr. Henderson. Holway has a crew clearing up and



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has dug a sump hole to supply water for a sprinkler system.

Personals

Dr. D. J. Crowley attended the annual Western Spray conference at Portland, Oregon, from January 19th to 23rd. He also attended the annual Experiment Station conference at Pullman, the first week in February.

Dr. J. Harold Clark has returned from a visit to Washington, New Jersey and Chicago.

Joe Alexson has resigned as foreman for the Cranguyma Farms project and is building a new home and getting land ready for cranberry planting in the spring.

Mr. and Mrs. Jim Olson of Bandan, Oregon, visited Long Beach and the cranberry station in early January.

Long Beach Club

The Long Beach Cranberry Club held its installation of officers January 9th. The officers are Al Sundberg, president; Elwell Chabot, vice-president; Mrs. W. C. Morton, secretary, and Mrs. Don Tilden, treasurer.

OREGON

Southwest Oregon is a hotbed of inventive genius, or so it seems judging from the wide variety of mechanical gadgets that have been constructed the past two or three years.

Four or five men have built mechanical planters that give promise of developing into worthwhile time savers. With these new planters, built on the order of a farm disc, planting costs from \$100 to \$150 an acre with plants furnished. However, it takes from 1000 to 1500 pounds of prunings to plant an acre. Fairly reliable reports claim that it costs about \$1000 to construct a planting machine.

Advocates of hand planting are paying 50 cents a pound for selected and tied vines, and using but 300 to 350 pounds to the acre.

Another gadget that gives hope to growers is a new barrel like affair used in splashing the berries from the vines. With this machine, one man can harvest an acre in a day. The berries are only suitable for canning, although exto promote more cranberry research work by the USDA. The

perimenters claim very little damage to the vines or berries. There should be some improvements in this machine by next harvest.

Frank Zorn has developed a water picker that he has used with success for several past seasons. He built five of these, and is working to make it popular with those who water pick.

Club for More USDA Research

The Southwest Oregon Cranberry club is staunchly behind a plan

club is working with the Washington club in keeping this subject before the proper authorities. It is believed that the industry will only reach its greatest possibilities through continued research and experimentation.

The annual meeting of the Southwest Oregon Cranberry club will be held in February. New Officers will be elected and tentative plans for the year will be discussed.

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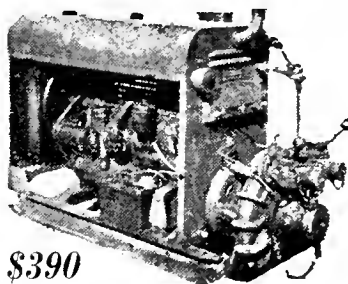
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We have installed both high and low pressure equipment on Cranberry bogs in Cape Cod area.

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The annual cranberry tour will be held in August, exact dates to be established later in the season. Oregonians who attended the Washington Field Day of 1947 are still starry eyed when they tell of the wonderful time they had. Oregonians hope to return that generous hospitality and make the August tour something to be remembered.

High Lights of the Past Harvest Season

Most growers went slightly under their "wishtimate" for production, although Oregon as a whole was 2000 barrels above the 1946 record. This was due largely to new marshes coming into production.

Oregon had rain along the coast

July 23 to 27, which was very unusual. Rain came again the middle of August and September 6 to 8. On September 11 temperature went to 87 degrees. It rained Oc-

tober 8-10, also October 14-20, really heavy storms which interfered with all harvest operations. The total rainfall for the month of October was 14.8 inches, as com-

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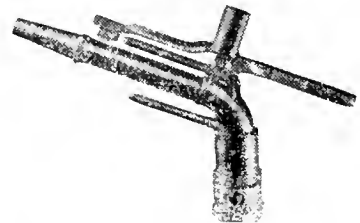
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		32.30	150	168
		34.50	155	173
		36.80	160	178
		37.50	165	182



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Catalog No.	Main Nozzle Size	Lbs. Pressure at Sprinkler	G.P.M.	Diam. of Coverage	Diam. of Uniform Coverage
LR-3 3" Inlet	1"	80	300	325	300
		90	320	330	305
		100	340	340	310

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pared to the 45 year average of 4.35 inches.

These unusual weather conditions contributed to the production of tender berries, making it necessary to can more than ordinarily canned on the coast.

The two National Co-operatives handled the marketing of the berries. Both did a good job with berries produced under unfavorable weather conditions.

Heavy weather and flood conditions in Oregon during January did not affect cranberry growers.

BEATTIE

(Continued from Page 4)

A brief summary of the more important points resulting from experiments and observations of the staff at the Cranberry Station, particularly Dr. Bergman's seem in order. First, let's be sure that we know our own property as thoroughly as possible. What applies to one bog apparently doesn't always work in the same fashion for others even in the same neigh-

borhood. The subject is controversial among growers which may have resulted from the many sets of circumstances involved.

However, here are a few of the

more pertinent practices to alleviate oxygen deficiency. Bogs should be flooded as shallowly and for as short a time as possible, according to Dr. Bergman. Oxygen defi-

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iciency is more apt to occur under a deep flood when conditions become unfavorable for photosynthesis. The time for putting on the winter flood will vary with weather conditions, but he urges growers to delay this flooding as long as conditions will permit (avoid high winds occurring when temperatures are low). Incidentally, those who delayed their winter flooding long enough to realize the benefits of the heavy December snows have no oxygen problem to contend with and are apparently in very favorable condition at present. Now we come to the final point, the rather delicate matter of when to withdraw the winter flood. This is where the careful sampling of the water and accurate determination of the dissolved oxygen content comes into the picture. As has been stated many times, when this dissolved oxygen content reads as low as 4 cc. per liter, it's time to seriously consider the immediate withdrawal of the water. Again, this is assuming that you have plenty of water for a reflow should it be necessary. One further precaution—if it seems advisable to withdraw the winter flood, Dr. Bergman suggests that it be withdrawn well down into the ditches, particularly if the bog is out of grade, in order to avoid any "pockets" of oxygen-depleted water which might not drain off.

Since many growers aren't in a position to take samples and make the oxygen determinations, it might be well to list the service available. The two cooperatives, plus one or two of the other cranberry marketing agencies, are performing this service for their members. For those who would like to take their own samples, equipment is available at the Cranberry Station as well as instructions in the proper technique.

As a final point, your attention is called to some of the bulletins or publications available on this

subject which may be tucked away in your files, or may be obtained by contacting your County Extension Services in Barnstable, Bristol, and Plymouth counties. Reference is made to Mass. Bulletin No. 402 entitled, "Weather in Cranberry Culture", written by Drs. Bergman, Franklin, and Stevens. The actual sampling technique and method for making the analysis is outlined in

a mimeographed publication prepared by Dr. Bergman entitled, "Directions for Taking and Titrating Water Samples for the Determination of Dissolved Oxygen." There is also a recent article that appeared in The National Cranberry Magazine by Dr. Bergman, in the March, 1946, issue, page 21, entitled "Oxygen Deficiency in the Winter Flood of Cranberry Bogs."

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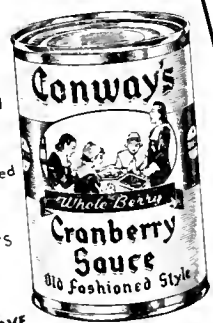
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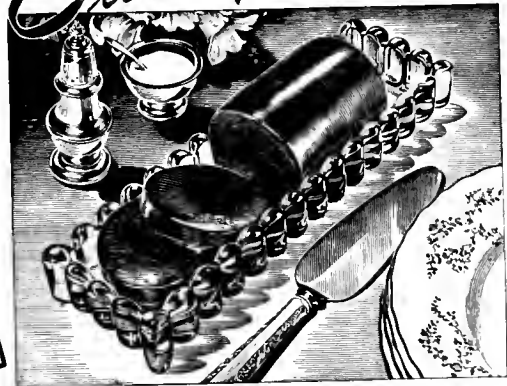
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Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE
Extension Cranberry Specialist



The 1947-48 winter has really given us a workout, so to speak. While it hasn't been the coldest one on record—please note that since 1888 nineteen previous winters have seen lower average temperatures—the snowfall did exceed all previous records in certain areas in the state. However, cranberry growers have been active in spite of it all. A large percentage of the hogs had the winter water withdrawn—including the State Bog. Considerable sanding on the ice was done after the winter water was withdrawn. Cranberry clubs and school meetings in Plymouth and Barnstable counties have been very well attended under the able direction of County Agents "Joe" Brown and "Bert" Tomlinson.

Speaking of meetings, there were two held this month of particular interest to growers. One was held at the Cranberry Station in East Wareham and the second in New York City. On February 4, 20 growers and Station staff members met at the Station to revise the Insect and Disease, and Weed Control Charts. This is an annual task, and one that requires considerable time and study. Both charts were thoroughly discussed, and proper revisions made under the able guidance of Drs. H. J. Franklin and C. E. Cross respectively. Growers' observations and comments are extremely helpful at these seasons. The charts have been carefully checked and are now in the hands of the printer. County Agent "Bert" Tomlinson is responsible for the printing of the Weed Chart and the writer will take care of the details of the Insect Chart. Incidentally, many revisions were made in both charts which will be discussed at the club meetings this spring. The time

and effort so generously given by the growers is really appreciated at these revision meetings. Growers present representing Plymouth, Barnstable, and Bristol counties included: Russell Makepeace, Robert Hammond, Frank Butler, Robert Pierce, Herbert Dustin, Seth Collins, Bertram Ryder, John Shields, Gilbert Beaton, Raymond Morse, Ferris Waite, Nahum Morse, Kenneth Garside, County Agents J. T. Brown and Bertram Tomlinson, and the Cranberry Station staff.

Dr. Cross Speaks

The second news item of interest to growers was the annual Northeastern Weed Control Conference held in New York City, February 11-13. Why was this a highlight? Well, growers will be interested to know that not only was Dr. Chester E. Cross present, but addressed the Conference and represented the Cranberry Station. Dr. Cross tells us that this group was organized a year ago at Cornell University in Ithaca, New York. The purpose was to bring together the research men and weed specialists of the northeastern states for a discussion of mutual problems, and to acquaint one another with the various new herbicides appearing on the market in great numbers. Dr. Cross attended the meeting last year at Ithaca along with about 70 other men. This year, however, he was one of about 300 who met in the Hotel Commodore. About half of this number were professional botanists and chemists actually conducting weed control experiments, while the other half were specialists from the research laboratories of agricultural chemical concerns, oil companies, and others whose products are used in weed control work.

After registration on the morning of February 12, the Conference

was officially opened by Dr. Ahlgren of Rutgers University. This was followed by speakers from the U. S. Department of Agriculture who outlined weed control problems and methods in the Northeast Region. At luncheon, the Conference heard W. H. Allen, Commissioner of Agriculture in New Jersey. FLASH—A special feature of the luncheon was the presence on each table of a large bowl of fresh cranberry sauce, a present from the Massachusetts growers to the Conference. Dr. Cross heard many very favorable and appreciative comments about the sauce. During the afternoon, several addresses on the way 2,4D functions as an herbicide, types of machinery used in applying herbicides, petroleum chemistry as related to herbicides, and finally a fine talk by an alumnus of the University of Massachusetts, Dr. C. E. Minarik, on methods of testing new chemicals to determine their value as weed killers.

On the morning of February 13, the Conference was split into the following four sections to bring together those interested in weed control in closely related crops: 1. Vegetables and Potatoes, 2. Field Crops, Pastures, and Turf, 3. Fruit, Nursery, and Ornamentals, and 4. Public Health and Welfare. Dr. Cross attended group 3 and presented a talk on "Chemical Weed Control on Massachusetts Cranberry Bogs". His talk was very well received. The PDB treatment of weeds appeared as a technique wholly unknown outside its use in cranberry culture. Many complained that the cost of the treatments was excessive until it was explained that hand pulling was the only alternative. The difficulties of controlling weeds in a crop that cannot be cultivated, plowed or disced, had to be related. It was apparent that studies of chemical weed control in many crops was just beginning, whereas the chemical weed control work on Cape Cod has been receiving close study for 12 years now. Most of the research men felt their work had not been carried far enough as yet to permit publication of specific recommendations. Dr. Cross

(Continued on Page 28)

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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FRESH FROM THE FIELDS

By C. J. H.

MASSACHUSETTS

How "Bad" the Winter?

Whether this past winter has been a particularly bad one for bogs from the viewpoint of oxygen deficiency or not does not seem to be known as March began. Certainly there has been more snow and snow-ice on the bogs than in many years past. On the other hand, more growers than ever before have drawn the water. On considerable acreage, vines were frozen into the ice, which gives the best possible protection.

The sunshine factor in February, which is a more important month than January in this respect, was more favorable than in January. There was probably no winter-kill, as bogs had snow or ice protection practically all winter long. Snowfall topped all records as recorded at Boston, 122.2 inches for the entire winter. Cranberry areas of Massachusetts received varying amounts, Barnstable county least of all. While the winter was an extremely uncomfortable one because of the repeated snowfalls and continuous cold days, the average temperature was not too far below normal.

Snowfall

Snowfall as recorded at the East Wareham Experiment Station for February was 14.9 inches. For the three winter months, 42.5 inches, 6 in December, 21.6 in January and 14.9 in February. Most snow on the ground during February was 13 inches on the 12th. The coldest day of February (Experiment Station) was -12 on the 11th and the warmest 51 on the 15th.

As March came in, observers at the Experiment Station are perhaps best described as being undecided as to how the balances—that is, favorable and unfavorable factors—will prove to have cancelled out. It may not have been such a bad winter from the viewpoint of production as was at first feared. If this proves to be true, bad effects have been alleviated to some degree, at least, because so many growers observed the warnings of threatening oxygen deficiency and "yanked" the water.

Although there was ice, not a great deal of ice sanding was accomplished. For one reason there was too much snow.

NEW JERSEY

Temperatures

February temperatures at Pemberton ranged from -10° on the 7th to 70° on the 19th. The month started cold, with no let-up from the prolonged frigid weather that started at Christmas time. A welcome respite from the 13th to the 20th removed all of the snow from the landscape and ice from many of the bogs. The average daily mean temperature through the 25th was 30.5° or 3.1° below normal. This deficiency was due to the severe cold early in the month that was not made up for by the mild weather in the middle of the month.

Precipitation

Precipitation at Pemberton through February 25 totaled 1.62 inches or 1.03 inches below normal for the month. Most of the precipitation was in the form of snow, occurring on the 4th, 5th, 6th, 8th

and 22nd for a total of 10.2 inches of snow for the month.

Winter Injury to Blueberries and Cranberries

Some blueberry fruit buds were killed by the severe cold of January 19th. Just how general or severe this has been is not known at the present time, though numerous reports of injured twig growth have been sent in to the laboratory.

Ice Conditions

As of February 27th, New Jersey bogs are still covered with snow-ice. That makes two months and two days since the Christmas snowfall. Some bogs had frozen over enough to bear the weight of men and wheelbarrows on December 19th. Since that time there has been no day when the bogs have been free of ice except for particularly sheltered places on February 19 and 20.

A number of growers dropped their ice on receiving Mr. Wilcox's warning of December 31st. Others dropped at different times during the month of January and the early part of February. These generally were properties where the water supply for reflowing was not abundant. A good many bogs have never had the ice dropped at all. Because of the prevailing cold weather early in February, non-flooded vines continued to be well protected from winter injury by the ice and a covering of snow that fell on February 4-8. This protective covering was melted off during the warm spell from the 13th to the 20th from bogs where the water had been drawn from under

(Continued on Page 22)

Jesse H. Buffum, Famed N. E. Broadcaster "Plugs" Cranberries

Columbia's Regional Agricultural Director, who has had Fabulous Career, in Radio, News Work, Still and Movie-Making, is an Ardent Disciple of the Industry—To Give Another of the Noted "Buff's" Luncheons This Month.

By CLARENCE J. HALL

Cranberries, and especially their publicity value, have one ardent disciple in Jesse H. Buffum, Columbia Broadcasting System's agricultural director for New England. And "Buff", with his early morning "New England Almanac" over Columbia's "Friendly Voice in Boston" (590) and his famous "Buff's Luncheons" is an extremely valuable man to have so favorably inclined toward cranberries and the men of the industry.

Late this month (March) there will be the fifth of these notable luncheons. These are events where agricultural leaders pay their respects to the Commonwealth's chief executive, with "Buff" as host and arranger. So far he has been host to both Governor Bradford and his predecessor, Maurice Tobin.

The luncheons, to which leaders in each Massachusetts agricultural industry are invited, Buffum says, are really across-the-table conferences, with all talk limited to two minutes. "These are give and take meetings", says this broadcaster who has been called "the most fabulous figure in New England radio."

"And", he told me at an interview recently at Columbia's Tremont street headquarters, "you can quote me that at this next luncheon cranberries will obtain very special consideration.

"Cranberries Most Romantic Crop"

"Cranberries are Massachusetts' most romantic, most colorful crop. The state is losing a great bet in not making more use of this unique crop for publicity purposes. The state is a loser through this unfortunate oversight and the cranberry industry is also the loser. Cranberries and their cultivation are fascinating. People like to read and hear about this crop and industry, which originated here in Massachusetts on Cape Cod more than a century ago."

Buffum is doing his own best to remedy this situation. Twice on Columbia national hook-ups, the latest on December 20th, Buffum has emphasized Cape Cod cranberries and the cranberry industry.

"Buff" is on the air every weekday morning from 6.10 to 6.45. The first half of his time he discusses

agricultural topics, market reports, etc., which last fall included cranberry quotations. The second half he gives up to telling legends, folklore, history and varied topics. At the present moment he is conducting a campaign to find out who is New England's greatest liar.

Making up the audience of this breakfast-time audience are early-to-work businessmen and professional people, suburbanites, industrial workers and farm families, the latter including many, many cranberry growers.

Ever since 1940 "Buff" has been beating New England to the alarm clock, with his down-to-the-earth broadcast of agricultural news and philosophy. Jesse H. Buffum, who you must have gathered by this time is quite generally and familiarly known as "Buff", is a tall, thin figure of a man with snowy hair. Although born in Boston, he was brought up on the farm of his father at Winchester, New Hampshire. He has the farm background and interest in agriculture, but he has come to be called the "adventuring farmer", because of his travels. Farming, newspaper work, traveling, movie making, lecturing and broadcasting make up his life.

"Buff" an Adventuring Farmer

He comes to both his flair for farming and for publicity work quite naturally. His father, be-

sides running his own farm, was G. A. R. editor for the Boston "Herald". He would go down to Boston from the Granite State in the late 1880's and early '90's to obtain the latest information upon farm problems, including the then new use of insecticides, Paris Green, and Bordeaux Mixture. He would then go home and hold meetings with his farm neighbors and explain the newest theories in farm science. "He didn't really run what would today be called a 'model farm', Buff explains. "It actually was more of a demonstration farm. What he was really doing was the sort of work the county agents do so well today."

"Buff" himself became a printer and then reporter on the Topeka "Capitol." He made a survey of Hawaii's sugar industry. He is an ex-Hollywood newsreel cameraman. He snapped pictures inside the live crater of Kilauea and was under fire during Mexico's Battle of Agus Prieta. For this he received a citation.

Only last summer he flew with still and movie cameras to the South Pacific with letters of introduction from Massachusetts Governor Bradford to the governors of New Caledonia, Fiji and New Guinea. These cleared the way for a "color film trail" through the native villages. In Australia, with government cooperation, "Buff" got the pictorial story of the world's most primitive people—the bushmen of the famous "out back" of the "land down under." He found Hawaii much more advanced than when he had gone there the first time, many years ago, except for some of the interior villages. But he found the speed of the plane in getting him there had a definite advantage over the sailing vessel in which he travelled the first time. In all, in this trip he flew 24,000 miles.

His interest in picture taking has led him recently to prepare 2,000 feet of color film which he calls, "This Is New England." In this he gives cranberries a good deal of attention. It is shown before various civic organizations, clubs, and other groups.

Buffum is definitely a man of far horizons and a romantic, himself.

He has an enthusiasm which keeps him going places and doing things, recording them and telling about them. This urge once led him, with his brother, to walk across the continent on a diet experiment for Dr. Dudley Sargent of Harvard University.

In spite of his journeyings, Buff, however, shows that he remains a farmer at heart. He owns a farm in Warwick, Massachusetts, to which he will some day retire with his wife. He has a son who seems to be following in his tracks, as the latter has entered the newspaper game at North Adams.

He Admires the Cranberry Growers

To get back to "Buff's" views on cranberries. At the interview with me, he leaned back in his chair, lighted a cigar, and the voice which Author Kenneth Roberts has called "the celebrated Buffum voice" poured forth his praise and admiration for the cranberry industry and the men and women who make it what it is.

One of the things which has most impressed him is that the growers have turned otherwise totally waste land into productive areas. This to him is important. He calls the growers a stalwart, far-sighted group of agriculturists. He mentioned George E. Short (former president of Cape Cod Cranberry Growers' Association and one of the cranberry guests at a luncheon), spoke admiringly of Dr. H. J. Franklin, and then turned to Ellis D. Atwood. "That is a wonderful thing that man is doing there at South Carver. I've been to Edaville a number of times and have ridden on the railroad. An industry which can produce such a public-spirited, generous man, and a man with such vision as Mr. Atwood, deserves credit for that fact alone.

"Atwood is doing much to publicize cranberries, and in a most favorable way. Let me repeat, more publicity is what the cranberry industry needs, and it would be a fine thing for the state at the same time. We here in Massachusetts and New England are too conservative. We hear all the time of Northwestern apples here in New England where we grow our own apples. We don't push our prod-

ucts as other sections do. Cranberries are grown in only a few places. Everything about the crop, from the building of the bogs out of swamps, the fight against insects, the fight against frosts, the harvest itself, make up one of the most colorful of human endeavors that I know of. Cranberries are a natural for publicity."

The cranberry industry should be thankful that a man of Jesse H. Buffum's multiple attainments and eminence has to a certain extent "adopted" the industry. He has spoken before growers at the annual growers' association meeting. He has boosted cranberries in his broadcasts and in his movies and at his luncheons. Even though Mr. Buffum may not need cranberries, cranberries need such men as he to pass along invaluable publicity. This is especially true now when the industry is faced with such an increase in crop potential.

The parting words of "Buff", as he terminated this interview were indeed heartening: "Be sure and quote me on this—that I'll plug cranberries at every opportunity."

Wisconsin School

A nine-week course in cranberry culture, open to all Wisconsin vet-

erans who are enrolled in the cranberry industry under the GI bill, was opened by the Wisconsin Rapids Vocational School, February 13. Sessions are to be held each Friday from 9.30 to 4 o'clock through April 19th.

While the cranberry course is primarily for GIs, it was announced that cranberry growers and other interested persons are invited to attend. Vernon Goldsworthy, vice president of the Wisconsin Cranberry Sales Company, will preside at each of the nine gatherings. He opened the school with a talk upon "Requirements of a Successful Cranberry Marsh".

Other speakers include Prof. H. R. Roberts, University of Wisconsin; Prof. A. B. Albert, University of Wisconsin; Leo A. Sorenson, NCA; Jean Nash, president Wisconsin Cranberry Sales Co.; H. B. Bain; C. D. Hammond, Jr., general manager Wisconsin Cranberry Sales Co.; Clifford Peterson, State Highway Department; H. F. Duckart, president Mid-west Cranberry Co-op; John F. Border, State Department of Agriculture; A. Reisdale, general accountant; Richard Brazeau, legal adviser to growers; Clarence Searles, development of the Searles variety; Donald R. Rowe, county agent.

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A PROGRESS REPORT ON THE NEW PREFABRICATED FLUME PROGRAM

(Editor's Note)—The following "anonymous" article is the result of collaboration between several of those most informed and experienced in the newer type of flumes. It is presented in the hope their conclusions will be of value to the industry at this time, even though the use of these new items is not yet thoroughly time-tested.)

History is replete with instances where an industry has gone along for years without any significant improvements, and then, all of a sudden, the work of several independent developers seems to come to fruition all at once, revolutionizing some phase of the industry. This has happened, almost in the past year, in the case of cranberry bog flumes. We all remember when the time for installation of a flume was reckoned in weeks, where it may now be figured in hours.

This is the result of the adaptation of corrugated iron to cranberry flumes. Of course it cannot be said that no grower ever pre-assembled parts of a wooden flume and then set them in place; undoubtedly that has been done. But the driving of spiling and the laborious effort to get a tight contact between the bottom of the "box" and the underlying material had to be done bit by bit in an exasperating battle with ever-rising water. And we all have known of flumes where considerable water ran under rather than through the flume, in spite of our best efforts.

Time Saving

Today the time of setting a flume depends on how fast you can handle the excavation and backfill, if the new prefabricated flumes are used. These can be assembled on the bank and swung into place with one motion of a power crane. And we have yet to hear of the first one washing out where properly installed. Many of the flumes have been assembled by hand in the hole, with a foot or more of water running through, in sizes as large as 60" pipe. And now even pumpwells are being handled the same way—installed in a day.

This somewhat surprising freedom from washouts seems to be due to the especial suitability of corrugated iron pipe for the work. It is easy to pack backfill around and under a pipe because the dirt does not have to be forced around corners. The dirt will practically pack itself tight around the pipe under its own weight. And in soils and locations especially liable to seepage, a "seepwall" may be used which is quite similar in form and function to the rat-guards used on

ships' mooring lines. Furthermore, the slight elasticity of the corrugated pipe plays a considerable role in relieving excessive spot-loads and developing support in poorly packed areas at the same time.

It is interesting to note and record the history of this revolution in flume building. Corrugated iron pipe has been used for years in and around cranberry bogs, for example on the L. B. R. Barker properties. But this use was only the pipe itself, as a culvert. For flume use, a wood, masonry or concrete flashboard head was applied in the traditional manner. We cannot consider such a structure as a prefabricated flume.

R. A. Trufant Took Hold

The metal sliding-gate on corrugated iron pipe has been used for decades in the irrigated Southwest and West. Probably a thousand have been installed on the plans drawn by R. A. Trufant when he was engaged in that work nearly thirty years ago. But this device did not become a cranberry flume until he put one in on his bog in North Carver in December, 1945.

Probably we should date the prefabricated flume from February 1944, when Marcus L. Urann of the United Cape Cod Cranberry Company, working with the Berger Metal Culvert Co., formerly of Boston, built the first flume of their type. This was the first corrugated-iron flume which could be swung into place in one piece.

This United flume is almost a copy, in heavy-gauge metal, of the traditional trunk flume. It is adaptable to large sizes. Its flat

bottom (except for corrugations and stiffener angles) gives it laege capacity at low levels, but also brings ii the peoblem cf securing good ground contact to avoid the possibility of underflow. It may be had with or without wing walls, curtain walls, flashboard grooves, etc.

United Cape Cod Co. Pioneered

Much credit is due to this pioneer effort for its stimulation of the other developers. Mr. Trufant freely admits that the United flume served as a challenge to his designing ability. And it surely took some of the newness off the idea when the Trufant and Whipple flumes came to be offered to the growers.

The forced neglect of maintenance during the war years left most growers with flumes needing replacement. The worst ones on the Trufant bog were all reservoir flumes, so he naturally was most interested in them. He thought more and more about the suitability of the irrigation headgates with which he was so familiar, to use as reservoir flumes. So in 1945 he ordered three and placed them in midwinter, with the thermometer hitting zero some nights. When no special faults or difficulties developed, he ordered a lot more, with experimental variations such as the dog-leg and morning-glory, in 1946. However, these were all of the sliding-gate type, not adaptable to flashboards. While they were eminently suited for reservoir work, they did not meet the problem of close regulation of water levels which dictates the use of some form of flashboard between and below bogs. These sliding gates, since they open at the bottom, will put water on the bog as long as there is any to put. There is no running back to take out more flashboards; the water does the running.

Contribution of Paul J. Whipple

This brings us to the contribution of Paul J. Whipple of The Forges Contractors, Inc., Plymouth, Mass. During his few inactive hours in the late war, he studied over how he felt flumes should be built, and came back with quite definite ideas on the subject. In January 1947 he had three made

up in what we now describe as the full-circle type. This is an adaptation in corrugated iron of the familiar "chimney" type of concrete flume. Flashboard grooves are set across a well which has both an inlet pipe and an outlet pipe. The well is set inside the dike, with a concrete base and with or without wings. If long enough pipes are used, turbing may be dispensed with entirely. The flume is especially adapted to locations where the flow of water is sometimes reversed. Some growers may prefer to have the flashboards more out in the open, but the only valid technical criticism seems to be that two entry losses in head are necessarily involved, one at the entrance of each pipe. In nine cases out of ten, this is of no importance.

This introduction of flashboards to the prefabricated pipe flume was a most essential step. While the United type also uses flashboards, the Whipple full-circle uses standard sections of pipe for inlet, outlet and well and thus can be built for less than the United type, where most sheets are special cuts. Also, the inherent strength of the circle permits the use of lighter gauge sheets for the same capacities. Furthermore, it is but a short and logical step to the introduction of a pump in the well, making a prefabricated pump setting. Both Whipple and Trufant have done this already. But that is a separate subject, and will be reported on later.

The next advance in the art was more involved. George R. Briggs had placed six 36" pipes in a new canal system (CRANBERRIES, January, 1948) with the idea of putting concrete heads on them for flashboards. He saw one of the first Whipple full-circle flumes, and asked Mr. Trufant to report on their suitability for use on these pipes. The answer was that since the pipes were already set, and set too near the canal to permit adding both well and inlet ahead of the pipes, a half-well would suit the case better. Mr. Briggs said: "Fine. Order them". Accordingly, after Mr. Trufant and Mr. Whipple conferred, Mr. Trufant detailed and ordered the first

half-circle flumes. Of course Mr. Whipple had considered building his flumes in the half-circle form. Only the fact that the first flumes he needed seemed to call for the full-circle type prevented him from putting in the first half-circles also.

The Half Circle

This half-circle type has a half a chimney coupled on the outlet pipe. Flashboard grooves, well braced, close the open face of the chimney. Thus the flashboards are at the extreme upstream end of the flume, out in the open. The half-circle extends a foot below the outlet pipe. This foot, with its bottom brace and a ring of anchor bolts, is filled with concrete as foundation, bracing, and as a seal for the bottom flashboard which is set partly in the concrete. Mr. Trufant uses a stovepipe topped by an overgrown funnel for pouring this concrete under water where necessary. This is the familiar "tremie" by which most underwater concrete is placed on commercial jobs. Such concrete takes an extra week to harden. Mr. Whipple uses a full circle on the bottom foot only of the half-circle flume and furnishes wings and seepwalls of corrugated sheet where desired. Mr. Trufant prefers to rely on turf for what facing is necessary, and on the "seep-wall" for protection against eels and muskrats.

It is probably more than just a coincidence that both Mr. Whipple and Mr. Trufant chose the New England Metal Culvert Company as their manufacturers. That company, they report, has been most helpful and cooperative in the development of their structures. The Company, in turn, specializes in the use of Armco pipe, corrugated, galvanized, asbestos bonded, completely bituminous coated, and paved with asphalt at the bottom where the wear comes. The life expectancy of this pipe is said to be fifty years; cranberry bog waters may be corrosive enough to cut this down to twenty-five.

The pipe flumes have not yet been built in sizes larger than 60" outlet. It is probably sound advice to use two or more separate flumes

where one 36" pipe is not enough. Concentration of larger amounts of water bring special problems of wash control. The other dimensions of the flumes may vary widely. The outlet pipes may be any length in any pipe flume. Any depth of well may be furnished, and any height of flashboards on these flumes. Five feet of flashboards on twenty feet of 24" pipe seems to be the size most commonly specified, with a large number ranging from 18" to 36" outlets four to twelve feet high. This height should be figured from the bottom of the channel downstream to just above high water upstream. Similarly, the sliding gates (which are just a handwheel-operated cap sliding up and down across the end of the pipe) comes in various heights to bring the wheel up to convenient operating position.

This wide variation in dimensions make it impractical to carry a stock of these flumes on hand. Every one is made to fit its particular location. This means that several weeks (months in the case of sliding gates made in Denver) must elapse between the ordering of the flume and its delivery at the bog. Add more weeks if you order at the same time as all the other growers, the highway departments of every town in six states, and all the expanding airports which also demand pipe and more pipe. Naturally, the winter is the best time to get quick service, because nobody wants it then.

One should not get the idea that the various distinct types of flumes are directly competitive with each other. The United type is competitive on a price basis only with the largest pipe flumes. All pipe flumes use up some hydraulic head; if you throw a dike across the middle of a level bog and still want to get the piece above drained as quick as the piece below, better use a concrete flume ten feet wide. The choice of pipe size is always a matter of balancing cost in dollars against cost in head. The sliding gate type, unexcelled for reservoir work, does not let you vary the overflow level at will and so is not suited for use between or below bogs. The flume which is cheapest in one size often is

more expensive in some other size.

The half-circle flume seems to be the nearest approach to an all-purpose flume. It is possible to use this flume in almost any location. That also means that there is danger that the excellent qualities of the other types in their own fields may be overlooked. Over-standardization is bad in any business. The cost of turving and other incidental work varies with the type of flume, and should be considered in comparing costs.

We repeat that most of the commercialization of these flumes had been within the past year. Yet already Mr. Trufant has sold 22 of the sliding gate type and 56 of the half-circles. Mr. Whipple reports 14 full-circles and 27 half-circles placed. About ten of the United type have been built.

Prefabricated Flume Seems Here To Stay

There have been no reports of real trouble with any type of prefabricated flume. The full-circles and half-circles have not yet been subjected to a winter's icing conditions. Will internal ice burst them, or will the pressure of the ice sheet distort and perhaps fracture them? Not if there is a bit of water overflowing at all times so that they are protected by open water. Not if they are well backed by frozen ground, either. All other seasonal conditions have already been met satisfactorily. The prefabricated flume seems to be here to stay.

Cape Meeting Hears Dr. Cross Report on Weeds

Tells of Experiments With Burlap and Paper for Frost Protection

A single meeting of Cape Cod Cranberry Clubs was held in February, that being the Upper Cape gathering at Bruce Hall, Cotuit, February 17th. About 80 attended. Meeting of the Lower Cape was called off, due to weather conditions.

Program was the interesting Wisconsin colored movies, which have been shown before groups in

Massachusetts, and an instructive talk by Dr. Chester E. Cross, of the Cranberry Experiment Station, his subject being "Current Status of Cranberry Weed Control". A summary of his talk follows:

Introductory

At the start of research work on a problem as great as that of controlling cranberry bog weeds with chemicals and cultural practices, it is relatively easy to find a number of effective solutions annually, and the sum of these makes an easy basis for a full-length talk. However, after this project has been labored over for some ten years or more, it becomes increasingly difficult to discover in one year's time enough new techniques to make a worthwhile talk without including some repetition. Because of this, I hope you will forgive the speaker for diverging a little at the start to tell you one or two interesting developments that have taken place during this last year in a different field of study.

Burlap Covering

Nearly three years ago, it occurred to the speaker that it might be possible to cover cranberry bogs with some cheap material other than water to protect cranberry vines from winter-killing and frost. It appeared that burlap was the cheapest of textiles that appeared suitable for this purpose, and a rather large quantity of it was procured at private expense. Some of this was sewed together into wide sheets and spread on a dry bog during the winter of 1946-47. There was little snow that winter, and the cranberry vines not covered with burlap were exposed to the weather most of the winter. In mid-February, 1947, some winter-killing occurred on this bog, but vines beneath the burlap covering showed no injury. A striking contrast was evident in April and May between vines covered with burlap and those without winter-killing protection, the former retaining all its leaves which turned green as usual, and the latter showing all the evidences of a general though relatively mild case of winter-killing. The crop harvested in the fall of 1947 from the burlap-covered area was about 30% great-

er than that picked on the unprotected portions of the bog.

It is thought that the above information may be useful to some growers who would wish to protect the high corners of their bogs. The cost of purchasing and using burlap makes it a prohibitive method, at least at present, for general use.

Paper Covering

While attempting to handle burlap in large sheets on cranberry bogs for winter protection, the speaker got the idea that paper would be a lighter and cheaper material and one which, because of its smoothness, could be spread over cranberry vines with greater ease than the burlap. Accordingly, the Crossett Lumber Co. in Arkansas sent an experimental roll of paper 16 ft. wide and about 1000 ft. long, the only expense to the speaker being payment of freight. This paper was cut into four 200 ft. lengths, and on one frosty night in May, 1947, it was spread on a quarter acre of bog in East Sandwich. It took only 10 minutes to roll it out when the bog temperature was 32°. the air still, and every evidence of a severe frost. At 3 a. m. the thermograph beneath the paper still showed 32°, while on unprotected vines nearby, white frost had appeared and the thermometer registered 25°. Full of confidence and hope, I went home to bed and returned at 7 a. m. The paper now assumed a very different aspect. Those four great sheets were rolled and twisted into a gigantic mass resembling a blimp. The wind was still light, there seemed little I could do to retrieve it at the time, so I left it. By mid-day, however, the wind had risen to near gale force, and I returned to the scene of my experiment. Shreds and streamers of torn wrapping paper were flying through the air, catching in all the prickly locust trees and in general littering the whole countryside—AND—it was village improvement week in the town! I conclude that paper is of little use as a frost protection on cranberry bogs.

Changes in This Year's Weed Control Chart

I am glad to report that work done in 1947 shows clearly that

PDB can be used with success to control bog weeds when applied in April. As yet, we are not sure of the effect of frost flooding after PDB treatment, but control of poison ivy and wild bean was excellent in one case where a frost flood was put on six days after treatment. I hope, if growers have any experience with frost flooding after treating with PDB during this coming spring, that they will acquaint me with their results. At present, it looks as though the flood settles and packs the sand over the PDB sufficiently to make the treatment more effective. In addition, a flood shortly after the application of such a heavy layer of sand would release a number of the buried uprights and possibly make unnecessary the lifting of the vines with rakes and potato diggers.

The control of 3-sq. grass and the small bramble with PDB appears inadequate to justify the retention of this recommendation on the chart. We are hoping that spot treatment with 2,4D may prove to be an answer to the problem of 3-sq. grass control.

The spraying of the usual salt solution has been found effective in killing the arrow-leaved tearthumb. This spray treatment is cheaper and more easily applied than the usual method with broadcast iron sulphate.

Work in 1947 has demonstrated that the placing of a few crystals of copper sulphate in the crowns of small bramble plants kills as many vines as weeds and can no longer be recommended.

Stoddard Solvent

Considerable work was done with Stoddard Solvent during the spring of 1947. This oil is known in Wisconsin and on the West Coast as "Mineral Spirits", and is marketed in Massachusetts as "Varsol No. 2" and "Sovasol No. 5". Generally speaking, Stoddard Solvent kills a greater variety of bog weeds than does kerosene. However, it is more expensive and appears to be effective only when used in quantities comparable with kerosene. Stoddard Solvent sprayed at 400 gallons per acre on May 1, 1947, killed all asters in the plot and apparently caused no injury to cranberry

vines or that season's crop. It is known, however, that the time period during which the solvent can be safely applied to cranberry vines is somewhat shorter than it is for kerosene. Growers who wish to try some of this should plan to use

it only during the first ten days in May until our knowledge of this oil has been augmented. If you do use some Stoddard Solvent during this coming growing season, I would greatly appreciate hearing of your results.

McGrew Optimistic of Fresh Fruit Outlook

Was Principal Speaker at Meetings of Plymouth County Clubs—South Shore Votes "Institute" Committee

Officials of the American Cranberry Exchange do not see only a cloud of gloom on the horizon for 1948, particularly as far as the fresh fruit market is concerned. Clyde E. McGrew, assistant general manager of ACE, told well-attended meetings of Plymouth County Cranberry Club at Rochester Grange hall, February 24th and at Plympton Grange hall, February 26th. He stated the '47 crop to be disposed of (with carryover) had gone to more than a million barrels, and this year there would probably be an even larger "crop" to be handled, but he felt it could be done through "orderly marketing."

E. C. McGrew

In spite of the rumblings and confusion the 1947 fresh cranberry market made a very good account of itself.

You will remember that at the start of the 1947 season, it was generally admitted there was a carryover from the 1946 crop of equivalent to about 230,000 to 250,000 barrels to be yet consumed.

The August estimate by the Government for the 1947 crop was 770,900 barrels. The last Government estimate places the 1947 production of cranberries at 784,700 barrels.

Add to this the carryover of 230,000 barrels and you have 1,014,700 barrels. There it is, over a million barrels to be marketed and consumed.

The fresh fruit season got off to a slow start for several reasons:

The memory of the "No sugar" 1946 season.

The continued hot weather throughout September and October retarded the proper maturing and coloring of the fruit. It slowed up the movement into consumption of all fruits.

ACE Could Have Sold More Fresh Fruit

With cooler weather and the appearance of our advertising campaign, fresh cranberries began to really move about the first of November. From then on for the balance of the season the movement picked up to such an extent that most markets cleaned up for Thanksgiving. Many markets could have used more fresh cranberries if they had had them on hand.

The last week in November and the first week in December the fresh cranberry demand was so strong that we, the Exchange, sold out—and as you know there were several thousands of barrels returned from the processing plants where they had been delivered for processing, to the fresh fruit packing houses, and packed and shipped on the fresh fruit market. It has lessened to that extent the carryover into another season.

The Exchange could have sold about 100 more cars if we could have had them. Remember that all the cranberries that are sold through fresh fruit channels are consumed and are not carried over to interfere with the orderly distribution and marketing of the next year's crop.

The 1947 fresh cranberry season ended in a strong flourish of increased demand and higher prices. You will be interested to know that cranberries were about the only domestic perishable fruit that went through their 1947 season with advancing prices and increasing demand. The season ended with the trade convinced and confident that many if not most of the

CRANBERRY growers, as we said last month, are taking a more critical look at the immediate and long-term future of the industry. This is borne out with the debates at meetings and from conversations with individual growers.

This is a time, as at uncertain periods in the past, when a constructive viewpoint is needed. This does not seem to be a time for tearing down. Cranberry growers are all in the same boat. If they are going to make port with next fall's crop, which may or may not be a large one. The general belief is that it will perhaps be a difficult one to dispose of because of the carry-over in cans and freezers from that of 1947. Thought being spent on where to place the blame for this, if there is blame, could be better utilized in facing the situation by as united action as possible, and making plans of how to move the cranberries which are held over and which will be grown in 1948.

There does seem to be interest in the "Cranberry Institute", an idea which was first advanced a couple of years ago by C. M. Chaney. This, it seems, must be purely for the promotion of the sale of cranberries—canned and processed—and in which all distributors of cranberries could participate. We were very interested in the talk by E. C. McGrew in which he said the Exchange was not dismayed by the fresh fruit outlook for next year and the next few years to come. It was also interesting that he replied to a question at a meeting that he thought there could never be "one, two or three" organizations which could control the sale of all cranberries. He said there would always be individuals who, rightly or wrongly, would prefer to do things in their own way. That being the case, they might combine in some way, to the extent at least of all working together to sell more cranberries—advertising, and other promotion.

The main problem for all growers is to increase cranberry markets to dispose of increasing crops. This is a time for constructive thinking by the industry as a whole.

AS further signs of probable increasing crops it may be noted Wisconsin is to have an improved frost warning system—

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and so is the Southwestern Oregon cranberry area. The eagerness of growers in all areas to attend cranberry meetings and their interest to talks on how to improve production, their interest in new equipment and new methods of all kinds are other indications.

AN echo of a suggestion CRANBERRIES made a few months ago has been heard from the West Coast, as is reported in the notes from Oregon elsewhere in this magazine. That is for the selection of a queen of the cranberry industry who will be a national choice of all the areas. It was the vote of the Southwestern Oregon club to encourage such a contest. It may come about yet, there will be regional queens and then one chosen from these to represent the entire cranberry industry.

McGREW

(Continued from Page 11)

American people are going to continue to want their cranberry dishes home cooked, for taste and quality, from fresh fruit.

Fresh Fruit Trade Cheerful

January, as you know, is a month of conventions in the fruit and vegetable trade. It was evident at these conventions this last January that the wholesale and jobbing trade recognize they have a merchandising job to do if they are going to keep Mrs. Consumer spending a fair share of her food dollars for fresh fruits and vegetables. Every year there are millions of dollars spent for vitamin pills. The vitamins and minerals in these pills are obtained principally from fruits and vegetables. The fresh fruit and vegetable trade are going to show and teach the consuming public to take their vitamins and minerals the natural way, through eating more fresh fruits and vegetables. They will have much more tasty and attractive dishes by simply doing naturally what nature intended should be done naturally.

The trade are not discouraged about processed foods, canned or frozen, running them out of business. They have an all-year-round job keeping before the public nicer and nicer displays of fresh fruits and vegetables that will cause the consumer to impulsively turn to the natural way to get their vitamins and minerals. Cranberries—fresh cranberries—have their seasonal place in this all year round program and the dealers are going to be looking for that bright, cheery red each fall and winter when the season rolls around.

With the cooperation of the growers in putting up a better pack, a better grade and better quality, the trade will follow through to see that the grower gets his fair share of Mrs. Consumer's dollar.

The keynotes of the January conventions were: Improved pack; improved grade; improved quality.

These are the growers' responsibility. The Trade divides this business of ours into three parts: production; demand; distribution.

The first is the duty and responsibility of the growers. The second can be influenced tremendously through wholehearted cooperation in advertising, publicity and better displays. The third can be kept orderly through cooperation between producer, shipper and dealer.

If this is not carefully directed and handled by men with experience, the result will be confusion and chaos. The trade is willing and ready. It is up to the growers to determine whether they want men trained and experienced in orderly distribution to direct the distribution of the fresh fruit, or permit confusion to prevail and backlogs build up carry-overs to interfere with receiving justifiable value and returns for succeeding crops.

The American Cranberry Exchange has a record of 41 years of orderly distribution with increasing returns to the growers.

Last but by no means least, you have seen for the last 16 years a centralization of power in our Federal Government. During war times this was no doubt helpful and was necessary for the mobilization of armed forces and of labor and production. Daily you see in the papers and hear over the radio a clamor for a return of states rights. There were Demo-

cratic demonstrations on this subject at the Jefferson Jackson dinners throughout the country the other night.

Centralization Not So Popular

Mr. H. E. Babcock writes in the February 1st issue of the "Cooperative Digest": "Big centralized farm organizations can be as destructive to community and group interests as big Government." Our answer to this problem is our separate local companies in each producing area. It is a decentralization of power—the retention of states rights in each producing area, but at the same time a continuing union of interests in orderly distribution nationally. Such cooperation between the different producing areas is an absolute necessity to avoid chaos and ruin. If the growers in the different producing areas ever stopped working

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together in the over all orderly distribution it would be only a very short time until they would bring down upon themselves complete ruin of the industry.

In the question and answer periods which were a lively "give and take season", it appeared that growers were well aware of the difficulties facing the industry with the expanding crops, and there was interest in how these bigger crops could be moved. There was debate on the plan of a "Cranberry Institute", which could promote the sale of all cranberries, regardless of who handled these berries. Mr. McGrew said he thought there could be an institute which might aid in advertising and promotion, but doubted if this could ever be effective in marketing. To questions (at Rochester) he said the Exchange had sold approximately 175,000 barrels fresh last year, which represented approximately 75 percent of member production. To another question he said he felt the most desirable balance for the future between fresh and processed fruit would be about 60 percent for the former and 40 for the latter.

At the Plympton meeting, Orrin Colley presiding, there was definite action on the institute proposal. G. T. Beaton moved a committee be appointed to hold a meeting of the four Massachusetts clubs at which this could be discussed. The four club presidents, Plymouth and Barnstable County Extension beds, Brown and Bertram Tomliason and W. H. Weyeth of Wareham, who brought up the subject at both meetings, were named. The place and time are to be named later, but this was possibly the most important action at these meetings.

At both meetings, panel discussions were held, "Dick" Beattie speaking on Root Grub, "Joe" Kelley on False Blossom, Raymond Morse on quality of the crop, and at Plympton Ferris Waite on Gypsy Moth control, stressing particularly the intensive program being planned for Barnstable County.

Addresses by Mr. Kelley and Mr. Morse will be printed next month.

E. C. St. Jacques Instructs School— Pumps, Irrigation

Sole "instructor" at the Plymouth County Cranberry School, Atwood screenhouse, Carver, Mass., February 17th, was Emil C. St. Jacques, Hayden Mfg. Co., Wareham, who gave a talk and led a discussion on "Pumps and Cranberry Equipment", carrying forward the previous subjects on present-day bog building and operation. Introduced by Cranberry Specialist "Dick" Beattie, Mr. St. Jacques, who has had years of cranberry equipment experience discussion, was on the floor for a little more than two hours. About 140 attended the session.

Mr. St. Jacques opened with a discourse upon old equipment as compared with the newer methods. By the old methods, a bog was built with stumps being removed by axe and lever, a horse-drawn eable; grading was by turf axes and turf pullers, with wheelbarrows to fill low spots. Sanding was by wheelbarrow and planting of vines by a dibble. The modern method is to use tractor-bull dozers, wherever they can get onto the swamps. The breaking of the sod and turning over is by tractors and harrows or tillers. Sanding on large areas is often by railroad or bog trucks on mats. Planting by light tractor with disc blades is coming in.

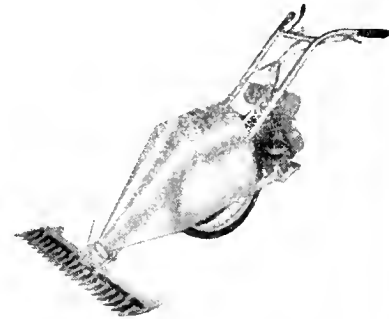
The old style of putting in dikes and flumes was by hand labor with wooden flumes or plain concrete, work being done by hand labor. In the newer style there is still plenty of wood used, but there are many reinforced concrete flumes, and, most recently, corrugated steel flumes, full and half round. The most modern way is to have a shovel dig and to be used as a crane on large jobs. Pre-mixed concrete is trucked in.

The old style of building a flume was by wheelbarrow, horse-drawn tip cart, followed by a truck. Newer method is by bulldozer, if at all feasible. Resanding in Massachusetts is still done largely by wheelbarrow, or on large bogs by railroad. Ice sanding by trucks is a

good way, but this is uncertain in Massachusetts because of the variety of the weather.

Air Insect Control

The old way of weeding a bog was done by hand labor, but now it is being done more and more by



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chemical control. For dusting and spraying, he said, sprayers are generally truck or trailer mounted, and dusters started out as hand-drawn, but this graduated to a self-propelled style. The latest method of dusting or spraying is by light plane or helicopter, although very few of the aircraft can be individually owned by a grower. He said the biggest advantage of air insect control is the speed and not trampling on the vines, but to offset this, he said, he did not believe the insect kill is better or even as good as ground spraying or dusting and the cost is more excessive.

Coming to picking, in Massachusetts, he said the first picking is still done by hand, and the snap machines which were used as the next step from hand picking are still used extensively on new bogs. Scoops still pick most of the crop, although picking machines have been very much in the news recently, and have made rapid strides in improvement.

He then told of the various pieces of screenhouse equipment,

principal ones being blowers, elevators, separators, belt screening tables, carriers, shakers, gravity conveyors, and explained the use of each.

Pumps and Sprinklers

He then came to the principal subject of his talk, pumps and sprinkler systems. He said that pumps were used for the rapid flowage, or removal of water on cranberry bogs. In the olden days only bogs could be flowed which had sufficient gravity flow for winter or frost coverage, or insect control. The first pumps that were installed were the vertical shaft, submerged, centrifugal pumps. In the early days, principally in Barnstable County, an open type propeller pump was used. At a later time, between 1910 and 1920, a new type of pump was developed. He said these were of a type that might be called the open type centrifugal pump. These pumps were installed in square wells, and the blades forced the water to the side in a circular motion, depending somewhat upon the friction of the

water in the corners to lift the water to the spillway.

The latest additions to the pumps, he continued, are the propeller pumps with guide bands, some of which are fully enclosed with pipe risers, elbows and horizontal discharges. He said the propeller types show an increase in efficiency. Wells should always be set down deep, about 3 to 5 feet below water. He said a well made of wood is the least expensive, but the shortest-lived.

Pumps are only useful and economical in locations where a sufficient supply of water is obtainable a reasonable portion of the time. "As an alternate, where the water supply is not sufficient for all fruit, insect and irrigation purposes, a sprinkler system seems the more suitable. The cost of this system is somewhat greater than pumps for the same area, but except for winter flowage and insect flowage they do fully as good a job as the pump flowage. In one or two respects they are superior to the pumps, as a method of irrigation."



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A favorite for many years with cranberry growers. Controls the cranberry weevil, gypsy moth caterpillar, cranberry blossom worm, false army worm and fruit worms.

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Micron-sized for better suspension and deposit. Contains superior spreaders and stickers for reducing loss from run-off. Made by Pennsalt, a leading basic producer of agricultural chemicals. For details write to Agricultural Chemicals Division, Pennsylvania Salt Manufacturing Company, Philadelphia 7, Pa.

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Photo Courtesy of Bell Aircraft Corp.

He discussed the origin of the sprinkler systems in Washington, and then extending to Oregon, and the respective merits of small heads and the "Giant" sprinklers.

Protection Worth the Cost

"Either type, pumps or sprinklers, is expensive for initial cost and upkeep—but so is the loss of the crop," he concluded. He said it was safe to say that a dry or marginal bog will not produce more than "two decent crops in five years, and that, generally, at a time when other dry bogs produce, and in normal times the price is low."

Mr. St. Jacques' discussion is to be repeated at the Barnstable County School, Barnstable High School, Hyannis, the evening of April 13.

New Jersey Blueberry Meeting

The Blueberry Cooperative Association, New Lisbon, N. J., held its annual meeting at the Grange Hall, Pemberton, on January 9 with Vice-President Scammell in the chair. In the general members' meeting in the morning the follow-

ing were elected to new terms on the Board of Directors: Lester Collins, Joseph W. Darlington, Charles DeLong, Russell Dunfee and Francis W. Sharpless.

W. A. Jarvis gave the treasurer's report, which showed gross receipts for the sale of New Jersey berries in 1947 as \$1,401,722.81 and for North Carolina berries, \$185,667.30.

Stanley Coville, Manager and Sales Manager, reported that out of a total of 513,030 twelve-pint crates marketed from New Jersey 422,038 crates were sold on the fresh fruit market. This is 55% more than had been shipped to the fresh fruit market in any previous year. Approximately 1,000,000 pounds were sent to the processors, which is less than one-half the amount processed in 1946. North Carolina shipments totaled 43,000 crates, all of which were sold on the fresh fruit market. Not sold through the Blueberry Cooperative Association, but sold under the Tru-Blu label by agreement, were about 105,000 crates of Michigan cultivated blueberries.

Miss E. C. White next informed the members that was the 21st birthday of the Blueberry Cooperative Association, saying the large number in attendance today in comparison to the handful of persons present at the original meeting in 1927 attested to the healthy condition of the "Co-op" and to the industry in general.

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IN STOCK
Rakes — Cutters — Insect Nets

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E. C. St. Jacques

WAREHAM 497-W

Marion Allen and King G. Martin of the Charles W. Hoyt Co., Inc., advertising agency who handle the advertising and publicity account of the Blueberry Cooperative Association gave a very interesting and informative account of how this advertising and publicity was handled in 1947.

Lester Collins Re-Elected

Following a delicious turkey dinner prepared and served by the ladies of the Grace Episcopal church, Pemberton, the business meeting of the Board of Directors was held for the election of officers and consideration of any new business. Lester Collins was re-elected president; H. B. Scammell, vice-president; Stanley Coville, manager and sales manager; Harry Bush was elected secretary-treasurer in place of W. A. Jarvis, who tendered his resignation in order to enable him to devote his full time as treasurer of J. J. White, Inc.

Additional business was the proposal and election to membership of 7 new members from New Jersey and North Carolina, making the total membership in both states 192.

Following the auditor's report, given by W. A. Jarvis, Coville discussed briefly the market prospects of 1948. There being no further business, the meeting was adjourned at 4 p. m.

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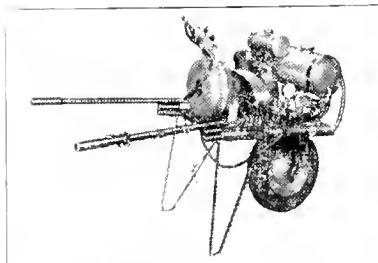
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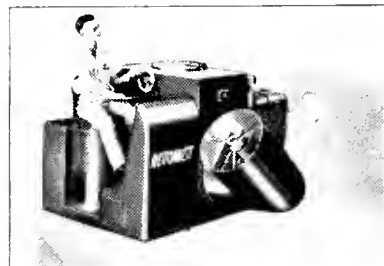
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Wisconsin Growers to Have Improved Frost Forecasts

Wisconsin this year will have vastly improved frost warning systems, the forecasts going out directly from Wisconsin Rapids, center of the industry, where a weather man, paid by the Federal Government, will be stationed, the service starting May 1 and continuing through until October 15. Largely instrumental in obtaining this was C. D. Hammond, Jr., general manager of Wisconsin Cranberry Sales Company, although the Midwest Cranberry Co-op is also backing this service, and contracts with both Midwest and Sales Company and the Government have been signed.

Warning will go out mainly by telephone, with supplementary broadcasts by six radio stations. These are WFHR, Wisconsin Rapids; WOBT, Rhineland; WIGM, Medford; WKBH, LaCrosse; WLBL, Stevens Point; WCCO, Minneapolis. These stations will adequately cover all the Wisconsin growing areas.

The forecaster who will be stationed at the Rapids will be James W. Milliken. He has had nine years of experience with frost warnings in Florida. Operating costs have not yet been figured, but half the costs will be borne by Midwest and half by Wisconsin Cranberry Sales for the first year, at least. The service will be operated for the benefit of all growers in Wisconsin.

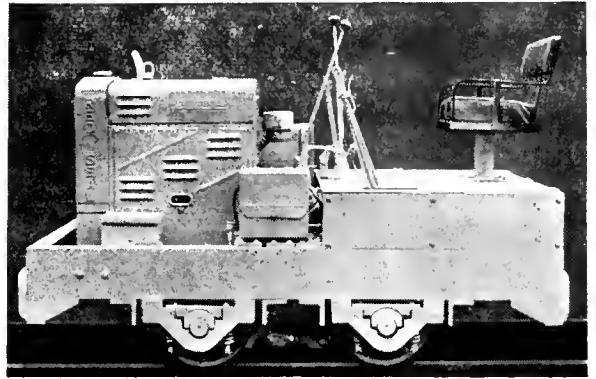
The forecaster, located as he is to be at the Rapids, will be able to give on-the-spot warnings, and will be able to obtain his information directly from the growing areas, and will also have at his disposal all Weather Bureau information in and around Wisconsin.

How Accomplished

Mr. Hammond in explaining how the new system came to be organized said that after operating bogs in Massachusetts he had come to be rather "spoiled" by Dr. Franklin's up-to-the-minute weather reports to the growers and felt some more efficient system could be installed in the Badger State. He said he began talking up the program with growers and the two co-ops and found the idea was well received by a majority. A first step was to contact several strategically-located marsh owners and ask them if their marshes could be used as observation points for the proposed weather forecasting service, which is to be known as the "Wisconsin Cranberry Growers' Frost Warning Service".

Then he got in contact with the chief in charge of the Chicago Weather Bureau at the Chicago Municipal Airport. This incidentally has been the origination of the former frost warning service to the Wisconsin growers. He received excellent cooperation there, and a man was sent to Wisconsin Rapids to make a survey of the marshes and see if such an improved service would be practical. The report was favorable. He then corresponded with the Chief of the U. S. Weather Bureau in Washington,

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This light-weight locomotive, designed especially for use in cranberry bogs, weighs only 3,250 pounds. It can be used over soft ground and requires only easily laid, light-weight track which can be traversed at high speeds, due to the freedom of wheel movement allowed by Brookville dual spring type, journal suspension.

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F. W. Reichelderfer, who also proved very cooperative.

After it was ascertained the service could be provided, a next step was to see if radio stations in Wisconsin could be enlisted in the service to at least two warnings a day. In this effort William F. Huffman, president of the Wisconsin Radio Network, former president of Wisconsin Cranberry Sales Company, and now director of American Cranberry Exchange, personally got in touch with all the desired stations and completed arrangements.

The result is that Mr. Hammond is highly confident that this coming season all Wisconsin growers will receive better frost warning service than ever before, and is looking forward to seeing this achieved.

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SCOOPS and SCREENINGS

One hundred vegetable growers of Massachusetts attending "school" at the University of Massachusetts were told last month to "look for changes in the next 10 or 15 years which may be hard to take". The trade must be satisfied to a much greater extent than ever before, it was said. There must be a constant maintenance of quality, a standardized product and good advertising. It was further pointed out that a survey showed that the average consumer today shops four or five times a week. Twenty years ago the housewife went to market once a week.

A Bandon, Oregon, woman, according to Bandon's "Western World", is growing a pineapple plant, proving that it doesn't take a Hawaiian plantation to raise pineapples. She has been growing one for nearly five years. She began by buying a fresh pineapple at a local market, cut off the top and planted it in a pot, "just to see what a growing pineapple looks like". Leaves are now as long as 47 inches, they are sticky with barbs and are a scarlet color.

Visiting the West Coast cranberry areas during February were Wisconsin growers. Among them were Mr. and Mrs. Charles L. Lewis of Shell Lake, Mr. and Mrs. Fuy Potter of Camp Douglas and Mr. and Mrs. Forest F. Mengel of Wisconsin Rapids. The Mengels and Potters stopped over on the Coast as part of a trip to the Hawaiian Islands. The Lewises were taking in Tucson, Arizona, before returning to Wisconsin. Also from Wisconsin were Mr. and Mrs. David Pieper and Mr. and Mrs. W. B. Pieper of Shell Lake.

A dinner at Bandon was served at the Natureland Cafe in honor of the visitors. Those present included Lewises, Mengels, Potters, Mr. and Mrs. Wilho Ross, Grayland, Washington; Mr. and Mrs.

Ed Hughes of Coquille, Oregon; Mr. and Mrs. Sumner Fish, Mr. and Mrs. Arthur Randall, Mr. and Mrs. L. M. Kranick, Mr. and Mrs. James Olson, all of Bandon.

Massachusetts cranberry growers were represented by a special committee at the Farm Marketing Conference of Massachusetts Agricultural Program Board at Harvard University March 2 and 3. This was the third time this important conference has been held, but the first time a cranberry panel has been invited to take part in discussions and plans for marketing the crops of the state. Russell Makepeace of Wareham, president of the Cape Cranberry Growers' Association, was chairman, and Cranberry Specialist "Dick" Beattie, secretary. Various marketing groups were represented on the board, and a complete story of this meeting will be reported next month.

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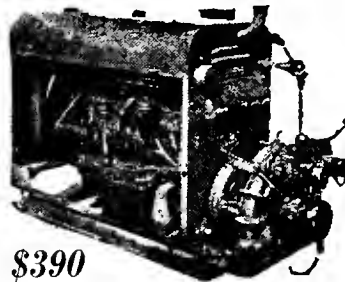
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Chrysler Powered Haul Pumping Units equipped with Chrysler Industrial engine Model T-118. Pump capacity 500 G.P.M. at 120 lbs. pressure to 850 G.P.M. at 75 lbs. pressure. Electric Starter and EXHAUST TYPE SELF PRIMER. Hundreds of these units are now giving an excellent account of themselves on all types of farms. We ourselves use one to pump water up an 80 ft. hill and through a mile of Flex-O-Seal pipe to operate a 1200 ft. sprinkler line. These units have been in storage and were operated only for periodic testing. They are thoroughly serviced and checked for performance at our own testing pond before shipping. We have entirely avoided any uncertainty on condition and performance in this way. For sale at less than half original cost. Many of best operated farms in New England have taken advantage of their availability to secure a number of these units. Battery extra.

Trailer Models with two suction Hoses \$490

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FORESTDALE, CAPE COD, MASS.

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Fresh from the Fields

(Continued from Page 5)

the ice. These bogs have generally been reflooded. Ice, however, as February ended, still remained on bogs where the water was not withdrawn from under the ice. The season of 1948 should certainly present a good many useful tests of the value of dropping the ice. It will be very interesting to observe the results.

Pest Control Charts

The Cranberry Insect and Disease Control Chart is in the manuscript stage at the time of this writing, but should be with the printer early in March and ready for distribution in advance of the spraying and dusting season. The 1948 revision of the Blueberry Insect and Disease Control Chart has been sent to the printers and should be ready for distribution some time in March.

Spray Chart Meetings

On February 19th, Burlington County Agent Kensler called a meeting for cranberry growers at the Cranberry and Blueberry Laboratory to go over the proposed changes in cranberry disease and insect control recommendations. Mr. R. B. Wilcox discussed fruit rot control, oxygen deficiency and false blossom. Mr. W. E. Tomlinson, Jr., discussed the changes in insect control. Atlantic County growers joined in this meeting.

A dinner meeting of the Ocean County Cranberry Club was held at the Riverview Hotel on the evening of February 25. Following the dinner, Mr. A. E. White of the U. S. Weather Bureau Office at Trenton spoke about weather forecasting. W. E. Tomlinson, Jr., went over the proposed changes on the Cranberry Insect and Disease Control Chart, and Mr. C. A. Doehkert pinch-hit for Mr. Wilcox in discussing fruit rot control. Following the speech-making, Joseph H. Palmer was elected President for the coming season; Isaiah Haines, Vice-President; and Ocean County Agent Dick Hartman, Secretary. Closing the meeting was a movie of cranberry growing in Wisconsin, shown by Walter Z. Fort.

Dr. Bear Speaks on Fertilizer

At an overflow meeting of cranberry growers, 90 persons heard Dr. Firman E. Bear of the N. J. Agricultural Experiment Station, Soils Department, speak on cranberry soils, on February 26. This meeting, open to all cranberry growers, was arranged by Walter Z. Fort and was held at the office of the Growers' Cranberry Company at Pemberton. Dr. Bear reported on the results of the analysis of several samples of cranberry and blueberry soils and leaf samples. In general, he noted that the nutrient requirements of these

two crops are relatively low in comparison to most other agricultural crops. Several essential plant foods such as calcium and magnesium are extremely low in New Jersey peats, and addition of these elements would seem to be in order.

American Cranberry Growers' Association Executive Committee Meeting

Members of the Executive Committee of the American Cranberry Growers' Association met at the Cranberry and Blueberry Laboratory to discuss arrangements for the meeting on weeds to be held

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For Cranberry Frost Protection and Irrigation

Rain Bird Sprinkling systems do the job you want them to do, when you want it. All working parts are accessible and fool proof. Oscillator arm breaks up stream to give maximum benefit.

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March 17 at Pemberton. Methods for improving the frost warning service were also considered.

OREGON

Notes

While January was a good month for bog planting and weed spraying, February brought some bad weather and slowed down the work.

There is considerable interest in a new sanding machine designed by Ed Smith. It has been seen in action and called very practical.

Southwest Oregon Cranberry Club held a combined social and business meeting at Masonic hall, Bandon, February 15. A pot luck dinner was enjoyed and the business meeting followed. There was a discussion of the advantages of a frost reporting service, and it was voted to ask for such service through the weather bureau. The service is proposed to be run for 180 days in the spring and fall. The club is to pay for the service.

Jack Hansell, assistant county agent of Coos County, stated that

the cranberry industry was now first in the county, and suggested that a sound program be developed for the study of weed control, insects, fertilizers, fungus and temperature damages. The growers are asking that the Assistant County Agent be given more responsibility in helping develop such a program.

A motion was made to publicize the need for extreme caution in discovering false blossom and fruit worm. Growers were requested to report any suspected area.

At the election of officers, James Olson was chosen president; Einer Brickson, vice-president; Clarence

Zumwalt, secretary, and Mary Bates, corresponding secretary.

There was a vote to sponsor a "queen" for the next cranberry festival, and to encourage a national contest as suggested by the National Cranberry Magazine. A committee was appointed to work with the festive committee on display.

WASHINGTON

Some Long Beach Winter Kill

By late February the weather had turned springlike at Long Beach, with daffodils showing up above the ground. There was,

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A number of properties available, more wanted.

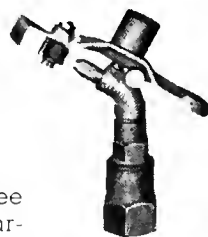


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however, quite a bit of cold weather, accompanied by some dry, freezing winds in late January, and in the opinion of D. J. Crowley this may cause some winter-kill, although he did not expect it to be severe.

New Acreage

New planting continues to go in with an estimated 100 acres being planted in the Grayland district, and at least half that amount around Long Beach.

Club Meeting

Long Beach Cranberry Club held a meeting February 13 and heard a very interesting talk on weather-forecasting for cranberries by Vernon Wallace of the North Head weather bureau.

An Ad

in

CRANBERRIES

is *your* message placed before the industry.

Wisconsin Growers May Have Trouble With Grasshoppers

E. L. Chambers, State Entomologist, Warned Meeting Against Invasion This Summer—Chlordane, New Insecticide, Effective Against Them.

In a historical review of the problems of Wisconsin cranberry growing, with emphasis on the newer insecticides, E. L. Chambers, Wisconsin State Entomologist, at a meeting a few weeks ago, brought out that all indications seemed to lead up to the fact the growers of that state could expect serious grasshopper trouble this coming summer. He deemed it important that growers familiarize themselves with the fact and be prepared to meet any emergency, if weather conditions are hot and dry. This has been predicted by those who are making a study of the sun spots.

According to these studies, he

says, there are seven years ahead of hot, dry summers, there having just been completed a period of cool, moist growing seasons. Grasshoppers have been building up all over the state during the past few summers, but there has been an adequate supply of green food for them to feed upon, so there was no serious threat to the crops.

When grasshoppers become numerous, they move into the cranberry marshes and cause considerable injury to the berries. During the latter part of August and the first part of September last there was enormous migrations of the red-legged grasshoppers into Southern Wisconsin, which attracted much attention and newspaper publicity.

Swarms Floated Ashore From

Lake Michigan

Huge swarms of them riding on Lake Michigan were washed ashore and there were windrows of hoppers around last Labor Day all along the shore for miles which could be scooped up with shovels. These were observed a few days previous to their appearance on the shore, floating like large islands

The New England Cranberry Sales Company

(The Cranberry Cooperative organized in 1907)

In a co-op there isn't any "they"—there's only a "we". You may have a manager, and he may have a staff, but they're not the co-op. The members are the co-op. Let's remember that.

**Eatmor
Cranberries**

9 Station Street

Middleboro, Mass.

on the lake, and with the change in the wind direction they were blown back upon the shore and most of them recovered from their soaking and migrated into the fields bordering along the lake.

It has been discovered during the past two growing seasons that Chlordane, a new insecticide, was very effective against the adult hoppers where a 5% dust was applied at the rate of 20 pounds per acre. This offers a good form of relief to specialized crops like cranberries, tobacco, and similar ones where it is difficult to check the march of invading grasshoppers with the ordinary poison bait, which is less attractive to the adults than the crop which they seek.

Chlordane Effective
By dusting Chlordane around the margin of the bog, it is possible to prevent the invasion of these hoppers into them. Ord-

inarily in the Wisconsin grasshopper control program, the importance of distributing poison bait over the areas where the hoppers are hatching is stressed, it being

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SKINNER controlled irrigation waters large areas uniformly—

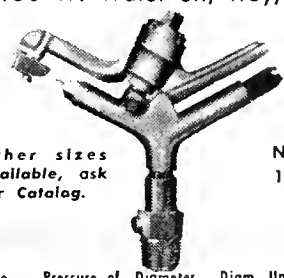
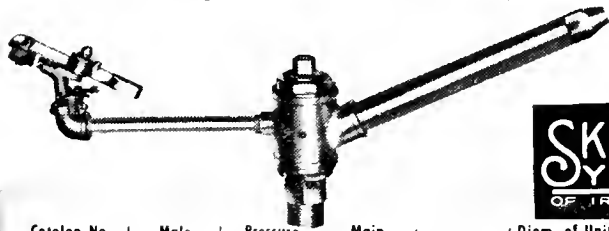
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Catalog No. Controlled Pwr.	Male Inlet Thr.	Pressure in lbs.	Main Nozzle Inch	G. P. M.	Diam. of Uniform Coverage in Ft.	Nozzle Size		Pressure of Sprinkler	Diameter Coverage	Diam. Uniform Coverage	G. P. M.
						Main	Secondary				
CP-1	1"	60	3/32	23.50	135	1/4"	7/32"	35	120	102	16.
		80		28.50	145		125	106	18.		
		100		32.30	155		135	115	21.		
CP-1 1/4	1 1/4"	85	1/2	64.00	180	9/32"	7/32"	40	130	110	21.5
		100		72.00	190			135	115	23.5	
		125				145	123	28.2	

pointed out that small amounts of poison spread in these limited areas will effectively control the young hoppers, whereas once they have migrated out of their egg-laying areas it requires more material to cover the increased area and it is much more difficult to control the hoppers as they grow older.

The threatened area in Wisconsin in the present invasion happens to be in the vicinity of the more important cranberry-growing areas and it is held, therefore, important that growers familiarize themselves with the facts and be prepared to meet any emergency.

New Jersey Annual Meeting

The 78th Annual Meeting of the American Cranberry Growers' Association was called to order at 10.30 a. m., January 31, 1948, at the Walt Whitman Hotel, Camden, N. J., with President Enoch F. Bills in the chair. Eighty members and guests were present.

Following the introductory remarks of Mr. Bills, an illustrated talk on the sanding method devel-

oped by J. Rogers Brick was given by C. A. Doehlert. A tractor loader, three flat farm wagons on pneumatic tires, another tractor for hauling the wagons from the sand piles to the bog and back kept the loader, hauler and six men spreading sand on the bog

busy all of the time. Light plank trackways were used for running out onto the bog.

Next on the program was a talk on cranberry fireworms and blossom worms by W. E. Tomlinson, Jr. A brief description of life history, habits and control for all

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species of fireworms that might be encountered on the bog was given. The importance of controlling the first brood of fireworms was pointed out, as well as the importance of detecting and controlling blossom worms before they become over half grown and before their destructive capacity is too great.

D. O. Boster of the N. J. Crop Reporting Service reported on the latest information on the 1947 cranberry crop. Why monthly surveys are necessary throughout the growing and harvesting season was well illustrated by the changes from month to month in New Jersey in 1947.

C. A. Doehlert reviewed the work of the year on comparisons of DDT and pyrethrum for the control of blunt-nosed cranberry leafhopper. The records showed in a striking way that excellent control was obtained with both materials when the application was thorough and uniform. On the other hand, a number of bogs tested showed just about perfect control in many portions of the bog, with little or no control in scattered areas. No mat-

ter what equipment is used to apply these materials, a certain degree of supervision and thoroughness is necessary in order to avoid serious "misses" from which re-

infestation of the bog takes place.

R. B. Wilcox described the conditions which caused the unusual fruit rot infestation of 1947, and pointed out the need for at least

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three fruit rot sprays in New Jersey, beginning at the peak of bloom wherever there is a real rot problem. In 1947 Karbam, Zerlate and Karbam White all ranked high with Fermate in the control of fruit rot.

Thomas D. Mulhern, designer of new ditching machinery for use on mosquito marshes, gave an illustrated lecture on the construction and use of two new ditching machines. The Association decided to visit the Annual Convention of the New Jersey Mosquito Extermination Association in April to witness demonstrations of these new machines. The meeting adjourned to convene again on March 17 in Pemberton for the discussion of weed control, at which time Dr. Chester Cross will be the principal speaker.

BEATTIE

(Continued from Page 4)

with some pride passed out a few copies of the 1947 Cranberry Weed Control Chart. We understand that this is the only chart of its type that deals solely with weeds.

The luncheon on Friday was addressed by New York's Commissioner of Agriculture, and during the afternoon the Conference held its business session. Dr. Cross was appointed to the large Research Committee of the Conference, which will make every effort to obtain rapid transfer of information between the research members of the Conference.

Dr. Cross says he went to the Conference in hopes of obtaining some definite information about chemicals that would kill grasses, bull briers, grape vines, Japanese honeysuckle, and wild morning glories. He learned that 2,4D can be used to kill grape vines, morning glory, and the honeysuckle. If the sodium salt of the 2,4D is used, there is no volatilization of the 2,4D and adjacent untreated plants will

not be injured by the spray unless wind drift carries the spray to them. He also learned that allyl mixed phenyl carbonate is supposed to be especially toxic to grasses, as is also ammonium trichloro acetate. He has already arranged for sample quantities of these two to be sent to him for

tests this year. No one seemed hopeful about killing bull briers, but 2, 4, 5 trichlorophenoxyacetic acid was suggested as being capable of it. With a name like that it should work even on bull briers, but Dr. Cross will be trying it during this coming season, so time will tell.

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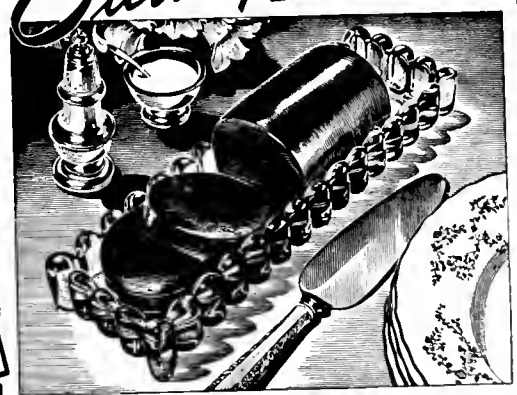
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"ART" BENSON, in front of his barbecue fireplace. (Story page 7). (CRANBERRIES Photo)

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There's more to selling cranberries than loading them on a truck beside the bog.

In this picture NCA's North Carolina broker, Harry P. Stokeley, discusses Ocean Spray's Chicken 'n Cranberry campaign with John Reid, manager of Reid's Super Markets, Charlotte, North Carolina. (Incidentally, Mr. Reid was chosen Grocer-of-the Month for December.) Soon after this conference, Ocean Spray-and-Chicken displays went up in all Mr. Reid's stores, and shoppers in Charlotte began developing a new chicken-and-cranberry habit.

From behind-the-scenes conferences like this come hundreds of new displays, new promotional ideas . . . and new customers for Ocean Spray Cranberry Sauce.

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Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE
Extension Cranberry Specialist



One of the first topics of conversation when cranberry growers congregate is the present marketing situation. This highly controversial subject has been both cussed and discussed all winter. The cranberry clubs and schools have featured talks on marketing. However, there was another meeting on marketing not reported before, which will be of interest to all growers. Reference is made to the Farm Marketing Outlook Conference held in Cambridge, March 2 and 3. A group of approximately 200 growers, market officials, and agency representatives met to consider the marketing problems confronting the major agricultural commodities within the Commonwealth. The cranberry industry was well represented and met as a separate agricultural enterprise for the first time. In fact, 16 cranberry growers were present at this conference, and the time and effort that they gave is greatly appreciated. The names of those attending are found at the conclusion of this report. (The writer would like to add that they made a very good account of themselves as would be fitting the representatives of the state's largest export crop—Cranberries.) After careful deliberation and a fine spirit of cooperation among all growers present, the following report was prepared and presented to the entire conference. (Please note. By the time this report is read, a meeting will have been held by the Massachusetts Agricultural Program Board to consider the proposed recommendations and to take the necessary action.)

1948 Farm Marketing Outlook Conference, Cambridge,
March 2 and 3

Report of the Cranberry Committee
Introduction:

This is the first Marketing Outlook Conference at which the cranberry industry has been represented as a separate agricultural commodity. The cranberry committee has found the conference most instructive and takes pleasure in presenting this report. In order to better understand the position of the cranberry industry in the agricultural picture of the Commonwealth, the committee would like to call to the attention of the conference the following pertinent facts.

Cranberries are the largest export crop in the state, and markets by far the largest portion of the crop outside the Commonwealth. Approximately two-thirds of the world's cranberries are raised within this state. In 1946, recognized as a bumper crop, the gross receipts for cranberries were \$16,000,000 from 15,000 acres of bog. It is with some pride that we submit these facts. However, we, too, have our marketing problems and after careful deliberations make the following recommendations.

Educational Field:

It is imperative that greater attention be devoted to the production and marketing of quality fruit. This is an educational job that begins with the grower and ends with the consumer. It is the recommendation of the committee that an active educational program be inaugurated to teach growers how to properly raise, grade, package and handle their crops. The Extension Service is the logical agency to instigate such a program.

It is the opinion of the group that suitable standards of quality for fresh and processed fruit be established and that further study be given this problem. We recommend that this responsibility be

delegated the Division of Markets, Massachusetts Department of Agriculture, and the Cape Cod Cranberry Growers' Association.

It is recognized that many growers have been extremely lax in sending in their crop estimates to the Crop Reporting Service. This information is vital to our marketing program. We urge greater cooperation on the part of growers with the U. S. Crop Reporting Service. Therefore, it is recommended that the Extension Service be delegated the responsibility of encouraging growers to report their individual crop estimates.

The Field of Research:

It is the opinion of the committee that considerable research data is available in the field of quality fruit, particularly as it concerns the keeping quality of our berries, the composition, and methods of handling.

It is the recommendation of the group that the Experiment Station assemble all such available data pertaining to this subject and prepare it for publication.

It is further recommended that marketing research be initiated with particular reference to: (1) Size and type of trade package and packaging materials, (2) Consumer trade preferences, (3) Type of trade outlets that will produce volume sales, and (4) Continued research in the use of cranberry by-products.

Orderly Division of the Crop, both Fresh and Processed:

We recognize the need for greater cooperation and coordination by all growers and marketing agencies for the orderly distribution of cranberries, both fresh and processed, throughout the country.

It is the recommendation of this group that a committee representing the cranberry industry meet to discuss the more orderly distribution of the crop and that the Massachusetts Agricultural Program Board assist in the appointment of this committee.

It is further recommended that all other cranberry-growing areas in the country consider seriously the appointment of a similar committee to cooperate jointly on this particular marketing problem.

(Continued on Page 32)

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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FRESH FROM THE FIELDS

By C. J. H.

MASSACHUSETTS

Spring weather arrived officially and actually on March 20th, after the most rugged winter in many years. With some exceptions the temperature remained high, which was still welcome, except for the spring scum situation. Highest temperature for the month was 63 on the 21st and the lowest was -5 on the 6th. Rainfall, including snow, was 4.71.

There is much concern as to how much the unusual winter situation may have damaged the bogs through oxygen deficiency. Dr. Bergman says this will be a most interesting year to observe in this respect, as a similar situation has not existed, at least since oxygen deficiency studies have been so far advanced. Dr. H. F. Bergman already expects a crop in this state of "below normal", because of oxygen deficiency.

Figures have been gathered in Plymouth County, which has an acreage of 10,409, in response to a requested survey by J. T. Brown and Cranberry Specialist "Dick" Beattie, which show that the number of acres which had water withdrawn from under the ice in January was 3,693, the total acreage of bog not flooded by January 1 was 1,113. In other words, 78 per cent of acreage was not under water in parts of January and February.

WISCONSIN

Frost warning service is to start April 15th and will continue until October 15th, rather than April 1, as this seems to be a normal spring. One new radio station has been added to the system broad-

casting the warnings and that is WEAU, Eau Claire. Broadcasts have been staggered so that if a grower misses one forecast he can probably pick up another.

It has been estimated that approximately 350 to 400 acres of new marsh is to be planted this spring. A larger percent than previously will be planted to McFarlins, but the majority will still be Jumbo Searles.

A helicopter demonstration was held in the latter part of March and this service will be available for members of the Wisconsin Cranberry Sales Company.

NEW JERSEY

Precipitation

Rainfall has been below normal for March at Pemberton with only 2.62 inches recorded out of a 3.59 inch normal; 2.5 inches of snow fell on the 4th.

Temperature

Following a cold start, March warmed up considerably during the third week with a total of 87 being recorded at Pemberton on the 21st. The average daily mean temperature through the 29th was 44.1° or 2° above normal. This is the first month since last October which has had normal, or above normal temperatures.

Dr. Cross Speaks

On March 17th, Dr. Chester E. Cross spoke on weed control at a meeting of the American Cranberry Growers' Association held in Grange Hall, Pemberton. This meeting was a continuation of the Annual Meeting and was open to all interested persons, whether members of the Association or

not. Seventy-eight growers and friends were present. Besides a very interesting discussion of weed control, there was keen interest in Dr. Cross's report of a new disease in cranberries on the Cape. Growers wondered just what their responsibility will be in regard to bringing vines from Massachusetts for the replanting of their bogs.

Carrying out the program of the Experiment Station for grower meetings on all the important phases of cranberry growing, there will be a demonstration of mechanical planting at Whitesbog on April 13 at 1.30 p. m. This is sponsored by the Cranberry and Blueberry Research Laboratory and the County Agents of the three cranberry counties. In case of bad weather, a second date will be arranged at the gathering on the 13th.

Boosting Production

The American Cranberry Growers' Association has taken a step which many feel should go a long way in boosting New Jersey's annual production of cranberries. On March 11th, President D. M. Crabbe called upon the Executive Committee to "promote all matters for the betterment of the cranberry industry and to complete unfinished worthy programs already initiated by the American Cranberry Growers' Association". The new Cranberry Industry Committee has already had two meetings. C. A. Doehrlert was asked to outline the organization and activities of all branches of the work at the Research Laboratory. He also laid before the group the urgent need for fundamental research

(Continued on Page 16)

Cape Cod Meeting – Exhibition April 21. “Open” Meeting on Public Relations at Wareham Town Hall, April 26

Directors of Cape Cod Cranberry Growers' Association at an all-day session at State Bog, March 15th, gave the green light for plans for the Association's spring meeting and exhibition at Wareham Memorial Town Hall, Wednesday, April 21st. The equipment and supplies display held last year, followed by a business meeting and program, was so successful that the same general outline will be followed this year.

The exhibition will be opened in the basement of the Town Hall (for some equipment out of doors) at ten o'clock a. m. A caterer's lunch will be served at noon, and the business meeting will open at 2. The last hour and a half of the meeting will be given over to reports by Dr. Franklin and other members of the East Wareham Experiment Station. Also invited to attend are newly-appointed Commissioner of Agriculture John Chandler, Director F. J. Sievers of University of Massachusetts, Director of Extension Willard Munson, County Agent Leader James W. Dayton, Ralph Van Meter, acting president of the University, Walter Piper, Mass. Dept. of Agriculture, Congressman D. W. Nicholson, and State Senator Edward A. Stone.

The committee in charge of the exhibition is Nahum Morse, chairman, assisted by George E. Short.

Cranberry Specialist “Dick” Beattie was given charge of advance publicity for the affair.

Presiding at the all-day directors' meeting was President “Rus” Makepeace, and those attending were Treasurer Harry Hornblower 2nd., Secretary G. T. Beaton, E. L. Bartholomew, Melville C. Beaton, Dr. H. J. Franklin, Orrin G. Colley, John F. Heriott, George E. Short, Nahum Morse, John Shields, County Agent Bertram Tomlinson, “Dick” Beattie, and recording secretary, Miss Thelma Laukka.

Besides making plans for the exhibition two other important

topics were discussed, these being plans for furthering cranberry “publicity” or “public relations”, perhaps through a “Cranberry Institute”, and the possibility of the Association establishing scholarships at University of Massachusetts for deserving young men who might be expected to make cranberry culture their life work.

“Mel” Beaton read a report of a recent committee consisting of himself, George Crowell, Stanley Benson and Orrin Colley, which had considered the matter of “publicity” for cranberries. The object of this would be primarily to create a greater demand for cranberry consumption and to coordinate these activities. After debate concerning the advisability of establishing such a committee, it was moved that the first committee appoint a committee which would be permanent or “standing” to consider “public relations” and that this committee arrange for a mass meeting.

This committee was appointed and consists of Miss Ellen Stillman, Ferris C. Waite, J. T. Brown, director Plymouth County Extension Service; Bertram Tomlinson, Barnstable County Agricultural Agent, Extension Cranberry Specialist Beattie, R. Harold Allen, Taunton; E. L. Bartholomew, Wareham; Homer L. Gibbs, West Wareham; Seth Collins, Waquoit; Peter LeSage, Yarmouth; William Wyeth, Wareham; Walter Rowley, West Wareham; George A. Crowell, Plymouth; Stanley Benson, Middleboro; Maurice B. Makepeace, Wareham; Melville C. Beaton, Wareham; and the presidents of the four cranberry clubs.

The committee met at the office of the A. D. Makepeace Company March 29th, with M. C. Beaton acting as temporary chairman, and plans were completed for this “mass” meeting to be held at the Wareham Memorial Town Hall, April 26th at 7.30 p. m. Speakers are to be Commissioner Chandler, who is secretary of the Northeast

Apple Institute; Edward A. Ryan, who is interested in the New England-New York State Apple Institute; and Harold Rotzel of Boston, who is associated with the New England Egg Institute.

The purpose of this meeting is to consider ways and means of bettering public relations and promoting the sales of cranberries.

This meeting is to be for the purpose of the explanation of the objectives and workings of an institute and not for organization.

As concerns the Association scholarship, President Makepeace and Dr. Franklin were appointed to name a third “grower” member and act as a committee to go to the University at Amherst and see what arrangements could be most suitably worked out.

Financial affairs of the Association were reported as very satisfactory by Treasurer Hornblower and it was brought out the association is stronger in membership than a year ago, but a still larger membership would be desirable and even closer cooperation with the four cranberry clubs. It was voted the Association join the Plymouth County Farm Bureau. It was voted a letter of sympathy be sent the family of the late I. E. Hiller of Marion, member of the association. A vote was passed that no printed report of the April meeting be published, but that it be incorporated in the printed report of the annual meeting in August. Dr. Franklin reported that color plates would be available for his forthcoming bulletin on “Cranberry Insects.”

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NECSO Manager "Art" Benson also Benson, Cranberry Grower

Executive Officer of Largest Unit of ACE Operates Bogs and Livestock Farm Near Middleboro—Farmhouse He Has Restored Is Historical and Unique.

By CLARENCE J. HALL

General Manager Arthur D. Benson of New England Cranberry Sales Company has become Cranberry Grower Arthur D. Benson, too. Since 1908—one year after this largest unit of the American Cranberry Exchange was organized, he has been associated with it. He began as chief clerk and bookkeeper and upon the death of Treasurer Churchill August 1915 he has been treasurer and manager. Since 1938 he has been learning the actual problems of a grower in the hardest and best way, by becoming a grower himself. This is by no means to imply that he wasn't thoroughly familiar with them before, because he could not have directed the efforts of the co-op unless he had made himself so. But being a grower does give a new

Not only has he become a grower of cranberries, he's pretty much turned himself into a farmer on a small scale, for his spare time when he isn't working at his job as general manager of the Sales Company.

At Lakeville, adjacent to Middleboro headquarters of NECSO, he has bought 152 acres of property. This includes a unique and historic farmhouse. Here he has about 11 acres of bog. He owns more at nearby Loon Pond. Everybody can always learn a little more about any subject. By becoming a practical grower it seems probable he can increase the extremely intricate knowledge of the industry which he has built up over so many years.

The Tanyard

The property was bought with Leonard Baker of Middleboro, who died a few years ago and was co-builder of the bog. This farmhouse is called "The Tanyard" because of the fact a tannery was the last of three ancient enterprises which were located at the site. The first was a mill for making cotton batten, which was in successful operation until the breaking out of the War of 1812, which caused such great financial disaster to many of the industries of New England. The second was a shoe factory, and the third a tannery which was carried on for a number of years by General Phraim Ward, who achieved con-

siderable fame in the Civil War. Water power was used in the operation of these plants, and this same source of water, enlarged to 25 acres, is now Benson's reservoir. This is located between low, but rather steep hills, which catches the natural watershed, this water source being supplemented by springs.

On both bogs his plantings are about 50-50 Blacks and Howes. The Loon Pond bog is being rebuilt. There is good sand on both properties. His biggest crop to date at the "Tanyard" was in 1942 when it cropped at the rate of 100 barrels to the acre. About two acres more could be put in there by cutting through a hill for water supply, and additional bog could also be put in at Loon Pond.

As Mr. Benson is a busy man most of the time with his exacting duties at the Sales Company, he has a full-time foreman, "Joe" Briggs of Middleboro, to care for his bog and farm and one or two others on part-time basis. Although he has an active manager and workers, most every week end and holiday will find "Art" Benson doing some work himself on the bogs or about the farm.

Hobbies

Mr. Benson has an interesting outdoor fireplace which he built himself. This provides for the entertainment of committees and gatherings of the various activities

in which he is interested. This includes yearly gatherings of the Lions club, meetings of committees of Anawan Council of Boy Scouts, Executive Committee of St. Luke's Hospital (Middleboro), and a convenient meeting place for committees of the Sales Company, as well as personnel of its various departments.

The soil on his property is rather clayey and he has gone in only slightly for vegetables or other crop growing. But he does make a hobby of his livestock. This is not large, but it must be admitted it is varied. As a unique matter of fact his animals and poultry are nearly all on the black and white order.

He has Holstein cows (2 at present black and white, it may be stated for those not well-informed as to breeds of cows. He has two black and white horses. He has pigs, black and white. He has Royal Palm turkeys, which are black and white. He has a flock of "silver-laced" Wyandotte hens, also black and white. He has a flock of Muscovy ducks, which are rather on the black and white side. He has a couple of goats, white.

Finally he has a Dalmatian, this coach dog, of course, being a black and white spotted animal, and a black and white cat. This color scheme seems to have come about more or less haphazardly when he acquired his first Dalmatian from C. D. Hammond, Jr., which incidentally was named "Cranberry", and then the rest of the black and whites just followed along. Possibly he figures so much black may help "keep the farm out of the red."

Farmhouse Is Historic

As to the old farmhouse, located near the entrance of his 152 acres, which are mostly pine-wooded, this is one of the most fascinating homes owned by any cranberry grower. Thomas Weston's "History of the Town of Middleboro" declares it to be probably the oldest house in Middleboro. Mr. Benson has said it was built in 1761, he understands, as a "half-house", a type of building fairly common on Cape Cod, in which the builder erected half

of his dwelling, planning to add the balance at a later date. It had an entrance and one room on the front.

The land was known to have been owned by one James Sproat in 1711: It was conveyed in 1737 to his son Robert, and in 1778 to Zebedee Sproat. Robert was an intense patriot and at the breaking out of the Revolutionary War he had a floral design painted over a portrait of King George which had adorned the chimney piece in a wood-paneled bed chamber. A predecessor Tory Sproat was said to have been ridden out of town on a rail. But this Sproat had had time to acquire some very fine doors, panelling and wainscotting from another Tory, Judge Oliver, who had a great "hall" at Muttock Hill.

The house was sold to General Ephraim Ward in 1806 and it was the Ward occupancy which has given it its present name of the "old Ward" house. The house was added to in 1824 and again in 1829. Later it came into the possession of the late Sprague S. Stetson. Mr. Stetson, in making some repairs on the most ancient part of the structure, found it was boarded by two and one-half inch oak planks which were spiked on to the sills and beam to form. Historian Weston wrote, a garrison house against attacks from the Indians.

At present the house is story and a half with seven rooms and an "office" study. It has three fireplaces, all of which have been restored and are in use. The rooms have wide floor boards; there are interesting "musket" corner posts, so called because the timbers are shaped like the butt of a musket. A beam in one of the rooms is bowed.

Exquisite Panelling

There is a good deal of really exquisite panelling and detail in the woodwork. The mantel piece of one room was called such an unusual piece of work that it was accorded an article in "Pencil Points", architectural publication. The "King's room", previously mentioned, with its all-wood finish in the manner of ancient houses, has luxurious draperies painted on

its walls and a "covering" stencilled on the floor. However, actually, as concerns King George's portrait, Mr. Benson says he has scraped away a little of the floral design, but has yet to find the royal painting beneath.

Perhaps the most interesting of the historical features of this house are two narrow halls or closets under the roof which run across the front of the building. The "Ward" house has always been known as one of the last "stations" on the underground railway by which slaves escaped to freedom in the North. In other words, its reputation is that it was a distributing point from which slaves were liberated after having made their way from the South.

Last Stop Underground Railway

In one of these narrow closets, up against the eaves is a series of small doors which open into a very narrow and low passageway which runs across the house into the other closet. It was said this closet was painted black and the fugitive slaves were hidden there. This passageway, which could be locked off by the small doors, was a means of escape for the slaves in case the house was visited by those who were opposed to the liberation of the slaves. While these persons were being entertained, or detained, the slaves could creep along the passageway, through the second closet, and out through a window and down a great tree which grew close by the window. This tree was blown down in the November 1947 storm. In cutting off the stump Mr. Benson noted by the number of rings that the tree was over one hundred years old.

Benson, of course, does not vouch for the authenticity of these romantic tales, but they are local legend, and there are the queer closet spaces and the other odd facts about the house. When he got the house it was in a considerable state of dis-repair, but he has painstakingly had it restored and built over into a spacious and very comfortable farm residence. He has not disturbed its original features any more than was necessary. His own par-

ticular retreat in this picturesque dwelling in its isolated setting a room which is beautifully wair cotted and has a large fireplace. Here he retires to think out problems of New England Sales management and of his own farm. **Benson Now Member of NECSO**

By becoming a cranberry grower in his own right, Mr. Benson became eligible to become a member of NECSO with one vote, any other member. He has handled the business of this one-member, one-vote co-op for 33 years now, coming to the organization when a young man in his early twenties. Born in Bridgewater he is a graduate of Brockton Business College, and began his career by being employed by the New York, New Haven & Hartford Railroad. He knew freight railroads and shipping before coming to the Sales Company. He had worked as bookkeeper in the Brockton office of the railroad, the traffic department at Boston and when he quit the road to enter cranberries was assistant chief clerk at Taunton.

Besides being executive head of the NECSO, he is an elected director of American Cranberry Exchange, and for some years was director of NECSO until last year when he was not one of the elected, which he says proves that the co-op is truly democratic. This year he may or may not be turned to the board.

At any rate, his experience as an active cranberry grower should make him more sympathetic to the down-to-earth problems of the producer in his executive position and, conversely, being executive of a cranberry co-op should make him as a grower more familiar with the broader aspects of the industry. It looks like a two-way street to increasing foresight around.

The barbecue fireplace shown on the cover was built by Mr. Benson, himself. It has already become locally well known as a center of interest for gatherings of various natures. These have included cranberry meetings and others of a civic nature, as he takes an active part in such matters, well as the cranberry industry.

Birds are Cranberry Growers' Best Friend

by CLAY SCHOENFELD

Spring is here, and that of course means that the birds are coming back to the cranberry marshes.

Cranberry growers, faced with many and varied insect problems, often fail to utilize the assistance of birds. The fact is that birds encouraged to breed in the vicinity of your bog will provide valuable help in controlling pests, according to a study just completed by University of Wisconsin ornithologists.

Let's take a look at the insect enemies of cranberries and see what ones are the natural prey of birds—and of what birds.

Moths and their larvae are among the most important insect enemies of cranberries. Leaf miners are taken by the bobwhite and the nighthawk. Leaf-roller moths are eaten by the downy woodpecker, black-capped chickadee, and the Brewer's blackbird. Snout moths are consumed by the crow, English sparrow, and red-winged blackbird. The gypsy moth, an introduced pest that occasionally inflicts great injury to cranberry leaves, has been eaten by no less than 46 kinds of birds, the scientists say.

More than 25 kinds of cutworms are destructive to cranberries. The most important among the bird enemies of these cutworms are the ruffed grouse, bob-white, killdeer, upland plover, cuckoos, crow, mockingbird, catbird, robin, bluebird, starling, English sparrow, meadow lark, blackbirds, orioles, cowbird, cardinal, and various native sparrows.

Gall midges and gnats are subject to attack by the chimney swift, cliff swallow, black-capped chickadee, Baltimore oriole, and goldfinch.

The blueberry maggot is one of the fruit flies devoured by the nighthawk, yellow-bellied flycatcher, and tufted titmouse.

Beetles are taken by upwards of 100 species of birds, especially the purple grackle.

The cranberry sawfly has occasioned serious loss through leaf eating by the larvae. Sawflies have been eaten by 78 species of bog birds, their most important enemies being the ruffed grouse, plovers, swallows, black-capped chickadee, vireos, and the English sparrow.

Bugs like the brown stinkbug are attacked by the sharp-tailed grouse, plover, starling, and meadow lark. Many kinds of birds take leaf bugs. At least 35 birds commonly eat the spittle insects and the lantern fly.

Grasshoppers and allied pests such as katydids and crickets are eaten by practically all species of birds.

All in all, it looks like a cranberry grower's best friend is his bird. Especially high on the list of bird helpers are the English sparrow, the European starling, cuckoos, plovers, the nighthawk, swallows, and fly-catchers.

To attract birds to your cranberry marsh is good business. For 5 cents from the Government Printing Office in Washington, D. C., you can get a pamphlet on "How to Attract Birds".

Cranberry Growing In Wisconsin

By VERNON GOLDSWORTHY

The requirements of a successful cranberry marsh in Wisconsin are undoubtedly different than they are for the growing areas in Massachusetts or on the east coast in general or the west coast, because of the severity of our winters and the method of harvesting in Wisconsin by water raking.

Assuming that the individual who goes in the cranberry business in Wisconsin has enough capital and has the proper management to guide him in his undertaking, there are four main requirements of a successful cranberry marsh. They are as follows:

Sufficient Water Supply

1) The water must be acid and perfectly clear and free of much organic matter. The marsh should be located in an area where it can not be flooded by overflows in the spring by rivers or streams for any extensive period.

With water supply from a reservoir it is usually necessary in Wisconsin to have about 10 acres of reservoirs for each acre of marsh. If one is taking water out of a lake by pumping and putting it back into the lake, probably one

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marsh acre to five acres of lake area is sufficient, if the lake has a constant source of water supply and does not vary too much.

It must be kept in mind that if you are on a lake in Wisconsin, while you are permitted to use the water in the lake for the culture of cranberries it must also be used with discretion. The size of the marsh must be limited so that in taking water out for the culture of cranberries you do not interfere with the fish life or other wild life in the lake or with the recreational facilities on a lake on which there are cottages or other recreational facilities.

Proper Soil

2) The most desirable type of soil undoubtedly is raw peat. This should be from 3 to 6 feet deep. Cranberries, of course, can be grown on lands of muck or sand origin with good results, but the problem of culture is intensified under such conditions. A too shallow peat covering over a sand subsoil makes it hard to hold the ditches, and if the peat is too deep it sinks, allowing the beds to get out of level.

Usually the most desirable soils will be found having brown bush, spagnum moss and wire grass grown on them. Such types of soils usually make good marsh, as this material is scalped off with ease, or in some cases may be plowed.

3) Muck soils are apt to have too high fertility and so promote excessive vine growth, and weed or grasses present a more difficult problem than on peat soil.

Drainage

Two or three foot drainage is almost an absolute necessity and if you do not have this amount of drainage the vines are apt not to do well and the weed problem will be much intensified. The best marshes in Wisconsin have at least two or three feet of drainage and any place where the drainage is not good usually has an intensified weed problem to combat and almost inevitably has a lower production than a marsh with good drainage.

Sand

4) It is absolutely essential to be close to a source of supply of

clean, sharp sand, as the marshes which produce the best are those which consistently follow a re-sanding program every three or four years. The sand should be acid and should be free of dirt or other foreign material.

In addition to the above four requirements, it is advisable to try to locate your marsh near to good transportation facilities such as roads and railroads, to be near a town or other source of labor supply (such as a good farming community) and to be located near other cranberry growers, particularly if you are starting in new at the business and do not have any previous cranberry knowledge.

A good cranberry marsh to be successful must also be planted to the proper variety. In Wisconsin the Searls Jumbo is probably the variety most suited to all growing areas of the state, although it is followed closely by the McFarlin, which is often rated higher than the Searls Jumbo in the central part of the state, but it is too late a variety for the northern part of the state. Howes are planted to some extent, but have not been planted very extensively does not seem to adapt itself as well as Searls Jumbo and McFarlin varieties to Wisconsin type of culture.

It might be well to point out here that in Wisconsin, which has considerable land available for the culture of cranberries it is well to try to select a site which is as level as possible so as to avoid moving any dirt if it can be avoided. Any place where part of the section is filled in is usually a trouble spot because it promotes excessive vine growth and is usually troubled with weeds more than the part which is just scalped off.

Insofar as the proper size sections are concerned, in any of the properties which I have managed lately or have been instrumental in developing or laying out, I have made the sections from 100 to 125 feet wide and anywhere from 750 to 1100 feet long. A center ditch is used in all cases and whether the sections are 100 or 125 feet, it is determined primarily by what the drainage of the marsh is or

the level of the proposed — it to be planted.

By the use of the proper kind of fertilizer on young plantings I have gained almost a year in bringing a new marsh into bearing and recommend fertilizer in Wisconsin marshes if it can be applied properly.

Plymouth County Cranberry School

Final cranberry "school" for Plymouth County was held at the Atwood screenhouse (sometimes called Edaville College), South Carver, March 16. Program consisted of a talk on marketing by Prof. Ellsworth W. Bell, extension economist, University of Massachusetts, a report on the recent marketing conference at Cambridge, by Kenneth Garside, and a truly stirring and eloquent talk by Dr. H. J. Franklin. Final item was the presentation of a souvenir scrapbook to Mr. Atwood by "Dick" Beattie, in appreciation of the fact Mr. Atwood has provided headquarters for the school for its two-year course.

The scrapbook contained photographs, abstracts of lectures given, five pages of signatures of those attending, and news clippings from CRANBERRIES and other publications. This had been arranged by Beattie and Dr. F. B. Chandler. In response, Mr. Atwood said he was sorry the schools were ending and hoped some arrangement could be made whereby these extremely popular gatherings of both new and old growers could be continued next winter.

Veterans Graduating

William H. Tufts of Middleboro High school, agricultural training who conducted the actual in-training classes, spoke briefly, telling of what had been accomplished. He announced the following veterans will complete their studies in cranberry growing May 15: Lawrence S. Cole, North Carver; Benjamin Hatch, Jr., East Wareham; John J. Russell, Plymouth; William Stearns, Buzzards Bay; Fred W. Bailey, Kingston; Ralph Gorham, Bryantville. Four veterans

rolled in the Institutional "On-rm" training had their programs terminated during 1947, because the increased salary they earned had reached a point that did not justify further training in this program. Two veterans of the original class of 16 transferred to other lines of business which offered higher salaries.

Although the school terminates in spring, veterans working on farm trainers are still eligible for two more years of training, providing at the close of the course they can establish themselves on a commercial cranberry bog of their own. Consequently, some in the group may get set up so their program is uninterrupted. New recruits are seeking in the course whenever vacancies occur. The vets, aside from studying at the unique school at Atwood's, have assembled for 50 hours of study. These indoor classes have met once each month at A. R. Parker's, East Bridgewater. Several classes have been scheduled for the spring and summer at the bogs to study insects, their control, to see dusting, and other cultural procedures.

Dr. Franklin

Dr. Franklin's talk, which was wholly in the nature of a commencement address, began with his recollections of the cranberry industry when he first came in, about 1906, and told of the changes and the development he had seen. He gave a discussion upon insects, particularly stressing the growing danger of Root Grub, now at so many Massachusetts bogs as 50 to 100 years old. He told of the new and older growers assembled to "treasure your new bog", these are apt to be less infested with grub or other insects. Speaking particularly to the new-growers, he pointed out that bogs and all operating costs are high.

He said the present period was something like 1929 when the stock market crashed. He said Uncle Sam has to have high taxes today. Possible "War", in big black letters, is in the news again. He was not trying to discourage the newer growers, he continued, it was merely pointing out haz-

ards. He then continued that "life was a gamble, anyway, from the cradle to the grave, so perhaps it is well to attempt some sort of a gamble, "but we shouldn't be foolish about too much of a gamble."

"Be Sure You Like Cranberry Growing

He emphasized that the new grower should not go into the business of cranberry growing solely with the idea of making money. "Be sure you like cranberry growing and the life of a cranberry grower. It is an interesting business and no mistake about that. If you take up cranberry growing and continue at it through the years and really put something into it, you will at least have acquired a little education in life."

"Marketing", by Prof. Bell

Professor Bell, introduced as a speaker who could give an "outside" look on cranberry marketing, said that in the earlier days successful marketing of cranberries depended largely upon the ability of individuals to gauge the factors of supply and demand. The season of marketing was relatively short (September through December), with the largest volume around Thanksgiving. Then came the administration of the marketing operations by cooperative organizations, and the marketing scheme repaid the grower well, so long as there existed sufficient potential demand and the annual production was insufficient to meet the demand. He said this problem was well handled by aggressive sales promotion, and sales and advertising programs yielded good results.

Each year, he said, it was the problem to decide on an opening price that would encourage active market buying on the part of the trade and at the same time bring the highest average returns to the growers. It was the established policy to open the season with a relatively low price and then to advance the price as the season progressed. "This policy tended to keep the good will of the wholesale and retail trade."

He said data showed the trend over the past 20 years of the re-

lation between the opening price for fresh cranberries and the price later in the season has been narrowing. He said it also seemed possible to notice less fluctuations in the price levels from year to year in the more recent years. He said these observations seem to be particularly noticeable from the period since 1935 when the processing of cranberries reached larger volume and became a measurable factor in the analysis of the market.

"Canning Aids Marketing"

"It is becoming apparent that the development of processing in the marketing operation has tended to aid rather than hinder the marketing of fresh cranberries."

The industry had prospered and total production gradually increased in earlier years, but a limit was reached and the law of diminishing returns began to apply when production began to approximate the fresh demand and the expense of creating and promoting additional demand did not proportionately enhance the growers' income from the sale of fresh berries. He said that since cranberries are positively a perishable crop, it became necessary to broaden the sales base by processing and extending the market over the entire year. "It cannot be said that processing and marketing cranberry products is in the experimental stage," he continued. "Operations have been carried on

(Continued on Page 15)

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MASSACHUSETTS "OPEN" MEETING

THE industry this year is undoubtedly faced with a situation which has never existed before. This fact has now become quite generally realized. It is that more cranberries are being produced than the being marketed, either in cans or as fresh fruit. This surplus condition must somehow be overcome if the industry is to continue to be the sound one it has now been for a considerable number of years. Fortunately, growers have their minds at work on means and methods of how to overcome the difficulty which has arisen. The mass, or "open" meeting which is to be held at the Memorial Town Hall, Wareham, the evening of April 26, may or may not find some solution, or a suggestion of a solution. At the very least it can provide a meeting place for discussion. What is done or suggested at this Cape Cod meeting will, it would seem, be of much interest to growers of all areas.

THERE IS REWARD IN EFFORT

THERE is more in cranberry growing than simply the money which may be realized from a crop. We are all engaged in a struggle for a means of livelihood, in which money has a certain importance. The importance of cranberry culture, the bog's care and nurture, sometimes means the sacrifice of a good part of a year's income. But this sacrifice brings a reward, a pride in serving nature, and the satisfaction of bringing to full and healthy growth a most exacting vine.

Over a period of years a good cranberry grower, as with other agriculturists, shares in more of life's worthwhile gifts than many others of us are privileged to enjoy. It has been said that creative work is the most satisfying of all endeavors. When Nature brings a bog into bloom and a grower surveys his prospect of fruit, he knows the result of creative effort and receives a cherished gift.

THE value of growers sending responses to questionnaires was much appreciated in Massachusetts by Cranberry Ex-

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tension Specialist "Dick" Beattie. This refers to the notices sent out as to how many growers "pulled" the water from under the snow-covered winter ice. It aided the research workers in this particular instance in their continuing studies of winter oxygen.

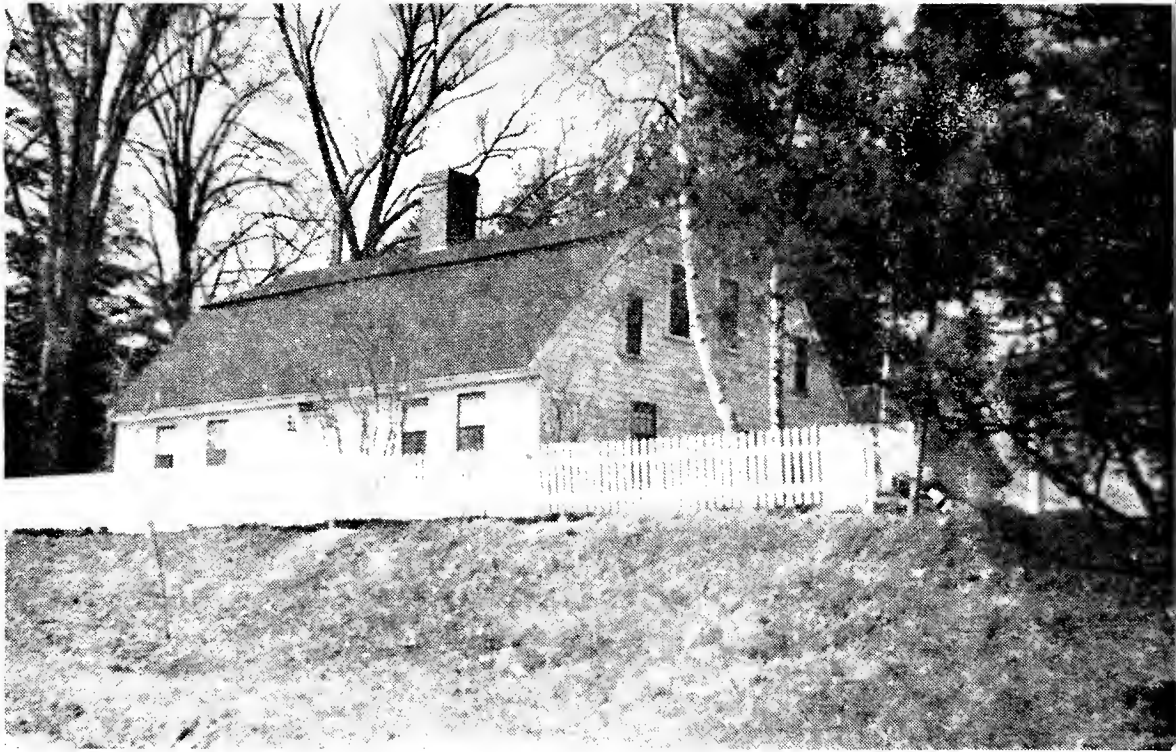
ANYHOW. Spring is at last HERE. That's something we are all thankful for. The sight of a little green grass which is becoming visible, at least in the town which has been the "Cranberry Center" of the world, is good. Lilacs are budding and we ourselves have seen robins.

Pictorial Section



(CRANBERRIES Photo)

A last winter view of A. D. Benson's historic house.



The Benson house as viewed from the front.

(CRANBERRIES Phot

Presentation as Plymouth County Cranberry School Closes



Plymouth School

(Continued from Page 11)

in practical locations within the industry for over 20 years. It was not, however, until within the last ten years that processing operations have actually become an integral part of the industry. This is the best approach to broaden the marketing base for cranberries and of adapting the form of cranberries to the changing habits of living and diets of the general public. It also tends to develop an entirely new market field for cranberries.

"It is not the opinion of these remarks that marketing cranberries in the processed form replaces the marketing methods so well developed for the fresh berries. On the other hand, it is felt that one method tends to supplement the other to the extent that any analysis or consideration of cranberry marketing must coordinate the application of both if the cranberry growers are to continue to determine the marketing policies of their industry which will serve their best interests."

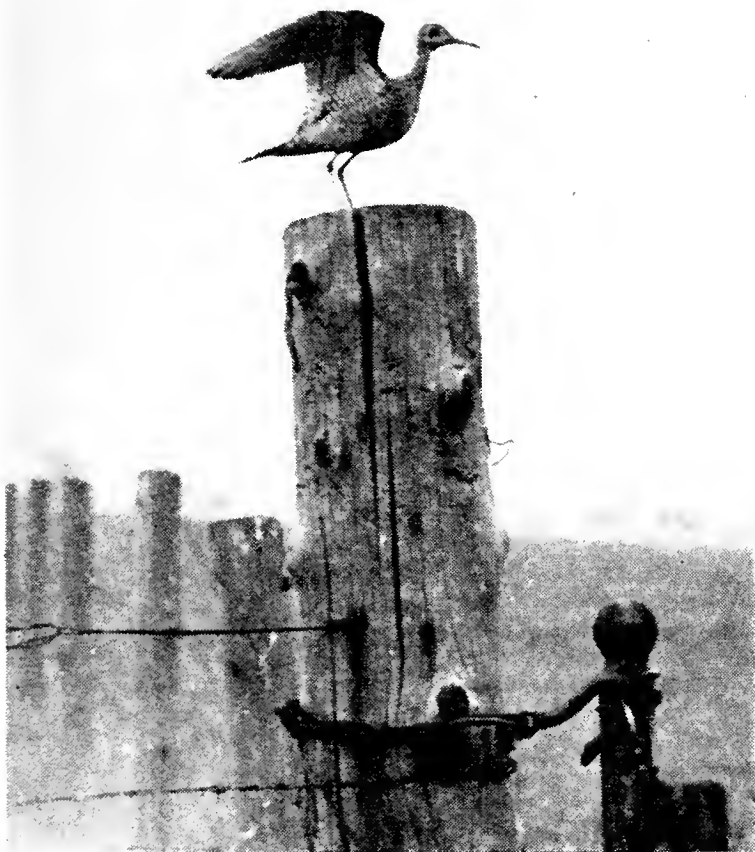
Stress Co-op Marketing

He then stressed the advantages of cooperative marketing as 1) assurance of good market outlets; 2) assurance of the higher prevailing market prices; 3) certainty of timely payment on crop; 4) orderly distribution of crop. He spoke of the advantages gained by processing and of advantages gained by cooperative processing.

He said growers should continue a program to promote the use of cranberries, their products and by-products; provide market supplies of cranberries and their products on a year-round selling basis; adapt varieties to their highest market demand value and use; cause processing operations to be closely planned to fresh product marketing; use up-to-date merchandising methods to gain the full use of retail markets.

Cranberries Need Promotion

In question and answer period Prof. Bell said that it was probably true the country's population is increasing faster than the increase in consumption of cranberries. He said we might expect



ABOVE—The upland plover is a shy bird, but he's one of the cranberry growers' best friends. (From story on Page 9).

OPPOSITE PAGE (bottom)—Ellis D. Atwood, Massachusetts' most-publicized cranberry grower, beams appreciatively upon examining a scrapbook which has just been presented to him by Cranberry Specialist "Dick" Beattie of East Wareham (left). To the right of Mr. Atwood are William H. Tufts, GI Cranberry School instructor, and Dr. Henry J. Franklin. The occasion of the presentation was the conclusion of the Plymouth County Cranberry School which had been conducted at the Atwood screenhouse, sometimes called "Edaville College", for the past two years. The scrapbook, arranged by Beattie and Dr. F. B. Chandler, contained abstracts of the lectures given, Courier and other newspaper clippings concerning the school, photographs, and five pages of signatures of those attending the school, (CRANBERRIES Photo)

175,000,000 population in another generation. He referred to a possible world capacity to consume cranberries, which, unfortunately, did not exist at the present moment. He said cranberries are only in "occasional" use and not almost a daily necessity such as morning orange juice, grapefruit, or other items which the public has come to adopt to every-day meals.

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Fresh from the Fields NEW JERSEY

(Continued from Page 5)

to find the exact requirements of the cranberry plant's normal and fruitful growth. Action was taken by the Committee to promote progress along this line.

On April 14th cranberry growers interested in new developments of machinery for ditching marsh land will visit the Annual Meeting of the New Jersey Mosquito Extermination Association at Atlantic City. The mosquito control men have arranged for a working

demonstration of their field equipment on a nearby marsh. At the January meeting of the America Cranberry Growers' Association Mr. Thomas D. Mulhern, who is secretary of the mosquito organization, extended this invitation to the cranberry growers.

Blueberries

A field demonstration of blueberry sprayers was staged at Whitesbog March 29th by the local representatives of the Field Force Pump Co., the Friend Sprayer, and the Hardie Sprayer. Each dealer operated his machine under actual working conditions and answered questions. C. A. Doehler made some remarks about the basic requirements of a blueberry sprayer, especially in regard to an effort to combat the blueberry grower's newest "competitor" blueberry bud mite.

WASHINGTON

New Planting

Growers are active, with several putting in new bog and others re-sanding their present acreage. Among those doing some planting are Chabot and Newkirk, Craigyma; Morgan, Rowe and Goldman, B. B. Saunders, Arthur Duclos, Carl Bernhardt, Wisner Brothers, L. McArthur, Joe Alexson, Blair Brothers, Ingvald Alsaker, Leonard Norris, Don Tilden, Warner and Ostgard & Sundberg.

New Station

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called for for the construction of a new fireproof office and laboratory for the State Cranberry Laboratory. This new structure will be an improvement which has been awaited for a long time.

Club Meeting

The following is a report of the March Cranberry Club meeting: "At the regular March meeting of the Long Beach Peninsula Cranberry Club held here Friday evening, March 26, 60 adults and a number of children were in attendance.

Al Sundberg, president of the Club, presided over a short business meeting and it was announced that beaver trappers who have worked the Peninsula area have trapped 12 beavers to date. However, some cranberry growers stated that beavers are still working on their places, and the club voted to ask for a continuance of the trapping.

Clinton Hollinger, A. C. A. secretary for Pacific County, attended the meeting and signed up the growers for the 1948 program. Speaking to the club, Mr. Hollin-

ger stated that 85% of the County is now signed up for soil conservation practices, and that in 1947 the A. C. A. paid out \$47,677 to Pacific County farmers. Following

his talk in which he explained the A. C. A. work, growers were invited to ask questions.

"An open discussion was held by growers who brought up cran-

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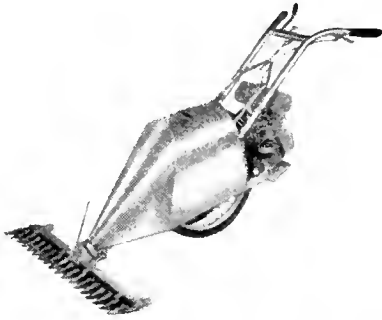
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berry problems, and D. J. Crowley and Dr. J. H. Clarke both spoke briefly on cranberry growing.

"Hostesses for the evening were Mrs. Frank O. Glenn, Mrs. J. H. Clarke and Mrs. D. J. Crowley."



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N. E. SALES COMPANY ANNUAL MEETING APRIL 15

The annual meeting of the New England Sales Company is to be held at Carver Town Hall, Thursday, April 15th, beginning at 10 a. m. Officers will be elected, reports heard, and other matters that may properly come before the meeting will be taken up. The problems of discussing quality fruit were discussed at the preceding directors' meeting.



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Cranberry growers—members of the American Cranberry Exchange—have supported this policy for many years.

The merchandising program for cranberries in 1948 will be made stronger and the cranberry business put on a firmer foundation by more growers becoming members of this cooperative.

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**"BUFF'S" LUNCHEON AT
BOSTON HELD APRIL 5th**

The fifth in a series of agricultural luncheons held by Jesse H. Buffum, Columbia Broadcasting System's Regional director (featured in last month's issue) was held April 5th in the foyer of the Hotel Statler April 5th. These luncheons, known as "Buff's Luncheons", have been attended each year by agricultural leaders.

The cranberry industry was represented by Dr. Chester E. Cross of the Experiment Station at East Wareham. Invited, but unable to attend, were Russell Makepeace, president of the Cape Cod Cranberry Growers' Association, and Clarence J. Hall, editor of CRANBERRIES.

MARCH CAPE MEETINGS

Two extremely interesting meetings of the Cape Cod clubs, the

Upper at Cotuit, March 5, and the Lower at Harwich, March 7, were held, at both of which the possibilities of wells for water supplies for irrigation were discussed in the principal talks. The glacial formation of the Cape was taken into consideration at length by both speakers, Paul J. Howard, well-known engineer of the firm of Whitman and Howard of Boston, at the first meeting, and H. N. Halberg, engineer in charge, Bos-

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ton office United States Department of the Interior. Geological Survey. It is our intention to give resumes of both talks in the May issue, omitted from this number because of lack of space.

WEATHER STATION FOR FROST WARNING PURPOSES ESTABLISHED AT GRAYLAND

A weather station has been installed at Grayland on the bog of C. C. Watson, for the purpose of more closely co-ordinating cranberry frost warnings which are to be broadcast to growers for the first time this season. The station has equipment for taking a maximum and minimum reading each day, a wet and dry bulb thermometer, a thermograph, a rain gauge, and a thermometer to check temperatures at bog level.

Reports are sent in from this station to the Weather Bureau at Boeing Field, Seattle, at 4.30 daily. The Weather Bureau then makes up a frost forecast and sends it out to the local radio station KXRP, Aberdeen, where it is broadcast with the 6.15 news.

Plymouth County Clubs Conclude Winter Meetings

Concluding winter meetings of Plymouth County cranberry clubs were held in March, the Southeastern at Rochester Grange hall, the 23rd, and South Shore Plympton Grange hall the 25th, votes being taken that April meetings be a part of the Cape Cod Cranberry Growers' Association meeting and exhibition at Wareham, April 21.

At the Rochester meeting, Nahum Morse, having served two years as president, was replaced by Emil C. St. Jacques of Hayden Mfg. Company, Wareham. Russell Makepeace was elected vice president, Gilbert T. Beaton re-elected secretary and treasurer, Ray Morse and Frank Crandon elected as advisory committee. At the South Shore meeting all officers were re-elected, these being Orrin G. Colley, president, Russell Loring, vice president, Stanley Benson, secretary and

treasurer.

Acting upon the suggestion of J. T. Brown, Plymouth County extension service director, the clubs appointed members of the Cranberry Advisory committee to work with Extension Service at University of Massachusetts, the County Agents, and the staff at the Experiment Station, East Wareham. This committee replaces a more or less informal committee which has acted in this capacity. The Southeastern club, upon motion of George Cowen, elected its advisory committee; the South Shore elected George Crowell and Russell A. Trufant. One more member will be elected from Barnstable County by the Cape clubs and one named from Bristol County.

New Insect Control Chart

Principal talks at both meetings were by Dr. H. J. Franklin, who discussed the new insect chart just released to growers, and Dr. Chester E. Cross discussed the

new insect chart, also just out.

As concerned Root Grub, the Number 1 insect pest, Dr. Franklin said he believed its long range control will best be served by flooding. He pointed out again, as he has in the past, that this insect is seldom very harmful to bogs of less than 20 years, but steadily increases as bogs become 25, 30 and more years old. He issued a rather sharp warning against Grape Anomala which effects bogs most seriously which are even older, 40, 50, and 60 years. As bogs continue to grow into "old age" in Massachusetts this pest will be more and more destructive. He said, in his opinion, as the inevitable ageing

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of bogs goes on it will replace Root Grub as the foremost menace to bogs, as it renews every year, instead of every four or five as does Root Grub.

He stressed the great amount of work which has now been done with DDT, not only in cranberry work, but in other forms of agriculture all over the country and,

in fact, the world. He said that he now felt it safe to say from the experience which has been built up that this new insecticide is not nearly as destructive to bees as had at first been feared. On the other hand, he continued, there remained the possibility of its effect upon human beings if too much residue is left upon a fruit or vegetable when it reaches the markets. This amount of residue is carefully checked by Government officials, he said, and therefore he issued a definite warning to growers not to apply it too late in the season. He said he would say up to the 10th of July might be safe, but to apply it the first of August would be definitely dangerous. However, he said, most insects for which it is used could be controlled by its use up to the former date.

Gypsy moths could be well controlled from spreading onto the bog by spraying uplands with DDT and this was now recommended rather than kerosene in margin ditches to prevent this

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est from getting on the bog. Referring to the chart, he asked growers to note that Rotenone, or Ferris, had been moved up to first place recommendation for control of fruitworm. He said the cost of this material was higher than other materials, but it did a better job with less injury to vines, particularly in the earliest application, and therefore was recommended in spite of the higher cost.

Dr. Cross

Of the weed control chart, Dr. Cross said as he had already given his talk once and it had been published in CRANBERRIES he would attempt a little different angle. He referred to a visit to New Jersey where he spoke before the American Cranberry Growers' Association on March 17th and he said it seemed to him growers here were not particularly anxious to get rid of grasses, as they had better crops where there were weeds. Concerning weeds on cranberry bogs, he said, as cranberry growers were engaged in a "permanent" form of agriculture, the

effort to get rid of weeds should be an effort of a permanent nature. If heavy vine growth can be promoted, he said, so that no sunlight got through, weeds could not grow. He stressed adequate drainage as a means of keeping weed growth down. Late holding of water, as Dr. Franklin had recommended for root grub, will reduce the brambles. He pointed out on the chart the number of weeds which "PDB" controlled had been reduced, but on those which still remain this chemical is very effective. It has now been ascertained that "PDB" works equally well in April and May as later, and if a bog is flooded for frost control it is now felt this packs the sand down better over the crystals and so holds in the vapors better. He spoke of Stoddard Solvent, which is used considerably on the West Coast and in Wisconsin. This is really mineral spirits, or the material which dry cleansers use for cleaning clothing. He said the cost is higher than kerosene, but the solvent appears to do a good job. Water white kerosene or

solvent should be applied not later than May 10th.

Panel Discussion

Final item on the program was a panel discussion, "New Developments in Equipment", led by Beattie, Raymond Morse speaking on "Aeroplane Float Boats"; "Bob" Pierce on "Mechanical Vine Set-

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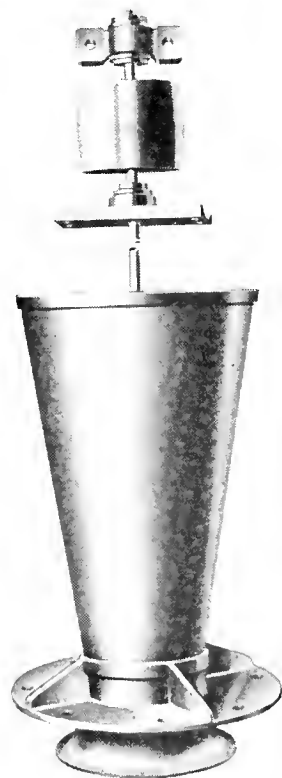
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DIVISION OF THE NATIONAL CRANBERRY ASSOCIATION

PLYMOUTH, MASS.

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ters"; Ferris Waite of NCA on "Sprinkler Systems"; Kenneth Gar- side on "Cyanide Equipment."

Float Boat

Morse, who said he was pinch- hitting for George R. Briggs, told of the three aeroplane floatboats developed last year: that of Mr. Briggs, that of National Cranberry Association, and a third which was put into operation late in the sea- son by the J. J. Beaton Company. He confined his remarks exclusi- vely to the Briggs or "Eatmor" boat designed by Mr. Briggs, as that was the only one with which he was familiar. Improvements over this boat (which was pictured and described in CRANBERRIES, No- vember last) that might be made, he said, would be to increase the size of the 65 h. p. motor to the next larger airtype motor avail- able and to put on a self-started, as the whirling of the blade to start the motor was a rather tick- lish operation in a boat. This boat had been clocked at a speed of 35 miles an hour on a large lake, but its operation on a small bog was at much less speed, but the lake agitating and the turns actually brought up everything from the bottom, floats, rubbish, and even had brought up a girdler, so the possibility of its use in insect con- trol might be opening up. The boat

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had actually brought up in floats from 5 to 20 per cent of the total crop of a bog.

Vine Setting Machine

Robert Pierce, in talking on the mechanical setter he developed for L. B. Handy (pictures and description in October issue of CRANBERRIES) said the vines thus set were alive last fall and he was eagerly looking forward to seeing how they were this spring when the water got off. About 12 acres were set last year, and it is expected to set as many more this year. He told how a 5 or 6 man crew operated the machine, which was an Ariens-Tiller, with disks and rolls adapted to the rear. The two most important men were the two who broadcast the vines in front; a third rode the machine to give it added weight, helping out on the turns, while two or three more followed, raking up the vines which were not set for re-use. He said it would set an acre a day at a labor cost of \$50 an acre. A Jari power scythe was used for mowing the vines, he said, and this seemed much preferable to hand mowing, cutting

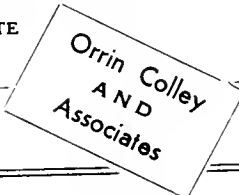
the vines evenly and leaving them in good condition for regrowth.

Overhead Irrigation

Mr. Waite exhibited and told of three sizes of sprinkler heads, from the "Giant" down, saying sprinkling in the East is still experimental, but he was inclined now to the belief that smaller heads did the best job. It has been estimated, he said, that losses from frost flowage might run from 10 up to 50 per cent and this might be eliminated by the sprinklers. Besides frost control he emphasized the value of the irrigation when needed, and that the sprinklers might work into insect control

by packing down the sand after a PDB application.

He mentioned the amount of dry acreage which now has no frost protection, the use of these on bogs which were out of level so that parts could not be reached by flowage. He described his own successful use of sprinklers for frost protection on his own bog last fall, and this developed a discussion which brought out that it was probably better to leave the ice formed on the vines (and berries in the fall) by the sprinklers and let the sun melt it off than to keep the sprinklers on after the sun arose.

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Garside described his cyaniding outfit, developed by himself, which he said consisted of two pumps and two tanks, plus the necessary fire hose, to take the solution out onto the bog. He said the outfit which he is now using is the fourth he has developed. He cautioned against the careless use of this material, which is extremely caustic, but said that since he has to "live with Root Grub" the pest has to be kept under control. Garside spoke only at the Rochester meeting, Louis Sherman taking this topic at Plympton.

February Meetings of Plymouth Co. Clubs

(Continued from last month)

Joe Kelley

False Blossom is a virus disease that affects all parts of the cranberry plant, including the root. Besides its spread by leafhoppers, false blossom is often spread by the use of diseased planting material. It was carried in this way from Wisconsin, where it first appeared, to Massachusetts, New Jersey and the Pacific Coast. The succulent growth of new plantings

takes the disease much more easily than the seasoned vines do. For this reason, vines free of the disease should be used in all new plantings.

When the diseased blossoms open, they are standing erect like those of daisies, instead of being turned downward as are the normal healthy blossoms. You should dig out and destroy all the diseased vines and roots in the hills of new plantings. The best time for this is the second year, when the plants are in bloom.

Vines of all varieties are very susceptible to false blossom when a bog is new. The Howes is one of the more susceptible and the Early Black one of the more resistant, but I have seen bogs with Early Black plantings nearly destroyed by the disease. For this reason, with so much new bog being planted, and that which is going to be planted, we have got to take special care to keep them clear of leafhoppers.

Around 1933 or 1934, cranberry growers were greatly troubled by the False Blossom disease. There was a feeling that we might even have to discontinue raising the Howes variety in Massachusetts, and at that time there was no known remedy for the disease.

Bog surveys of the abundance of different insect species and of false blossom abundance, made in Massachusetts, New Jersey, Wisconsin and on the Pacific Coast, showed plainly that the blunt nosed leafhopper and false blossom were always associated. This pointed strongly to the true carrier. The way in which this insect was discovered was by putting cages on bogs of about 2 feet square and putting hundreds of different kinds of insects in them, a hundred or so being put into the cages once a week. These insects were taken with a net from bogs that had a lot of false blossom vines and put in the cages on bogs that were absolutely clear of the disease. The following year we found that we had a considerable amount of false blossom in the cage where we had put the blunt nosed leafhoppers, and no other diseased plants were found in the cages where other insects had been placed,

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While we were hunting for insect carriers of False Blossom, we were much surprised to see the damage that had been done by the bees containing the spittle insects, we did not realize at that time that this insect was so injurious. One of the experiments that we tried was putting on rubbers and tamping on diseased vines when they were both wet and dry, then tamping on marked plots where there was no disease, to see if it was carried on shoes or rubbers.

As soon as a remedy for the disease was established, a campaign was started to eliminate leafhoppers from bogs in Massachusetts, and a prize was offered for the best slogan to be used for this purpose. Mr. Charles Goodhue ofreetown won the prize with the slogan, "With Sand and Dust We'll Win or Bust." With the cooperation of the growers, we really cleaned up the leafhoppers on most of the bogs in Massachusetts.

False Blossom on Increase Again

The spread of the disease was pretty well controlled until the beginning of the last war, when we were unable to get materials for

spraying and dusting, and for the last five years very little spraying or dusting has been done for this insect. There is no question that the False Blossom disease is on the increase again on practically all varieties of cranberries. I am beginning to see occasionally a bog

that is so far gone that I advise making over parts of it.

For this reason, we have really got to start another drive and get rid of the leafhoppers this year.

Raymond Morse

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FREE- If you raise a number of different crops, you'll want the ALCOA Cryolite spraying and dusting chart—tells when and how to apply. Sent free on request.

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Packed in 50-lb. bags, 6-lb. bags and handy 1-lb. shaker cans

Alcoa Cryolite Insecticide

ite relation to a quality pack of
 anberries. First, it is not possible
 to pack good berries unless
 they are sound when harvested. I
 el sure that we are making progress
 in growing better fruit, although
 the marketing conditions of the
 past few years have not helped
 to improve the quality. Rather,
 would say that we have been
 inced to raise as many berries
 possible regardless of quality.
 What steps can we take to enable
 us to harvest better quality
 fruit?

Late Holding

The proven method of late holding
 is the first I would mention.
 For a grower with only one bog
 takes courage to leave it under
 water until the last of May, but
 growers who have several bogs
 might well rotate them on a three-

BEES
 RENTALS
JOHN VAN de POELE
 West Abington, Mass.

year cycle perhaps.

The use of fungicide spray can
 be an important factor in the
 production of better quality fruit. I
 will not attempt to go into the
 technical part of this job, because
 we have men at the Experimental

Station who are much more capable
 than I am of explaining the
 why.

Fungicides

However, there has been considerable
 successful work done with
 Bordeaux and with Fermate. The

The Forges Contractors, Inc.

WATER ST.

PLYMOUTH, MASS.

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Power Shovels, Cranes, Clamshells
Draglines. Bulldozers and Trucks

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 New England Metal Culvert Co. Pipe.

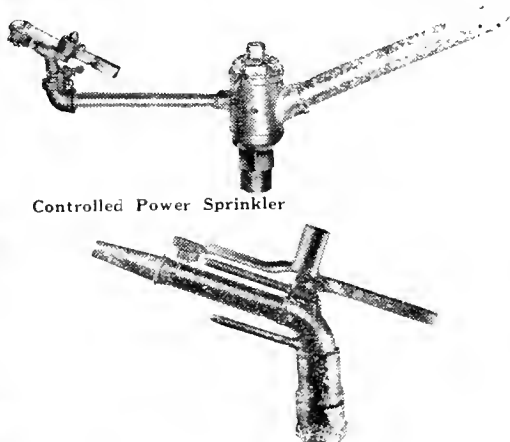
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"SKINNER", the pioneer and leader in
 irrigation for more than half a century, has
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 use—a glance at the table below tells the
 story better than words. "SKINNER"
 equipment is quality equipment. Quality
 means dependability — durability — efficiency.
 Better write us for complete details today.

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 150 Water St., TROY, OHIO

Catalog No. Controlled Power	Main Nozzle Inch	G. P. M.	Diam. of Coverage in feet	
			Uniform	Total
CP-1	5/16	30.00	145	162
		32.30	150	168
		34.50	155	173
		36.80	160	178
		37.50	165	182



Controlled Power Sprinkler

Long Range Utility Sprinkler

Catalog No.	Main Nozzle Size	Lbs. Pressure at Sprinkler	G.P.M.	Diam. of Coverage	Diam. of Uniform Coverage
LR-3 3" Inlet	1"	80	300	325	300
		90	320	330	305
		100	340	340	310

Other sizes available in both Sprinklers. Write.



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With John Bean equipment your *crop* is protected and your *profits* are protected.

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Both in range of output and in type, John Bean offers the most complete line of high pressure spray

equipment. Outputs range from 3 to 60 gallons per minute at pressures of 200 to 800 pound. Engine powered models are made in 2, 3 and 4 wheel types, or are available for truck or ski mounting. Tractor power-take-off sprayers further increase the variety of John Bean sprayers. There's sure to be a John Bean model that meets your needs fully.

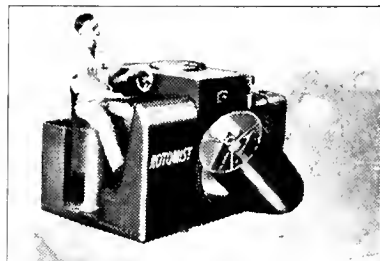
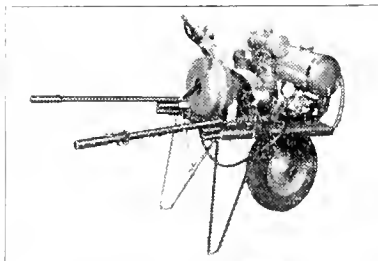
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DIVISION OF FOOD MACHINERY CORPORATION

LANSING 4,



MICHIGAN



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PORTAMIST is the answer to the problem of applying material on hard-to-get-at areas. Applies concentrates, wet or dry dust. Is as easy to handle as a wheel-barrow. Free catalog is available.

ROTOMIST, a new John Bean development, applies micron sized particles of insecticide. High output. Easy, simple one-man control. May we send you the facts about the new Rotomist?

atter is much easier to use if you don't object to the sweet odor of kunk. I personally lean toward Bordeaux from the results of my work in Yarmouth. Perhaps I am a bit hasty in making comparisons, as I have only used Fermate one year on those bogs.

Of course, there are only two methods in the production of better quality berries. It goes without saying that anything we do to improve and strengthen our bogs will have an effect on the crop.

Proper Harvesting

Proper harvesting is essential in maintaining good quality. Do not allow Early Blacks to get over-ripe unless you intend to use them for processing or a quick market. Blacks to be held in storage should be picked while they are in the process of coloring. Just where to begin, I think, would be a subject for discussion.

Personally I like to see Howes well colored when harvested. Usually they will keep better and do not develop blossom end rot as

rapidly. Howes will not color as well in storage.

Storage

With regard to storage, it has

been proven to my own satisfaction that too much ventilation is as bad as not enough.

Berries should never be moved

Black Leaf 40

PROTECT

**THIS YEAR'S PROMISE FOR
A
PROFITABLE
CRANBERRY CROP**

Use **Black Leaf 40** in accordance with State recommendations for the control of

Blackheaded Fireworm Blunt-Nosed Leafhopper
Spittle Insect Red-Striped Fireworm

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A favorite for many years with cranberry growers. Controls the cranberry weevil, gypsy moth caterpillar, cranberry blossom worm, false army worm and fruit worms.

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Wettable Base, 50% DDT

Micron-sized for better suspension and deposit. Contains superior spreaders and stickers for reducing loss from run-off. Made by Pennsalt, a leading basic producer of agricultural chemicals. For details write to Agricultural Chemicals Division, Pennsylvania Salt Manufacturing Company, Philadelphia 7, Pa.

* U. S. PAT. OFF.

Photo Courtesy Bell Aircraft Corp.

from the time they are put in storage until they are packed for market. Every time we handle fruit it starts it on the downhill road. If necessary to move berries do so on a dry day. You no doubt have seen berries handled when the air is damp and humid, when the water stands out on them from so-called sweating. Naturally this does not improve quality.

Now a word about packing.

It has always been my policy to operate the mills so as to get the best possible milling job, even though it may mean more seconds; and yes, a few good berries going out in the rotten box. Hand-screening for quality is costly, inefficient and unsatisfactory. That may seem to be a harsh statement. I'm sure, though, that anyone who has handscreened berries will agree that it is impossible to make a good pack if they come onto the screenbelts in poor condition. Which brings us right back where we started. Quality begins at home.

Field Notes

(Continued from Page 4)

National Advertising Program:

The committee realizes the necessity for greatly increasing the consumption of cranberries and to this end wishes to go on record as favoring a cranberry advertising and publicity program established on a national basis. We recommend that further study be given the formulation of a Cranberry Institute as a means of creating consumer demand. This is recognized as a grower's problem.

Attention of the Massachusetts Agricultural Program Board:

The cranberry committee recommends that the Massachusetts Agricultural Program Board consider the various commodity marketing recommendations at their next regular session and exert

every effort to see that proper attention and action are taken concerning these recommendations.

Respectfully submitted,
J. Richard Beattie,
Secretary
Kenneth Garside,
Acting Chairman

Stanley Benson, Orrin Colley, George Short, Ferris Waite, Edward Bartholomew, Arthur Benson, Frank Crandon, William Wyeth, Nathaniel Ryder, Miss Janet Crawford, William Tufts, J. T. Brown, Bertram Tomlinson, Joseph Kelley.

Dependable and Safe!

ELECTRICITY will be on hand
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for the frost season now approaching.

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luscious, whole berry
CRANBERRY SAUCE

Meat, fish or fowl—all are enhanced by CONWAY'S old-fashioned cranberry deliciousness. Made by the original packers of whole berry sauce, CONWAY'S is cooked slowly to retain natural flavor . . . to bring you a rare taste-treat for any occasion. Order CONWAY'S always for whole berry goodness!



READY TO SERVE

For delicious jellied sauce, ask for MIN-OT

THE Festive Fruit FOR ALL OCCASIONS

(reduced size)

It will pay you **DIVIDENDS**
to deal with

MIN-OT FOOD PACKERS

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Only fine quality cranberries, sugar and water go into MIN-OT'S — assuring you the full cranberry flavor that adds unique tastiness to any meal! Try MIN-OT'S with meat, fish or fowl—its zestful flavor makes all foods deliciously tempting . . . its jellied perfection makes serving easy!



READY TO SERVE

For old-fashioned, whole berry sauce, buy CONWAY'S.

THE Festive Fruit FOR ALL OCCASIONS

A Good Home... Through Cooperation

You spend a lot of money and many long hours producing a good cranberry crop. You spend more money and hours picking and cleaning it.

When your berries are in their boxes next season and ready to ship, you owe yourself the added satisfaction of knowing that they have a good home to go to—that you are not sending them out to make their way alone in a world that may well prove cold and cruel to them.

The Exchange system of finding a home for cranberries—and not sending so many cranberries to any one place that some of them are treated like orphans—has been operating successfully for 41 years. And every year it grows a little, becomes a little smoother-working. There's nothing like experience.

By joining the New England Cranberry Sales Company, the Wisconsin Cranberry Sales Company, the Growers Cranberry Company or the Coos Cranberry Cooperative you automatically become a member of the American Cranberry Exchange—**for 41 years the Cranberry Growers Cooperative.**

The American Cranberry Exchange, Inc.

The Cranberry Growers' Cooperative

"U. S. Department of Agriculture License No. 1."

Marketers of

**Eatmor
Cranberries**

Chicago

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CR 7



APR 1948
NEW JERSEY
WISCONSIN
OREGON
WASHINGTON



NAHUM MORSE, chairman of Spring Equipment Exhibit of Cape Cod Cranberry Growers' Association, is snapped in front of exhibit of Cranberry Experiment Station.

(CRANBERRIES Photo)

Founded in 1895

Our Company has steadily grown in scope and purpose until today it is unequalled in the character of its service and the range of its activities for cranberry growers. If you are not a member of this progressive Company, you are invited to become one.

Growers Cranberry Company, Inc.

Oldest Cooperative in the Cranberry industry
Oldest agricultural Cooperative in New Jersey

PEMBERTON, NEW JERSEY

RIGHT AS RAIN!

Right as rain is the service this old-established organization gives to its members and to the cranberry industry in general.

It is proud of its achievements, yet does not rest on the laurels of the past. It is forward-looking, aggressive, ever on the alert to find new methods, new means which will further the broad field of cranberry culture.

Wisconsin Cranberry Sales Company

(A Cooperative)

Build a Market as Fast as You Build Bogs



Here's another Chicken 'n Cranberry dinner in the making.

This Ocean Spray-and-chicken display will help to make Chicken 'n Cranberry a habit in this woman's home . . . but its real effectiveness lies in the fact that it is part of a campaign including magazine advertising, newspaper advertising, and publicity.

You can't be a very good piano player if you use just one finger. And you can't educate people to Chicken 'n Cranberry unless you use every possible means at your disposal. National Cranberry Association is making cranberry sauce a "must" with chicken through advertising, publicity and promotion . . . laying a solid foundation for a permanently wider market for Ocean Spray.

JOIN WITH NCA TO BUILD A BIGGER MARKET FOR BIGGER CROPS.

NATIONAL CRANBERRY ASSOCIATION

The Growers' Cooperative

Branches at:

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Morris April Bros.

Bridgeton - Tuckahoe
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Apples
Cranberries
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The National Bank of Wareham

Conveniently located for Cranberry men

Funds always available for sound loans

Complete Banking Service

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Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE
Extension Cranberry Specialist



Frost and More Frost

The spring season finds Massachusetts cranberry growers on the job twenty-four hours a day. Frost warnings have been going out over the telephone and radio systems since April 17 and have continued with monotonous regularity, according to many growers (17 warnings to date, April 30). Let's hope our water supplies hold out! Just a reminder of the radio frost warning schedule which is again going out over Radio Station WEEL, Boston. The time is 2.29 p. m. and 8.59 p. m., Daylight Saving Time, and forecasts are given only when there is danger of frost. The radio merely supplements the excellent telephone frost warning system offered by the Cape Cod Cranberry Growers' Association.

Get After Root Grub

Besides frost activities, there is a lot of sanding being done throughout this area. Speaking of sanding, let's hope that growers are putting some PDB crystals under this sand where root grubs are found. This leads up to the root grub system. This might be a good year to really go after this No. 1 cranberry pest. Dr. Franklin has estimated that the cranberry root grub destroys between 100,000 to 150,000 barrels of cranberries annually in Massachusetts. A survey completed in 1945 showed that approximately 42% of our acreage was infested with this pest. While it is seldom harmful on bogs under twenty-five years old, we should all be thoroughly familiar with its life history and means of control. We have had an active campaign carried on primarily in Plymouth County which is now entering its third year. The purpose has been to acquaint growers with proper identification, type of injury on the bog, and how it is con-

trolled. Field meetings, demonstrations, and publicity have been methods used to acquaint growers with the seriousness of the problem. However, prices for our berries have been very attractive these last few years, and growers have hesitated to do anything that might reduce their crop which, of course, is understandable. Last fall, Joe Kelley and the writer decided to learn what was actually done in the way of controlling these grubs. We visited twenty-two of the growers enrolled in the root grub campaign who had indicated that they planned to treat for grubs in 1946-47. The following is a brief summary of data collected from these visits.

	1946	1947
a. Cyanide	41	66
b. PDB crystals	16	6
c. Flooding	257	143
Total	314	215

Results for 1946: (Growers' estimate of control):

	Good	Fair	Poor
a. Cyanide	6	1	0
b. PDB crystals	9	0	0
c. Flooding	7	1	2

Infested acreage still to be treated = 390 acres by 22 growers visited.

There were four instances where the control was not too satisfactory. Possible reasons were carefully examined. Under the cyanide treatment, one grower stated that he obtained only a fair control because a thorough job was not done. There was too much run-off of materials. Another grower stated that he had only fair results when flooding for grubs on a very weedy bog. It is only a theory, but he believed a possible explanation might be that photosynthesis was active under these conditions which supplied plenty of oxygen for the grubs and too many survived the flood. Two growers told us they had poor results from flooding. One informed us that cold spring water was used and that he had to keep pumping to keep his bog un-

der, which meant that the water was always cold during the flow. The second grower could find no logical reason for not getting a higher percentage kill from flooding. It was apparent that most growers were pleased with the three accepted means of control. We found that three growers had recently bought their own cyanide apparatus. The capacity of their tanks ran from 400 to 550 gallons. This type of equipment could do nearly an acre a day with proper conditions with only a small crew ranging from three to five men. All growers contacted stressed the following directions very carefully which is an excellent cue in any insect, disease, or weed control program.

When the Insect chart calls for 7½ lbs. of PDB crystals or 1 lb. per acre, that is the proper amount. The growers who obtained the best results covered the crystals immediately with at least an inch of sand and put out the crystals just ahead of the sand crew. In cyaniding, the Insect chart calls for 7 oz. to a hundred gallons of water, with one gallon of cyanide solution to 1 sq. ft. of bog. It is very important to let the bog soak in well and not have any runoff of material. It may take longer to do the job, but it will certainly pay in the end. For those who will be flooding to control root grubs, May 12-15 is the date to put the bog under and hold until July 1. See the new Insect chart for particulars, consult your county agricultural agents, or get in touch with the Cranberry Experiment Station. Whatever treatment is used, let's be sure to follow directions carefully and do a thorough job. With the competition that lies ahead, we can't afford to donate over a hundred thousand barrels to root grubs annually.

CRANBERRY GROWERS

Watch our announcement
next month concerning
the new sensational
GUPTILL WHIRLWIND
Mist Blower
for cranberry bog spraying

THE BKN CO.

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SO. MIDDLEBORO MASS.

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of May, 1948—Vol. 13, No. 1

Published monthly at The Courier Print Shop, Main St., Wareham, Massachusetts. Subscription, \$3.00 per year.
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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Frosty April

Growers had plenty of frost troubles during April, although damage to bogs was not considered very extensive. Much of what damage did occur may have been in the 10th, when the first general warning went out from the Experiment Station. There were warnings again on the 17th, 18th, 21st, 22nd, 25th, 26th, 27th and 28th. Growers who normally have adequate flowage had sufficient water and bogs were very generally flooded. For the last four nights of frost, in most cases the water was held over for the four nights. Water supplies were reduced somewhat, although there probably was no particular scarcity as May began. These April frosts were general frosts, and not of the "spotty" variety.

Month Slightly Warmer

In spite of the number of frosts, the month as a whole was slightly warmer than normal, it is believed. Temperatures at Boston averaged one degree and a half warmer than the norm, and presumably this same situation applied broadly to the cranberry areas. High of the month as recorded in the shelter at the State Bog was 67 on the 24th, and the lowest was 20 on the 11th. Lowest figure of bog frost temperature which Dr. Franklin has recorded from growers' reports was 15. Rainfall for the month was 4.63 inches.

Frosts Continue Into May

May continued the cold nights. On the night of May first degrees were reported from 19½ to 24. On the night of the 2nd reports ranged from 21 at Carlisle in Middlesex County to 26-28 in South-

eastern Massachusetts. Some cloud saved the southeastern area from getting too much general frost. It was heavy in Middlesex.

"Late Water" Crop Perforce

Many growers have left the water on bogs for the long spells of frost nights, some up to ten days, while others have drawn the water generally or on some bogs from day to day so that some spring work could be done. With so much of the acreage under water so late this spring, much of Massachusetts' crop will be pretty much "late water", perforce.

Oxygen Deficiency

As regards the oxygen deficiency situation on Massachusetts bogs during the winter, because of prolonged snow-ice, Dr. H. F. Bergman is interestedly watching developments. He says it will not be possible to make any statement as to damage until the bogs come into bloom in late June and early July. He is "standing by" watching developments, but so far nothing has changed his mind as to the fact there may have been considerable damage in overwintering of the bogs. However, it appears evident that if growers had not followed his advice quite generally in dropping the water under the ice, damage would have been more severe than whatever it turns out to be.

WISCONSIN

No Frost Damage

Spring, insofar as the cranberry bogs are concerned, is a little early. "Del" Hammond of Wisconsin Cranberry Sales Co. reports. As of April 29 some frost reports had gone out over the radio of the new frost warning service, but little, if

any, flooding was necessary for protective purposes. The coldest night to that date was about 25, and as of the end of the month it was figured buds could stand 20. Probably no frost damage was chalked up in Wisconsin for April.

Fear Dry Cycle

According to Vernon Goldsworthy prospects for the year look "quite good." Most of the marshes came through rather well, although there was winterkill on some. The spring has been rather dry and there is some worry about May frost protection. Undoubtedly, says "Goldy", Wisconsin is entering a drier cycle, and this is readily admitted by the weather experts. This, of course, would effect Wisconsin production, particularly if it extended into the fall.

Fertilize by Air

Starting May 5, the Wisconsin Cranberry Sales Company planned to fertilize approximately 150 acres by helicopter. This program will be extended if the initial results are satisfactory.

Weather Man Arrives

J. W. Milligan, familiarly known as "Jim" or "Red", has arrived at the Rapids to conduct the new frost warning service. He has presented some new ideas and is expected to add greatly to the program and increase the efficiency of the frost warning service to the growers. "Del" Hammond is sure this program and service to the growers is one which can be watched with profit by other areas. It is admitted the cost will be a little higher, as this is an experimental year for the service. But it is held, however, that if the service can prevent just one night of such losses as occurred June 15th of last year, it

(Continued on Page 30)

CAPE GROWERS HEAR HOW AGRICULTURAL INSTITUTES WORK

Mass. Meeting, Wareham Town Hall, April 26, has limited attendance with Frost Forecast, but those present hear top-notch speakers with much interest — Gathering was sponsored by Public Relations Committee of Growers' Association.

Massachusetts cranberry growers heard a discussion of how agricultural institutes operate, at an "open" meeting sponsored by Cape Cod Cranberry Growers' Association at Memorial Town Hall, Wareham, Wednesday evening. The attendance was considerably smaller than had been anticipated, probably because, as President Russell Makepeace explained, there was an 18 degree frost in prospect that night, one in a series of frost nights, and because a number of one of the co-ops (New England Cranberry Sales) had left for New York to attend annual directors' meeting of ACE.

The growers heard a calm, informative program by Edward Ryan, New England Representative of the New York and New England Apple Institute, upon how his organization functions; Harold Rotzell, speaking upon "The New England Fresh Egg Institute, Inc."; and John Chandler, Massachusetts Commissioner of Agriculture, upon "The National Apple Institute". Frederick E. Cole, Massachusetts Extension Marketing Specialist and former commissioner of agriculture, was moderator. In conclusion Mr. Cole summed up the activities of an institute as "promotion, publicity, service, conservation, development of by-products and research", all on an entirely voluntary basis by grower members.

In opening, President Makepeace said the meeting had been called to learn something which might be of benefit to the cranberry industry, "to take a leaf out of the book of those who are more experienced." The meeting was strictly for information and was not for organization.

Mr. Ryan

Mr. Ryan, opening speaker, began by citing how much various fruit and vegetable industries were spending upon advertising annually, running up to \$720,000 for pine-

apple growers, the list including grapefruit, grapefruit pieces, tomatoes, prunes, and others. He said the apple people had sat by and watched orange and banana people forge ahead in sales because their products were promoted on an industry-wide basis.

He then told how the apple growers of New England and New York State formed state organizations and each state except Massachusetts which elected two, chose one representative to the Apple Institute, and New York state was represented by counties. He said this board met twice a year and elected officers, and the officers in turn set up an executive committee which generally met once a month. Grower members contribute one cent a bushel toward the expenses, and this is the lowest rate of any apple institute in the country. These voluntary pledges by growers are made in June and he was usually able to get in 98 per cent of the pledges. If a grower ran into hard luck, hail or frost, for instance, and his crop did not go up to what he had estimated, he was not held to the estimate pledge. This is collected one-third in October, the balance in June following.

Maintains News Service

His institute carries on an active promotion campaign continuously, but does not go into any selling. He said it maintained a regular news service for food editors of newspapers, magazines and radio, dieticians, and others who might be interested. He said calls were made on such people and a feeling of good will was built up. He said the institute helped chain and other large retail food stores with advertising material. Calls were made on such stores to help them arrange displays featuring apples. There was an educational program for the schools. He said they arranged apple displays at fairs—at the moment there being

an apple booth at the Boston Food Show.

He said the institute was working upon the development of apple by-products and that this was a field which had been badly neglected by the apple growers. The institute, early in the season, decided what per cent of the crop should go onto the fresh market. He stressed the fact that the program was an entirely voluntary one on the part of the grower, and said the sales of apples had been increased by the institute.

Mr. Rotzell

Mr. Rotzell began by saying that if production of a given product is to be increased, the producer have simply got to see that more is consumed. "If we don't, we are simply in the soup". He cited the instance of duck producers, who had been letting ducks pile up in freezers when the supply was out running the demand. He said they got excited and decided they couldn't just let ducks be "kicked around" any longer. "The hen cackles when it lays an egg—a duck just keeps quiet." The institute got duck programs on the radio and in the news, booklets declaring how delicious duck is, were sent out. He said a duck dinner was arranged for editors and others at a Boston hotel, a brace of ducks was given to the Governor and he came to the dinner. He said trips to duck farms out in the country were arranged for food editors, who went back and wrote about ducks. He said cranberry growers have an excellent opportunity to do the same thing, arrange trips to the bogs and canneries.

Egg Consumption Hadn't Increased

The institute found out, he continued, that egg consumption per capita hadn't increased in 30 years, whereas, for instance, consumption of citrus fruits had gone up as much as 70 per cent. A program of promotion was begun. He told cranberry growers that when they read stories about eggs in various publications, these stories didn't just happen; they were encouraged by egg institutes. He said food editors are only human,

like anybody else, and they will often use the material which is easiest at hand. "We give them authentic egg information".

He said he personally spoke before many schools, particularly preferring the junior and senior high grades. Boys and girls of that age are most alert, he said, and he gave educational talks which were welcomed by educators. He told how vital the farmer is to life, and that health must come from the "soil up, not from the drugstore." He said he gave them information, rather than entertainment, and he explained that everyone comes from the "sun, air, water and soil", a fact which many city boys and girls have never had brought home to them.

Certain industries, such as dentifrices, spend as much as 40 per cent of their total intake upon advertising, but this is lower in food, citrus fruit being the highest, 3 or 4 per cent. He said his institute spent one-tenth of one per cent. Contributions by producers were about one cent a crate, all voluntary, arranged mostly on a county basis. Contributions were not difficult, he continued, but with so many people producing eggs and poultry the question of contact was extremely hard. Once contacted and the institute explained, he said the producer was more often than not willing to make his contribution.

Commissioner Chandler

Concluding speaker, Mr. Chandler said that during the depression years, 1934-1935, apple growers had the "pleasure" of disposing of every bushel of apples at about 25 cents a bushel less than the cost of production. He said the growers of the Washington State area began a start, a very modest one, and eventually 16 regional organizations were included. Each organization worked in its own area. Directors from each area are sent to the general board and this board meets at least once a year. The largest amount which has been spent in operation expenses, he said, has been \$20,000. The groups, as an institute, have the benefit of working as a national group and can put on national apple "drives" and can "dispose of

a lot of apples very quickly."

Each area promotes the sales of apples in its own area, so that, for instance, Northwestern apples can be sold on the West Coast largely and not come in to glut New York and Boston markets. The groups swap information which is sent out to newspapers, magazines and the radio. The institute also swaps personnel. "We join together in group advertising. I think this might be highly valuable to the cranberry industry."

Plans Allocation

He told of color spreads with informative articles which had appeared in magazines. He said the national institute plans the distribution of the crop. He said an industry estimate in late June gave a pretty good idea of what the crop is to be, and there can be intelligent planning between what should go on the fresh market and what should be processed. At least 40 per cent of the apple crop is normally processed.

Programs are discussed with commercial canners, he said, that a reasonable relation between canned and fresh prices might be developed. He added this generally worked out to the benefit of all concerned.

"No True Surpluses"

In the question and answer peri-

od, Mr. Rotzell brought out that there is never an actual "surplus" of food, but it was only a problem of distribution and purchasing power. He pointed to the tremendous increases in population in the United States and throughout the world today, and that people still starve. He said increased production of food must be brought about and also a means of distribution of these so-called "surpluses" to the right places at the right time.

President Makepeace said that possibly there was a feeling the advertising of cranberries should be supplemented beyond that which is done by the two major co-ops and others who now advertise.

Return postcards were distributed as the growers left, with the message to briefly get the grower's frank opinion of the value of an institute as a possible means of advertising cranberries and increasing consumer demand. These were to be returned by May 5.

Bringing the meeting to a close Makepeace pointed out that William H. Wyeth of Wareham is chairman of a permanent public relations committee of the association and this committee would take the matter under advisement and growers would be informed of any recommendations finally arrived at.

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University of Wisconsin

Cape Cod Growers' Association Holds Extremely Interesting Exhibition and Spring Meeting

Many See Displays at Wareham Town Hall and Hear Instructive Talks by Experiment Station Staff—Dr. Franklin to Issue "Rot Forecasts".

Second annual exhibition of cranberry equipment and supplies, and spring meeting of Cape Cod Cranberry Growers' Association at Wareham (Mass.) Memorial Town Hall, Wednesday, April 21, brought out several hundred growers, who declared this occasion to be highly successful and instructive. Opening at 10 a. m. with exhibits in the basement and on the grounds outside, the growers roamed around examining the displays and observing much of value. Display was in charge of a committee headed by Nahum Morse of East Freetown and George E. Short of Plymouth.

At noon a caterer's chicken pie lunch was served by the Mayflower restaurant of Hyannis. Lunch was in charge of a committee headed by E. L. Bartholomew of Wareham and John Shields of Osterville. The afternoon was devoted to a brief business program and then a cultural discussion by Dr. H. J. Franklin and other members of the East Wareham Experimental Station staff. President Russell Makepeace presided.

Principal speaker was Charles R. Cherry, district forester, Massachusetts Department of Conservation. Walter Pieper, Department of Agriculture, brought greetings of Commissioner John Chandler. C. D. Stevens, statistician, New England Crop Reporting service, said it was expected to have the complete survey of the Massachusetts cranberry industry, begun in 1946, ready for distribution by the time of the annual Association meeting in August. He further said he saw little likelihood of any considerable final revision of the state crop estimate of 485,000 barrels, although all figures were not yet in.

Public Relations

Mr. Bartholomew, who has taken an active part in recent marketing

programs and public relations, said one of the greatest hindrances to progress has been the "complacency" of the growers. "We should let the world know we have a big industry and a good one. We should let it be known that cranberries are Massachusetts' chief export crop and that we grow three-quarters of the world's crop". He pointed out that the crop has brought in as much as \$16,000,000 to Massachusetts alone. "From now on", he told the growers, "your Association has a public relations committee which is going to let the public know something of our industry, and keep cranberries in public attention."

Restlessness Good

President Makepeace said the legislative committee is at work assisting in the effort to prevent the Old Colony Division, N. Y., N. H. & Hartford R. R., which provides the only train service to Southeastern Massachusetts, from discontinuing passenger service. He mentioned the restlessness among the growers in regard to the marketing situation, and concluded by saying, "I would call this a good thing, and good can come from it. Too much complacency on the part of our industry is bad."

He pointed out that the association had been formed in 1910, and read the charter of the incorporation, which he said was sufficiently broad to allow the association to do many things. He said it spoke well for the wisdom of the founders, and that one of the original directors was still a director and present at the meeting. He called upon this member, Franklin E. Smith of Boston, to take a bow. Two others of the original members were present, J. C. Makepeace and L. B. R. Barker.

New Insect Bulletin

A brief report was made upon the progress toward the publication of a new insect bulletin, with colored plates, to replace and bring up to date one issued in 1928. This printing has run into

some difficulties, but Dr. F. J. Sievers, director of Extension Service, University of Massachusetts, said he was in thorough approval of the project and he believed its publication could be brought about shortly. This bulletin, prepared by Dr. Franklin, has for a number of years been a need of Massachusetts growers, as the earlier publication has all but disappeared, and growers need a replacement to assist in proper insect identification and information.

A keynote of the meeting, mentioned by a number of the speakers, was for "quality fruit."

Reforestation Needed

Forester Cherry explained his work in his district, comprising most of the cranberry areas, and said it was the forester's duty to help property owners with their forestry problems. He said assistance could also be obtained from other sources and from town tree wardens.

He pointed out that since the 1944 hurricane and the increased demand for wood during and since the war, that the number of mills in Southeastern Massachusetts has tripled. The normal cut from the areas used to be approximately 20,000,000 board feet a year, whereas now it is about 60,000,000. "This cut is three times the amount of timber which is being grown today", he said.

He urged the growers to take over the challenge of reforestation—replacing woodlands which had been cut down or destroyed by fire and in planting new forests. "Forestry", he continued, "is the growing of a crop of timber on land on which no other crop will grow." He asked growers to be careful in letting out contracts for cutting timber so that the timber be cut correctly. He urged consultation with the forestry department in any program begun that it might be properly conducted. Fifty years seems like a long time for a cash crop of trees to come in, but, he said, cash from trees could be obtained in 10 or 12 years. This, he explained, was because 1200 trees should be planted to the acre, this being to help the trees to grow straight when young. This number is then thinned to 300, and the

rees which are thinned out could be spruce or fir which could be sold for Christmas trees, leaving the others well spaced to reach a good maturity in 50 years.

Forest fires each year take a tremendous toll of forests, he said. He urged care on the part of all property owners, particularly when burning and in cleaning up slash. He said cranberry growers were among the worst offenders in not keeping their woodlands clean.

He felt confident this could be remedied, as the growers have taken waste land and made it into beautiful and productive areas. "I feel sure that when you people accept the challenge of reforestation you can bring about just as beautiful forests, as you bring about beautiful bogs."

Experiment Station Program

Dr. Franklin took charge of the Experiment Station speaking program, first paying tribute to the "three most efficient station workers, Joe Kelley, field man, George Rounsville, grounds keeper, and Miss Thelma Laukka, office clerk." He then said he was extremely pleased with the research staff as it is now established. He highly praised the work of Extension Specialist "Dick" Beattie, the latter being the first speaker.

Beattie outlined the projects which lie before the staff and the industry: control of root grub, fruit rots, and the bringing about of quality fruit; and a program to keep key bog employes in active service the year around, in some such plan as reforestation.

Dr. Bergman

Dr. Bergman spoke on "Methods of Fruit Rot Control in Cranberries." He told of his experiments with fungicides and said the two best in his opinion were Bordeaux and Fermate, the former perhaps being more effective in action, and the latter having an advantage in that it could be mixed with and applied with an insecticide. He said the time of application was most important, particularly in the first application, which should be before five per cent of the buds are open. The second should be as the buds were disappearing, and in that application there was a little more time

leeway. A third application, in his opinion, was simply an unnecessary expense and did no appreciable good.

Air Fungicide Spray

He told the growers that fungicides should be applied in spray form only, and that experiments were made last fall which strongly indicated that fungicides could be effectively applied from the air by 'copter or plane, particularly the former, because of the slower speed of the craft. This opens up a promising field, he said.

Dr. Chandler

Dr. Chandler told of his experiments in fertilizers and soil studies. He said that "management is fully as important in fertilization as type of soil." He referred to drainage studies, and it seemed to be that filling ditches for irrigation did not have any beneficial effect upon the middle of a section. Of the cranberry breeding program in which he is doing work for the U. S. D. A., he said the new seedlings had been planted upon various bogs and that by 1950 some of these new varieties might be available for general distribution. Another project which might be developed, he said, would be to plant a crop on bog uplands which would not harbor cranberry insects and would be a crop which wild bees like, bringing them around the bogs.

Dr. Cross

Dr. Cross departed from his usual subject of weed control and gave a preview of a new bulletin which Dr. Franklin and he have written concerning weather in relation to cranberry growing, which will be a short supplement to Dr. Franklin's "Weather in Cranberry Culture". All roads in cranberry studies, he said, seemed eventually to lead to the subject of the relation between cranberry culture and the weather.

He divided his subject material into three topics, sunshine, rainfall, and the monthly mean temperature. He said he has used a 21 month base, 9 months of the year of the crop and the 12 months of the year preceding, this being in relation to the size of the crop and the size of the berry. It is now believed that sunshine in the

month of February of the year of the crop is important; that is, the more sunshine the larger the crop. This is a new thought. The important months of the preceding year are May, August, September and November, the latter having the strongest influence of all. February sunshine appears to give large crops, provided the bogs are not covered with snow and ice.

"Since 1893 no large crop has been produced", he said, "unless the February sunshine hours were at least 150. This year the sunshine has exceeded that figure slightly. The sunshine for the important four months of the year was far in excess of normal.

He said, as concerns temperatures, the higher the temperature in May the year of the crop, the larger the crop.

For rainfall, he said May, July and August are important in the year before the crop, but this importance is exceeded by that of October. He suggested the growers give thought to October irrigation in promoting the crop of the following year.

For size of berries, he said the greater amount of sunshine the larger the size of the berries. He said a lot of sunshine in January tends to produce large berries. He said that records since 1925 show there have been no large-sized berries where the January sunshine hours have not been 130 or more. Speaking of the past January, he said the hours had been less than this figure, whereas the important months of the past year had been far in excess.

Sometimes growers questioned the value of ascertaining such information, he said, but its value to him was obvious, as it could be used in better bog management.

Dr. Franklin

Dr. Franklin said one feature in cranberry growing has been leaping rapidly to the foreground recently, and this is in quality fruit. He added this field should be "pursued for all it is worth". In this connection, he said, one feature is to note early the conditions which produce rot, and he then made his statement that he planned to give a rot forecast this year in late May, when he felt such a forecast could

be made with reliability. He said such an early forecast might help in the determination of the allocation of the crop between fresh, and berries for processing.

A second cause of poor quality berry is excessive heat, sunshine, or drought, or a combination of all three. The latest good example of this combination occurred only last fall. He said proper bog irrigation in August seemed to be the best answer.

Exhibits

Among the exhibits this year was a display by the staff of the Cranberry Experiment Station, planned by Dr. Chandler. This showed specimen weeds and root grubs. The latter constitute one of the greatest menaces to growers today.

The exhibits included an elaborate display featuring irrigation pipe by Veg-Acre Farms, Forest-dale; Niagara Sprayer & Chemical Division, Food Machinery Corporation, Middleport, N. Y., insecticides and fungicides; Boston Lightning Rod Company, which had a model country home and barn with manufactured "lightning" striking the chimney of the house in a continual demonstration; Joseph M. Hackett, North Hanover, industrial engines; Cranberry Trading Post, Plymouth, a big display of equipment of all sorts; Hayden Separator Manufacturing Company, Wareham, various items of cranberry equipment; E. W. Goodhue, East Freetown, lumber and various building supplies; Hedge & Matthies, industrial engines, tractors; Robertson Farm Machinery Company, varied cranberry equipment; H. A. Suddard, Wareham, dump trucks; Aetna Engineering Company, Hanover, pumps and other equipment; New England Cranberry Sales Company, fresh cranberries and other items; Eastern States Farmers' Exchange, West Springfield, many items of insecticides and other supplies; R. B. Parmenter, Massachusetts Extension Forester, Amherst, wood preservative; H. F. Davis Tractor Co., Boston, tractors, other items and a movie showing heavy equipment at work; The Forges Contractors, Inc., Plymouth, a prefabricated flume model with constantly

running water; Russell A. Trufant, North Carver, prefabricated flumes; George B. Dexter, Marion, Rotary Tiller demonstration outside; CRANBERRIES Magazine, magazines, halftones, cranberry photographs.

Growers' Company Holds Annual Meet

Theodore H. Budd Re-elected President—Members Learn with Regret of Retirement of Misses E. C. Becher and M. C. Lambert.

Members of the Growers' Cranberry Company held their 53rd annual meeting at the company's office in Pemberton, New Jersey, April 20.

C. M. Chaney, general manager of the American Cranberry Exchange, New York, gave an illustrated report on the past season's business. It proved not only very interesting, but highly satisfying to the members, especially the fact that the Exchange had secured for that part of the New Jersey crop sold fresh an average price of \$26.25 per barrel (which was, less operating expense, turned over to the Growers Cranberry Company before January 1).

Theodore H. Budd, president of the American Cranberry Exchange

and the Growers' Cranberry Company, who was re-elected as company president and delegate to the Exchange during the meeting, was authorized by the members to pick a three-man committee. Purpose of the committee was to be available for meetings on better cooperation among cranberry growers. The committee was empowered only to make suggestions to the company's members.

Other officers re-elected were Ralph B. Clayberger, first vice president; Edward Crabbe, second vice president. Walter Z. Fort was elected secretary-treasurer. The two delegates to the American Cranberry Exchange who have served with Mr. Budd were also re-elected—Edward Crabbe and James D. Holman.

Misses Becher and Lambert Retire

It was with real regret that during the meeting the members learned of the impending retirement of Miss E. C. Becher and Miss M. C. Lambert, who have served New Jersey cranberry growers faithfully and well since, respectively, 1907 and 1915. All the members were deeply appreciative of the efforts which these ladies had made over the years in their behalf.

After the business meeting the members adjourned to the Fireside restaurant, Mount Holly, where a delicious lunch was served.

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N. E. Cranberry Sales Company Sets Keynote of Quality Fruit

Annual Meeting at North Carver, Mass., Reports Additional Payment of \$2.00 on Fresh Fruit, Bringing Total to \$18, With Some More Still Due—George A. Cowen Re-elected to Third Term as President.

The 42nd annual meeting of New England Cranberry Sales Company at Carver (Mass.) Town Hall, April 15th brought out an attendance of 200. The themes of the meeting may be described as plans to concentrate upon the growing of quality fruit, and a recognition of the current "critical" situation of the industry, but without discouragement. In fact, the necessity of providing quality fruit was stressed again and again, and the words of Assistant General Manager E. C. McGrew, "Let us look forward constructively and not backwards remorsefully", perhaps presented the mental attitude of the growers.

At the start of the meeting General Manager A. D. Benson announced that directors had voted \$2.00 dividend on the fresh fruit in addition to the \$16.00 which had already been paid, with an indefinite amount more to come when final returns were in from processors and the berries in freezers had been disposed of. He told the members the Company had handled a total of 128,629 barrels of which 92,950 had been sold fresh, 22,827 processed, and 12,863 barrels were still in the freezers. A total of 72 new members had been added during the year.

Member Service Important

He said service to members has become a paramount part of the business of the company. He suggested the bog loan service be temporarily discontinued. There are 53 loans outstanding.

Mr. Benson called upon Raymond Morse, in charge of service, and the latter reported that growers' service had reached a new high, with 185 bogs having been treated

by the company by helicopter and airplane dusting. He said 40 men are now employed in this service, divided about evenly between Plymouth and Barnstable counties, with Weldon Pierce having charge in Plymouth and Ralph Thacher on the Cape. Fourteen bogs are now being entirely managed.

Stanley Benson reported on membership, saying there are 271 members, and he hoped each member would be a committee of one to obtain new members, as the solicitation of a member is much more effective than that of a grower's relation man, now matter how efficient he may be.

Miss Sue A. Pittman gave a report on berries handled.

Mr. Benson again reported, telling of a planned addition to the Plymouth screenhouse, and he explained why final returns could not be made at that time. He then urged the growers to put forth every effort to grow a quality fruit, to screen and pack them properly. He referred to the progress report of the committee in March which follows this account of the meeting.

Paul Thompson read the report for the auditing committee.

Chaney

Mr. Chaney deplored the fact that so much of the '47 crop had gone into the hands of processors and was withheld from the fresh fruit market. This, he considered as completely unnecessary and unwise. "Looking at the overall picture, it would have been much better if considerably more of the crop suitable to have been sold fresh had been sold fresh, as it could have been. It is too bad that such a large part of the production went into cans and freezers."

He said it was his estimate that by Sept. 15 of this year there would be 400,000 barrels in cans, wholesale dealers' hands, or in the freezers to compete with the 1948 crop. "If there is a normal or over-age crop it will give us better than a million barrels to dispose of in the 1948 season."

"Canning Was Overdone"

He continued that members should not get the idea that canned cranberry sauce is the only canned product in the doldrums. He said the sale of canned cranberries and of other fruits, so high during the war, has slowed down, especially citrus juice. "Canning was overdone during the war, especially with the sugar shortages which prevailed for the housewife. We are now paying the price."

He commented upon the Government estimate of 770,900 barrels, which, reduced to per capita consumption, meant that each person ate only .54 of a pound of cranberries last year.

He said he was not in agreement with those who say there should be a large carry-over for canning, to be put into the market each fall in competition with fresh fruit. Cranberries, in his opinion, always have, and always will be, a highly seasonal commodity. This, he said, had its advantages and its disadvantages. One of the advantages of this, he went on, is that a seasonal fruit has a "news value" aside from advertising and this news value can be capitalized upon through publicity.

Speaking of advertising, he said he was firmly convinced that ACE advertising last year not only benefited the members of the sales companies but the whole industry. He said the Exchange ended the season with orders on hand, rather than cranberries, which is a good way to end the season. He mentioned that the members of the Coos Cooperative with headquarters at Bandon, Oregon, which is now affiliated with the Exchange, were very much pleased with the way their crop was handled last year, as their fresh berries were sold out immediately and at top prices.

In conclusion he said: "We at the Exchange are not overcome by pessimism."

Clyde McGrew

Following Mr. Chaney was Mr. McGrew, who said "we must have quality berries to get back the fresh fruit market, particularly the December market, which has fallen off." He said that with more im-

(Continued on Page 17)

CAPE COD'S "OPEN" MEETING

WE believe the public relations committee of the Cape Cod Cranberry Growers' Association did a service to the industry in sponsoring the "open" meeting at Wareham April 26th to hear the story of agricultural institutes, presented by speakers who "knew their stuff". The attendance was small, but doubtless would have been larger had the evening not been one of a tiring series of frost nights. What the final reactions of the growers are will be learned later when return post cards distributed are analyzed, and the growers have mulled the thoughts over in their minds.

Moderator Cole summed up the advantages of an institute as "promotion (advertising), publicity, service, conservation, development of by-products and research." The cranberry industry already has been doing all these things, most of them for a long time. American Cranberry Exchange began advertising "Eatmor" cranberries years ago, Cranberry Cannery, now the National Cranberry Association, established its "Cranberry Kitchen", did research in by-products and other fields, has an educational program, and it advertises "Ocean Spray." Some independents have done some advertising of their individual products, particularly processed fruit. Credit is certainly due all of these, especially the efforts of the two principal co-ops. Certainly NCA has done a lot along this line.

The question seems to be, however, can the industry, working as a whole, do an increasingly better job, by supplementary promotion, advertising, publicity, etc., which would not impair the value which has been built up in the now well-recognized cranberry trade names but would somehow lead to greater consumption of all cranberries from all areas. As pointed out at the meeting, if more of a product is to be produced ways must be found of selling more.

That is the crux of the situation and the proper place to consider it is a "non-political", non-marketing body such as the Cape association, the American Cranberry Growers' Association in New Jersey, the Wisconsin State Cranberry Growers' Association and the clubs of the West Coast, which has no such association. Possibly an in-

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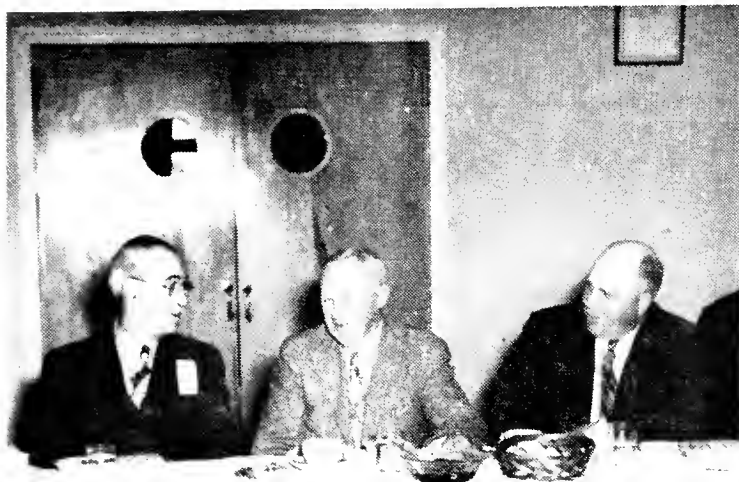
New Jersey

CHARLES A. DOEHLERT,
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Pemberton, New Jersey

creased promotional program on the part of the co-ops would do the job, but that would leave the independents "no place to go" in taking part in an expansion program, except by individual effort. An institute might co-ordinate all these efforts. Whether the imposition of another organization upon those already existing is desirable or not is a grower's problem.

STILL on the subject of the Cape Growers' Association, it did a fine job in its spring meeting and exhibition. Growers were interested in the equipment and machinery show. They listened attentively to the scientific talks. Such meetings, as President Russell Makepeace pointed out, are occasions where all can really get together, regardless of how they choose to market.

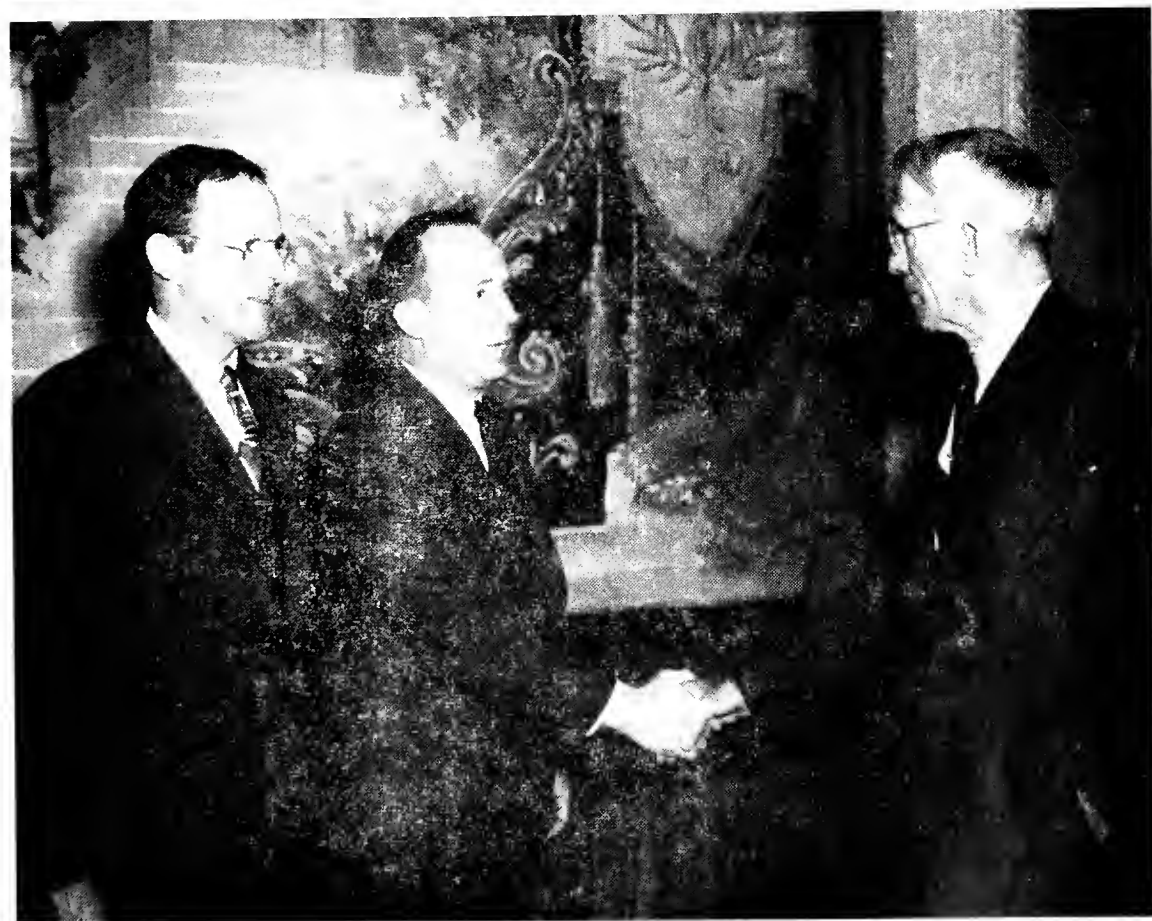
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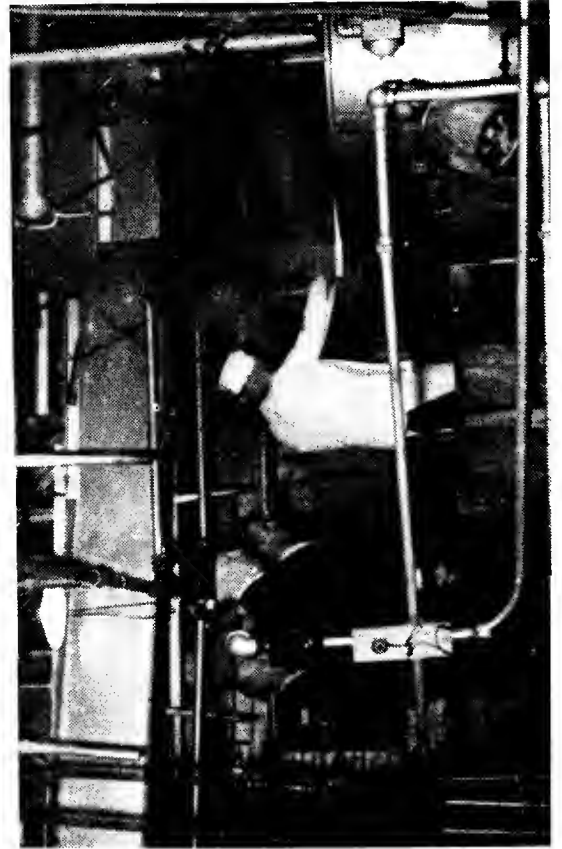


TOP — Directors of Growers' Cranberry Company shown at dinner at the "Fireside", Mt. Holly, New Jersey, following the annual meeting. From left to right, Theodore H. Budd, Sr., Lester Collins, Roger Brick.



LOWER —Left, Daniel Mc.E ("Mac") Crabbe, president of American Cranberry Growers' Association and Walter Z. Fort, growers relations man of Growers' Cranberry Company, New Jersey, are welcomed to the annual meeting of New England Cranberry Sales Company at the annual meeting of the Cape Co-op of ACE at Carver town hall.—(Photos Courtesy American Cranberry Exchange.





(Photos courtesy National Cranberry Association)

at Hanson.

SNAPSHOTS of Massachusetts GI's in cranberry training at their second visit to NCA cannery at Hanson.

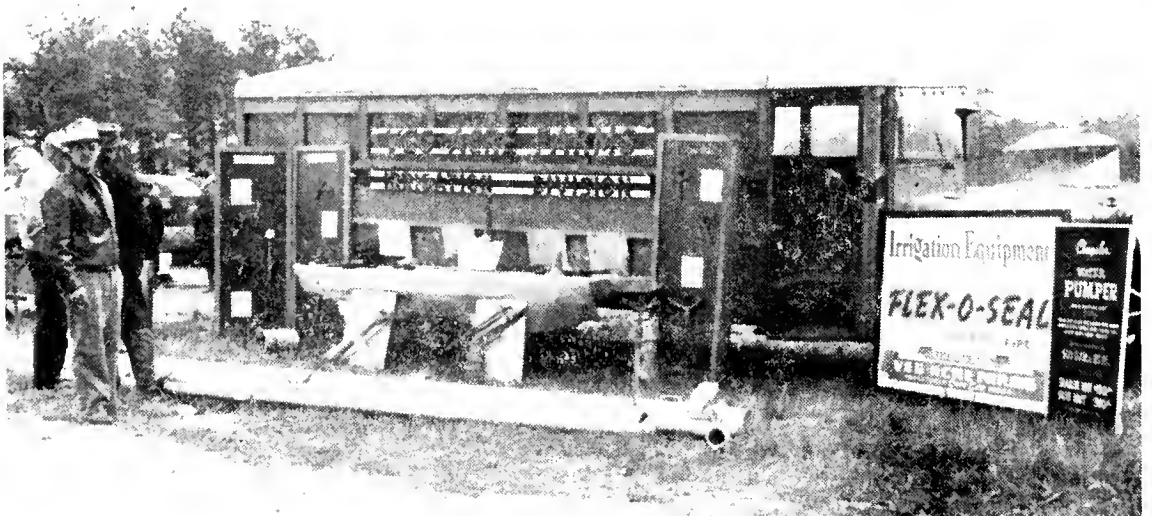


Speakers at the CCGA "Mass." Meeting on agricultural institutes. Left to right—Harold Rotzell, Edward Ryan, Commissioner of Agriculture John Chandler and Frederick E. Cole, moderator of the gathering.



UPPER E. W. Goodhue, Goodhue Lumber Company, and Harrison F. Goddard of Plymouth discuss something or other in the Goodhue booth.

LOWER - Many were interested in the elaborate out-door display of Veg-Aere Farms. (CRANBERRIES Photos)



New England Sales

(Continued from Page 11)

proved quality fruit, there would be berries to supply the entire "active" season, and with good quality fruit the cranberry growers would be in good position for the competitive fruit and vegetable markets of the present time. "I think for the past few years the growers may have been more intent upon quantity than quality."

He said another important ingredient toward stabilizing the industry again was to get a large membership in a "democratic" co-operative. He continued this was no time for Eastern growers to be "against" the Western growers, or vice versa.

"Horse Sense" Needed

Continuing, he said there had been a second World War and that had ended, but there is still no peace. "It is high time we have a little peace, with liberty and truth and backed by 'horse sense'. Let us look forward constructively and not backward remorsefully."

Lester Haines of the ACE New York office, traffic manager, said if the fresh fruit market was to be kept, good berries were a necessity. Speaking of shipments next fall, he asserted the refrigerator car situation looked better—unless the military demand should be stepped up.

Miss Manny of Batten, Barton, Durstine & Osborne, Inc., advertising agency for ACE, spoke interestingly of publicity and advertising, stressing the importance of maintaining good public relations with food editors of magazines and newspapers.

Walter Z. Fort, growers' relations for Growers' Cranberry Company in New Jersey, and Daniel McE. Crabbe of Toms River, New Jersey, president of American Cranberry Growers' Association, were introduced and each spoke briefly.

During the meeting there was discussion by a number of members, including Lawrence Cole, Earle Broadway, Jesse Holmes, E. L. Bartholomew, Russell Trufant and Lincoln Hall, concerning canning. Mr. Cole said he hoped for closer relationship between New England Cranberry Sales and NCA.

No action was taken.

President Cowen presided at the meeting, and at noon a chicken pie dinner was served.

Election of Officers and Directors

Nominated for directors of ACE were: E. L. Bartholomew, George Briggs, George E. Short, Homer Gibbs, George A. Cowen, Arthur D. Benson, Robert C. Hammond.

Directors of N. E. Sales: District No. 1 (Hanson, Pembroke, Marshfield, Duxbury, Kingston, Plympton): Paul E. Thompson, Fred L. Bailey, Arthur H. Chandler.

District No. 2 (Plymouth): L. B. R. Barker, George Briggs, Robert

C. Hammond, George E. Short, Sherman L. Whipple, Jr., Edward S. Griffith.

District No. 3 (Middleboro): Wales Andrews, John G. Howes, Albert A. Thomas.

District No. 4 (Carver): Isaac M. Arenberg, Frank H. Cole, Homer L. Gibbs, Ruel S. Gibbs, Carroll D. Griffith, Kenneth E. Shaw, Russell A. Trufant, Herbert J. Vaughan, Homer Weston, H. R. Bailey.

District No. 5 (Assonet, Freetown, Lakeville, Rochester, Taunton, Marion): Arthur D. Benson, George A. Cowen, Nahum Morse, Herbert Dustin.



CRANBERRIES Magazine exhibit at the Spring meeting of Cape Cod Cranberry Growers' Association.

District No. 6 (Wareham): E. L. Bartholomew, Arthur E. Bullock, Joseph L. Kelley.

District No. 7 (Barnstable County): J. Foxcroft Carleton, Louis A. Crowell, William Crowell, Walter E. Rowley, E. E. Eldredge. (In this district Eldredge and Fred S. Jenkins were tied, Mr. Jenkins resigning in favor of Mr. Eldredge).

These directors at an organization meeting immediately following the members' meeting elected: president, George H. Cowen, North Rochester; first vice president, Homer L. Gibbs, West Wareham; second vice president, George E. Short, Plymouth; general manager, clerk and treasurer, Arthur D. Benson, Middleboro; assistant treasurer, Miss Sue A. Pitman, Middleboro.

PROGRESS REPORT

Committee on Keeping Quality

We find quality control to be a matter of great importance, especially in the markets of today. The Sales Company would be justified in making a considerable expenditure to reduce the proportion of its berries which must be relegated to cans because of poor quality.

The reduction of spoilage may be divided into two subjects, general preventive measures and fungicides. In considering general

measures, we find that tendencies to rot are notable on (a) early drawn bogs, (b) bogs weakened by grub or false blossom or other injury such as oxygen deficiency, (c) bogs too dry in hot Augusts, (d) bogs receiving fertilizer too low in phosphorus, (e) hard-bottom bogs. Note that only the last is incurable. We propose a campaign to reduce the other predispositions.

Turning to the matter of fungicides, we find that certain conclusions are justified by a preponderance of technical and practical advice. Without analyzing reasons, these are:

1). That while occasional satisfactory results have been obtained in applying fungicides from the air, at the present stage of the art the results are not consistent

enough for us to rely on air machines for any major portion of fungicide program. Helicopters might well be used in emergency to make up for time lost by ground machines due to bad weather.

2). That dusting by ground machines is definitely inferior to spraying.

3). That a minimum control program would involve ground spraying with Fermate in two treatments, one at the beginning of the flowering period before more than 5 per cent of the buds have opened, and one near the end of flowering.

4). Either or both treatments could be made a blanket by adding

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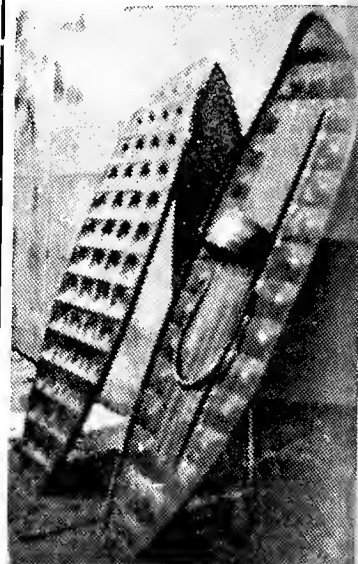
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tion of DDT, pyrethrum, rotenone, cryolite, etc. Fermate is compatible with any of the insecticides commonly used.

5). If berries from a bog, in 3 out of 5 years, show 7 per cent or more of rot, the bog should be sprayed. Against 10% mechanical injury, offset shrinkage, increased screening cost, lower market value and spoiled sales. This recommendation may be modified from year to year by rot forecasting in line with Dr. Franklin's "Weather in Cranberry Culture." If a bog needs insecticide treatment anyway, the addition of Fermate to a suitably timed spray treatment is justified by any noticeable indication of rot.

6). To date, the "weather" indications are for a normal 1948 crop, with over-sized, tender berries. Later developments may reduce the size of berries or crop, but could not overcome the tendency toward weakness. A complete Spring forecast will not be available until about May 15th.

7). There are in the Sales Company 4,500 acres, about 1,200 to 1,300 acres of which, on the

basis of (5) need fungicidal spraying.

8). Within the time allotted for effective treatment, we could expect a small sprayer to cover 50 acres, and a larger one 100 acres.

9). To cover the 4,500 Sales

Company would be wasteful as well as impossible, taking about 60 sprayers, half large, half small.

10). We are limited to a voluntary ground spraying program, which we may encourage as seems best.

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11.) Covering the 1,300 acres seeding treatment would require about twenty sprayers, dependent on size. The Company has but three. An essential part of our program must be devoted to persuading member-owners or sprayers to permit use of their equipment on other members' bogs. An early questionnaire is desirable.

12.) Fermate ground spraying twice would cost about \$20 per acre in all, including \$7 for materials. We suggest that the Company might well consider, as an inducement, furnishing free Fermate to growers for properly timed, approved applications. With the amount of compliance we could reasonably expect, the cost to the Company should not exceed \$7,000.

13.) We are assured Fermate will be obtainable.

Conclusions

Our recommendations at this time are that the Company start an educational campaign on the general subject of quality improvement at once, stressing at the start the advantages of late holding and other general preventive measures. Also that we assemble data on sprayers which might be available, and prepare an intensive pro-

motion for late May, which might be modified by prospects at that time. Also that we consider the free-Fermate idea.

If all our members had produced only fresh berries last year, the Sales Company would now have no carry-over, and would have already closed its pool at a very attractive figure. While it is too late to remedy past errors, we can guard against a repetition. What we might be willing to give to have our carry-over sold today at \$28 a barrel should be a guide in considering the cost of any future quality-control program.

The member who raises canning-quality berries no longer has "two says to sell cranberries." With the tightening of screening requirements for canning berries, any fancied gain in selling to canners is becoming a loss. The delayed returns from canning berries penalized their grower and all his fellow-members. It pays to grow quality.

Respectfully submitted,

Russell A. Trufant, Chairman.

George E. Short

Joseph L. Kelley

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**SCOOPS
and
SCREENINGS**

That the oxygen deficiency studies concerning cranberry flooding waters are of general scientific interest is shown by the fact that Dr. H. F. Bergman recently received a request through "Biological Abstracts" for copies of two issues of CRANBERRIES from the University of Oxford, England. Dr. Bergman had prepared abstracts of an article, "Study Oxygen Deficiency in Winter Flooding at Beaver Brook", by Charles H. Lewis of Wisconsin in the February issue, 1946 and his own article, "Oxygen Deficiency in the Winter Flood of Cranberry Bogs", ap-

pearing in March, 1946. The librarian, forestry department of the English university, desired to have the articles in entirety.

Charles A. Doehlert, heading the

New Jersey Cranberry-Blueberry Laboratory at Pemberton, was a visitor in Massachusetts last month, attending the spring meeting of CCCGA. He put in a busy two days visiting Cape bogs, blue-

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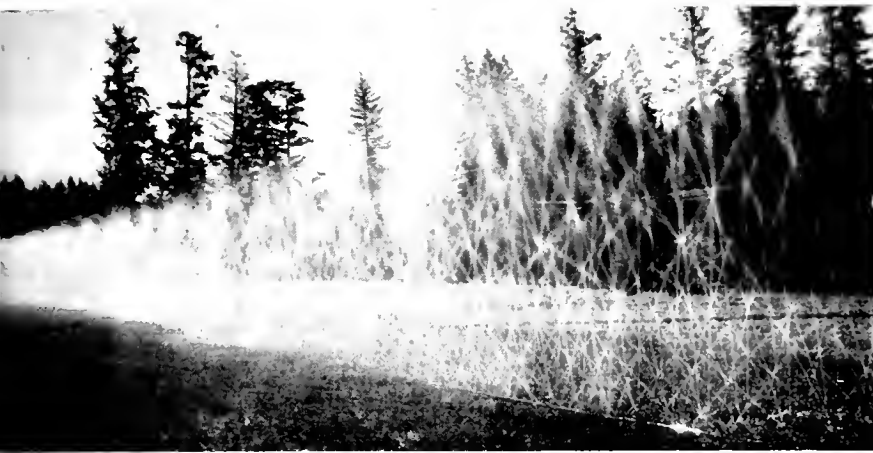
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Cape Growers Interested In Plan For Possible Gypsy Moth Eradication

The Peninsula Has Been Chosen for Experiments, Members of Clubs Are Told at Concluding Meetings—Robert B. Handy Elected Head of Upper Cape, Brant D. Ellis of Lower

Final meetings for 1948 of the Upper and Lower Cape Cod Cranberry clubs were held at Bruce Hall, Cotuit, April 12 and at Orleans April 14 respectively. Both were supper meetings.

Annual elections of officers were held. At Cotuit, Robert B. Handy of Cataumet succeeded John F. Shields as president; Harold Shepard, vice president; William Foster, re-elected secretary; Alvin Crocker, treasurer. Directors, Seth Collins, Ralph Thacher and John Shields. Elected to the Cranberry Advisory Committee were Mr. Handy and Mr. Shields.

Orleans meeting: Brant D. Ellis of Dennis succeeded Frederick B. Eldridge, Jr., as president; Raymond Syrjala, West Yarmouth, became vice president; Calvin C. Eldredge remains as secretary-treasurer. Executive committee consists of Maurice E. Lee, Brewster; George Nickerson, Chathamport; William Crowell, Dennis; Francis Kendrick, East Harwich; Frank Ryder, Orleans. Elected to the cranberry advisory board were the retiring and the new president.

Gypsy Moth Control

A principal speaker was John Anderson, State Dept. of Conservation control of gypsy moth in Plymouth, Barnstable, Nantucket and Dukes counties. Mr. Anderson gave most interesting talks—particularly to cranberry growers—of a proposal to eradicate or at least subdue the gypsies on the Cape. He said the Cape (Barnstable County) had been selected for large scale experiments because of its

peculiar geographical features. He said this long, narrow peninsula is admirably suited for tests.

He briefly sketched in a resume' of what had been done to date, the project being proposed last October, and a meeting of 26 interested and well-informed persons in Hyannis on November 26 had really started the ball rolling. This meeting had discussed ways and means by which the project could be started.

It has been decided, he said, to concentrate upon two areas on the Cape. These two areas were selected because in each instance they were where three towns joined and where there had been bad infestations in past years. The larger area, one of 5,600 acres takes in sections of Sandwich, Mashpee, and the western portion of Barnstable. The other, toward the lower end of the Cape, takes in areas in Brewster, Harwich and Dennis and this contains 2,150 acres. The thought would be that these areas would be expanded eventually until they merged. In these areas the pest would be

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ought with planes and with ground equipment, such as mist spray-blowers.

In this program will be concerned Federal, State and town efforts. The Government has, since the meetings, provided a pilot and bi-plane which has flown over 1000 of the acres and for this the State provided the DDT. The State has also provided the materials for the balance of the areas. Each of the six towns has made a special appropriation at the town meetings and will cooperate in the work.

He said the project would probably take from three to five years and was only experimental, but he was very hopeful of success. He hoped a permanent project might be set up, as in the mosquito control program.

Dr. Franklin

Dr. Franklin gave a talk, explaining the insect control charts quite similar to those before March meetings of Plymouth clubs reported in the April issue. In this again he stressed the efficiency of DDT as being "remarkably" effective against the gypsies and very useful for the growers against many other cranberry insects.

Dr. Chandler

Dr. F. B. Chandler discussed "Bog Fertilizers." He sketched in the mixtures of the past and the present, and told of continuing experiments at the State Bog. He said in addition to testing nitrogen, phosphorus and potash combinations, there were a number of test plots to check the minor elements as to their possible value in cranberry fertilizers.

He said the use of fertilizers by cranberry growers in Massachusetts is steadily increasing. This trend is quite marked, he said, and more is being used each year. In fact, at the Orleans meeting, he said a recent survey showed that approximately $\frac{1}{3}$ of Barnstable County's 3,500 acres had been fertilized last year. He said a survey in 1935 by Dr. Franklin and County Agent Tomlinson had showed that in 1935 about 295 tons had been used in the entire state and presented figures which indicated that 724 tons had been used in 1946. While '47 figures were not avail-

able, he said he believed there had been an increase over '46.

Final feature at both meetings was a color movie of helicopter dusting shown by "Bert" Tomlinson.

A special feature at the Orleans meeting was a talk by Calvin B. Eldredge, son of Secretary and Mrs. Calvin C. Eldredge. Young Mr. Eldredge has just been graduated from Briston County Agriculture School, where he won first prize in public speaking and also won third prize at Amherst. His topic was "The Cranberry Industry". He is to make cranberry growing his career and is the owner of ten acres of bog.

At the Cotuit meeting, Andrew Kerr introduced the following resolution in view of the threatened

total abandonment of all rail service to Southeastern Massachusetts. It was adopted and is as follows:

Resolved: That the Upper Cape Cod Cranberry Club go on record in favor of the consolidation, co-ordination, and allocation of our public transportation sys-

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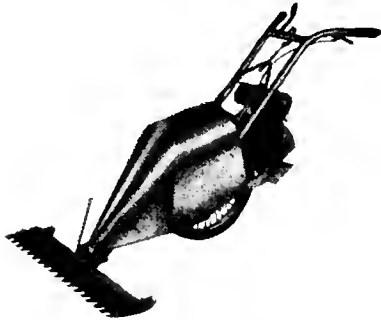
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to, as it is physically impossible to have a successful commerce without efficient public service transportation.

SCOOPS AND SCREENINGS

(Continued from Page 22)

berry plantations (thanks to Joe Kelley) and the State Bog, where he talked with members of the research staff. He was house guest of C. J. Hall of CRANBERRIES.

Prior to his visit, William H Tomlinson, Jr., his associate in research, had made a brief trip to Massachusetts with Mrs. Tomlinson and family. The family visited relatives in Providence, R. I., while "Bill" made a trip to the State Bog, East Wareham. This was a vacation, but Tomlinson couldn't resist the opportunity to mix some cranberries in.

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Theodore Budd Again President Cranberry Exchange

Directors of American Cranberry Exchange held their annual meeting at the Hotel Pennsylvania, New York, opening April 27 for a three-day session.

Election of officers the first day resulted in the re-election of Theodore H. Budd, Sr., Pemberton, New Jersey, president; 1st vice presi-

dent, Homer L. Gibbs, West Wareham, Mass., vice president, Bernard C. Brazeau, Wisconsin Rapids, Wisconsin; vice president, George R. Briggs, Plymouth; executive vice president, C. M. Chaney, New York; secretary and treasurer, E. Clyde McGrew, New York; assistant treasurer, Kathryn Pratt, New York.

Discussion was held on the continued improvement of pack and grade of fresh fruit; the enlarged advertising campaign to help move

the crop.

Present at his first meeting as a director was William F. Huffman, former president Wisconsin Cranberry Sales Company. Mr. Huff-

NOTE

Two articles, scheduled for this month, one a talk upon legal aspects of cranberry growing by Attorney Fletcher Clark, Jr., Middleboro, Mass., and the other upon irrigation water supplies on Cape Cod, mentioned last month, will be published in a later issue.

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man is publisher of Wisconsin Rapids Daily Tribune and owner of radio station WFHR. Through his efforts radio stations in the Wisconsin cranberry area this year

are cooperating in issuing frost warnings. Present also was Ray Bates, president of the Coos Cranberry Co-op, Bandon, Oregon, now affiliated with ACE.

Mass. Vets Visit NCA Hanson Plant For Second Time

On Thursday, April 15th, the veterans participating in on-the-job training in the cranberry industry, met at NCA's Hanson plant for the second time in the 1947-48 session. They were conducted on a tour of the plant by Marcus L. Urann, president of NCA. Several times during the tour Mr. Urann stopped to lecture on the finer points of processing cranberries and to answer questions.

After inspecting the plant the group relaxed and discussed the prospects for the cranberry industry. A turkey dinner was served, with Mr. Urann acting as host for the National Cranberry Association, and his guests participated in demonstrating the final process for Ocean Spray, the ultimate use by the consumer.

Discussion was resumed shortly after dinner. The questions asked by "Bill" Tufts (G. I. instructor)

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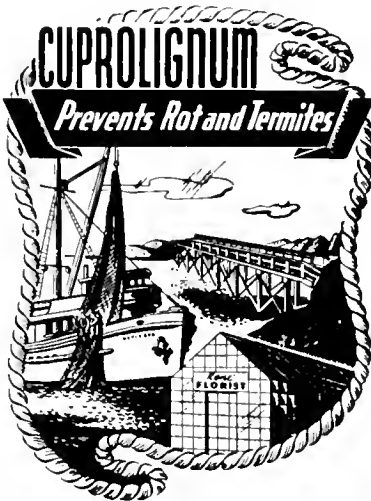
E. A. Thacher of this firm will be happy to discuss your requirements, and without charge or obligation, prepare a survey of your property and needs.

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For new clapboards, old stained or new shingles. Can be painted over if desired.

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with the addition of Cuprolignum gives added resistance to barnacles or teredoes by penetrating the wood cells, depositing toxics which remain after paint film has completely disintegrated.

New England Representative

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Manufacturers: RUDD PAINT & VARNISH CO., Seattle, Washington

group showed them to be vitally concerned with the problems that confront the industry today and the effects of these problems on the future. (Photos of the gathering, courtesy NCA, page 14.)

Last December the veterans' group had its first meeting at National's Hanson plant. The subject at that time was concerned mainly with the history of processing in the cranberry industry.

NCA Directors Meet

The Board of Directors of the National Cranberry Association, meeting at Hanson late in April, voted to pay an advance of \$2 a barrel on all berries for which members have thus far received \$10 a barrel.

NCA's first advance to members consisted of \$15 per hundred pounds for the first 200 barrels delivered, and \$10 per hundred pounds for all berries over 200 barrels. The new advance will bring all \$10 payments up to \$12.

A committee consisting of Chas. Lewis of Wisconsin, Joseph Darlington of New Jersey, and Russell Makepeace of Massachusetts was appointed by the Board to confer with other groups interested in an over-all cooperative for marketing cranberries.

National to Hold "Cranberry Week" In the Fall

To get the cranberry season off to an early start, the National Cranberry Association will sponsor a "Cranberry Week" this fall, with nation-wide publicity through the

**Let Us Handle
Your Power Needs
for Bog Pumps**

International
and
Continental Red Seal
Industrial Engines
SALES and SERVICE

J. M. HACKETT

Tel. Rockland 1864
NO. HANOVER MASS.

CONTROL

**Cranberry Root Grubs
White Grubs • Chokeberry
White Violets • Loosestrife
Poison Ivy • Small Bramble
Three Square Grass • Wild Bean**



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SOLVAY
TRADE MARK REG. U. S. PAT. OFF.

PARA-DICHLOROBENZENE

*The Massachusetts Cranberry Experiment Station
Charts recommend*

Para-dichlorobenzene for controlling Root Grubs, White Grubs, Chokeberry, White Violets, Loosestrife, Poison Ivy, Wild Bean, Three Square Grass and Small Bramble. For best results, bogs should be treated in April or early May. Write for details.

SOLVAY PARA-DICHLOROBENZENE
FOR TREATING CRANBERRY BOGS
is distributed by

THE CRANBERRY TRADING POST

- Plymouth, Mass.
- Onset, Mass.
- North Harwich, Mass.
- Bordentown, New Jersey

SOLVAY SALES DIVISION

ALLIED CHEMICAL & DYE CORPORATION
45 MILK STREET, BOSTON 9, MASS.

press, radio, hotels and restaurants, and retail stores. The decision to promote Cranberry Week was made at a recent meeting of the Association's Board of Directors at Hanson.

Cranberry Week will take place late in September or early in October. Since the cranberry season ordinarily gets off to a slow start and does not pick up real steam until Thanksgiving approaches in

November, the Association's Directors felt that the promotional stunt during the early fall would give the season a head start without detracting from normal heavy sales during the holiday season.

Cranberry Week will feature both fresh and processed Ocean Spray berries. Publicity will be approached from every suitable angle, with the aim of making consumers all over the country cranberry-conscious, and creating a carry-over of enthusiasm that will last until the holiday season.

The National has employed a New York public relations man to handle Cranberry Week promotion. He will spend some time in Massachusetts during May gathering material to help him in the months of preparation which Cranberry Week will involve.

The Forges Contractors, Inc.

WATER ST.

PLYMOUTH, MASS.

Tel. 1763

Cranberry Bog Building and Rebuilding

Power Shovels, Cranes, Clamshells

Draglines. Bulldozers and Trucks

Dealers in:

Prefabricated half and full circle "Whipple Flumes".

New England Metal Culvert Co. Pipe.

Fresh from the Fields

(Continued from Page 5)

will have more than paid for itself.

New Plantings

At the present writing it looks as if about 400 acres of new planting will be put in in Wisconsin this year. Goldsworthy is planting about 75 acres, of which roughly 25 will be set at Three Lakes. These will be his own, while the rest will be on properties he manages for others in Northern Wisconsin.

Cranberry Institute Next Winter?

Goldsworthy, with the Cranberry School ended, is trying to get the University of Wisconsin to conduct a "Cranberry Institute" for the growers around Wisconsin Rapids next winter. He feels the plan is quite likely to succeed, and as Wisconsin does not have a cranberry laboratory or a state specialist, such an institute should be of immense value to growers who do not have too much contact with scientific information.

Notes

Dan O'Neill, former partner of Dan Courtney of the Oncour Cranberry marsh, who was killed in a

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A complete range for any watering condition from 3 G.P.M. and 20 pounds pressure to 110 G.P.M. and 100 pounds pressure. Especially designed for use on portable irrigation systems. They are light, compact, general purpose sprinklers built for rough and tumble usage. Wide variability in speed of rotation. Stainless steel parts insure freedom of action, long life. Write today for details on the Skinner Line. No obligation.

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SKINNER—Pioneer and Leader in Irrigation for nearly half a century.

**"CRANBERRIES"
ADVERTISING
PAYS BIG
DIVIDENDS!**

Reasonable Rates
on Request

passenger airline accident recently at Chicago airport, has taken over the management of the marsh. Mr. Courtney was a member of Wisconsin Cranberry Growers' Association, Wisconsin Cranberry Sales Company and of American Cranberry Exchange. He was one of the younger growers and joined the Sales Company about two years ago.

Don Rowe, county agent for Wood County, recently interviewed "Del" Hammond over radio station WFHR, Wisconsin Rapids. The topic was what part the Wisconsin cranberry industry played in the industrial set-up of the state, how it ranked in the U. S. cranberry production, and a general picture of the industry as a whole.

NEW JERSEY

Temperature

Though probably not many will believe it, the average daily mean temperature at Pemberton has been about a degree above normal with an average of 52.4°. The highest

temperature at Pemberton was 81° on the morning of the 23rd. Temperatures down to 19° occurred on cranberries and down to 22-26° on blueberries on the morning of the

23rd. Bogs were generally protected or the vines were in resistant condition.

No injury to blueberries has been noticed or reported.

Black Leaf 40

PROTECT

THIS YEAR'S PROMISE FOR A PROFITABLE CRANBERRY CROP

Use **Black Leaf 40** in accordance with State recommendations for the control of

Blackheaded Fireworm Blunt-Nosed Leafhopper
Spittle Insect Red-Striped Fireworm

TOBACCO BY-PRODUCTS & CHEMICAL CORP.

Incorporated
LOUISVILLE, KENTUCKY



PENN SALT

AGRICULTURAL CHEMICALS

CONTROL CRANBERRY PESTS WITH THESE **PENCO*** PRODUCTS

Kryocide* *Natural* **CRYOLITE**

A favorite for many years with cranberry growers. Controls the cranberry weevil, gypsy moth caterpillar, cranberry blossom worm, false army worm and fruit worms.

PENCO WB-50*

Wettable Base, 50% DDT

Micron-sized for better suspension and deposit. Contains superior spreaders and stickers for reducing loss from run-off. Made by Pennsalt, a leading basic producer of agricultural chemicals. For details write to Agricultural Chemicals Division, Pennsylvania Salt Manufacturing Company, Philadelphia 7, Pa.

*REG. U. S. PAT. OFF.

Photo Courtesy Bell Aircraft Corp.

Precipitation

Rainfall through the 26th has been 1.29 inches above normal in South Jersey. This puts bog water supplies in good condition for the frost season.

R. B. Wilcox brought back from Beltsville, Maryland, nearly 400 seedlings of tetraploid cranberries and planted them in test plantings at Cutts Brothers' bogs. He has shipped to Dr. J. H. Clarke at Cranguyma, Washington, propagation material of the 40 hybrid selections of 1940.

Double Trouble Company has been building extensive dams, forming two new reservoirs and dividing the large New Guinea bog.

Cutts Brothers also have built new reservoirs and prepared a new bog for planting. This is virgin land.

The bogs of the late Newton Clevenger have been taken over by Mrs. Virginia Wills Eldridge.

Blueberry Sprayer

The Cranberry and Blueberry Research Laboratory has acquired a 200 gallon Friend sprayer. This has been made possible by the Frederick V. Coville Research Fund which was set up in 1947 by the Blueberry Cooperative Association. It will be used chiefly for spraying experiments in the study of possible methods for controlling blueberry stunt disease. The Experiment Station has furnished a jeep for towing the sprayer. The first applications of spray will have been applied before this issue goes to press. The trapping of insects in blueberry fields, which is another part of this experimental work, was begun during April in New Jersey, North Carolina, and Massachusetts. Trapping in Michigan and Washington will probably start in May.

WASHINGTON

Late Spring

This has been a cold, late spring in Western Washington. There had

been no frosty weather up to April 26th, but the temperatures have been mostly in the low 50's, and the vines have remained practically dormant. It has also been very difficult to get any oiling done because of the almost continual wet weather.

Could Mean Smaller Crop

This can be a serious matter for

the Washington crop, D. J. Crowley points out. When the season is late the lost growing period is just not made up by subsequent high temperatures. These high recordings do not come, so when warm weather is missed in the spring it can well mean berries will be smaller and production will be less.

TOP PERFORMANCE

is what you get when

ELECTRICITY

is at your command in your bog work
and at home.

Plymouth County Electric Co.

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Tel. 200

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NATIONAL DISTRIBUTORS
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Cape Cod Cranberries

for over a quarter century
in United States and Canada

Wareham, Mass.

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- Full horsepower motor
- Standard two speeds—forward and reverse.
- Positive action, multiple disc clutch.
- Full sized 3/4" electric alloy steel tines.



ARIENS COMPANY • BRILLION, WIS.

Let's Look at the Record!

OVER a period of many years, Minot Food Packers, Inc., have fully cooperated with cranberry growers in their problems, and particularly as regards stabilizing the market with a "just price" for canned sauce.

WITH so much publicity as regards cut prices on the 1947 crop pack of canned sauce, even though we feel that it is not necessary to assure our growers, nevertheless we make public announcement that Minot Food Packers, Inc. have not reduced prices, nor did they offer any promises when quoting their prices on Minot brand and Conway's brand of Cranberry Sauce packed from 1947 crop berries or 1946 crop berries.

OUR policy, at all times, is that the growers should receive a "just price" for their cranberries and we, in turn, offer the canned product at a "just price" to the distributors.

*It will pay you **DIVIDENDS** to deal with*

MIN-OT FOOD PACKERS, INC.

BRIDGETON

NEW JERSEY

Represented by

BEATON'S DISTRIBUTING AGENCY

WAREHAM, MASS.

DO YOU AGREE?

1. That a larger per cent of the 1948 crop should be sold fresh than in the past several years?
2. That we must pep up cranberry eaters with additional advertising?
3. That we should protect our markets for the future by improving grade and pack?
4. That we must, for the benefit of all, avoid a useless price war?

If so, you should be a member of the American Cranberry Exchange—because this is our 1948 program.

The American Cranberry Exchange, Inc.

The Cranberry Growers' Cooperative

Marketers of

**Eatmor
Cranberries**

90 West Broadway

New York 7, N. Y.

SEND FOR OUR BOOKLET, CRANBERRIES AND CO-OPERATION. IT WILL GIVE YOU THE FULL STORY OF HOW CRANBERRY GROWERS WORK TOGETHER FOR ORDERLY, PROFITABLE MARKETING THROUGH THE EXCHANGE.

C

...the ...
...the ...
...the ...

CPA

CAPE COD
NEW JERSEY
WISCONSIN
OREGON
WASHINGTON



"BILL" WYETH (Article, Page 6)

PROMISES or RESULTS

Promises are easy to make, and hard to keep. Results mean a lot of hard work, intelligent thinking, and planning. Results has been the by-word of the Wisconsin Cranberry Sales Company since its founding, and will continue to be in the future.

Promises are made and broken every day.

Wisconsin Cranberry Sales Company

(A Cooperative)

WHY

*... wait until your crop
has been harvested ...*

*.... and guess and gamble
with it.*

WHEN . . .

. . . you can be sure of a safe, sound way of disposing of your cranberries, by using the services of this Company, which is thoroughly and economically equipped to handle them, as proven by our 54 years of successful marketing. If you are not a member of this progressive Company, you are invited to become one.

Growers Cranberry Company, Inc.

Oldest Cooperative in the Cranberry industry
Oldest agricultural Cooperative in New Jersey

PEMBERTON, NEW JERSEY

Build a Market as Fast as You Build Boqs



Never before have so many retailers pushed Ocean Spray Cranberry Sauce in their newspaper ads at this time of year. Since January more than 300 samples of grocery store ads featuring Ocean Spray have reached NCA's Hanson office. And these, of course, are only a small percentage of the ads that actually appear.

It isn't the easiest thing in the world to persuade a retailer to boost cranberry sauce in the spring. Ocean Spray's brokers and sales department have worked long and hard at the task, and a great deal of work remains to be done. But every newspaper ad that says "Ocean Spray Cranberry Sauce—a "Must" with Chicken . . . 19¢" means new year-round customers for Ocean Spray, and greater security for cranberry growers.

JOIN WITH NCA TO BUILD A BIGGER MARKET FOR BIGGER CROPS.

NATIONAL CRANBERRY ASSOCIATION

The Growers' Cooperative

Branches at:

Hanson, Massachusetts
Onset, Massachusetts
Plymouth, Massachusetts

North Harwich, Massachusetts
Bordentown, New Jersey
North Chicago, Illinois

Coquille, Oregon
Markham, Washington
Long Beach, Washington

DIRECTORY FOR CRANBERRY GROWERS

MASSACHUSETTS

Call
WAREHAM 162

S. C. M. Packard & Co.

Hardware—Locksmiths
For Maintenance Supplies

Marinette & Menominee Box Co.

Marinette, Wisconsin

BOXES, BOX SHOOKS, CRATING
WIREBOUND BOXES AND CRATES

M & M's 64th Year

Serving the Wisconsin
Cranberry Growers

Extensive Experience in **ELECTRICAL WORK**

At Greenhouses, Bogs and
Pumps Means Satisfaction

ALFRED PAPPI

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USE DYNAMITE

The modern way to re-
move stumps, excavate
rocks, DIG CORES FOR
DIKES, and other blasting
work in cranberry growing.
Speeds up work—reduces costs.
CONSULT WITH US ON ANY
WORK YOU ARE PLANNING.

Trained by Hercules Powder Co.

ALTON J. SMITH

High St., Hanson, Mass.
Tel. Bryantville 297

Diesel Bulldozer

E. C. HOWES

WEST WAREHAM, MASS.
Tel. Wareham 405-W-2

Experienced in Bog Work

"CRANBERRIES"
ADVERTISING
PAYS BIG
DIVIDENDS!

Reasonable Rates
on Request

WE ARE BUILDING
OUR NEW PLANT

and will be pleased
to supply you with your
Box Requirements

Also on hand: a supply of Best
Quality Pine BUILDING LUMBER

F. H. COLE

North Carver, Mass.
Est. 1707
WOODEN BOX MFR.

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WAREHAM, MASS.
Est. 1891 Tel. Wareham 108

PIONEERS RETAILERS OF
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CATERING To The CRANBERRY
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LUMBER DRAIN PIPE
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TOOLS

H. R. Bailey Co.

South Carver
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WISCONSIN AIR
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6 and 8 H. P.
in stock

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New Jersey

Apples
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GROWERS AND
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Wood County National Bank

Wisconsin Rapids,
Wisconsin

MEMBER FEDERAL DEPOSIT
INSURANCE CORPORATION

SERVING THE CRANBERRY INDUSTRY

ADAMS & GOULD

Lumber Dealers

"Everything Under Cover"

East Wareham, Mass.

Tel. Wareham 648

Building Material for Bog,
Screenhouse and Home Uses

Paints - Hardware

Attention Cranberry Growers !!

We have

Drain Pipe

Large Sized Terra Cotta
Makes a Permanent Installation

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Tel. Wareham 794

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Plumbing and Heating Service

Cape & Vineyard Electric Company

Offices:

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WOOD BOXES

Cranberry Growers
Order Harvest and
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New Bedford, Mass.

Est. 1865

Established 1848

Hall & Cole

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Commission Merchants
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BOSTON, MASS.

APPLES AND CRANBERRIES
SPECIALTIES

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INSECTICIDES

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For the Cranberry Grower

CROP-SAVER
CHEMICAL COMPANY, Inc.

3511 West Potomac Avenue
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The National Bank of Wareham

Conveniently located for Cranberry men

Funds always available for sound loans

Complete Banking Service

Member Federal Deposit Insurance Corp.

Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE
Extension Cranberry Specialist



Bog work in Massachusetts was definitely slowed down during the past few weeks because of frequent frost flows and heavy rains (16 frost nights and 18 consecutive days of rain as of May 25.) Probably weed control work has been restricted the most. Considerable kerosening had been planned, but poor weather conditions upset the schedule. Actually with all this rain and frost flows, the stage is set for a severe weed season. Some acreage is still being sprayed, but at a risk of injury to the vines and possible reduction in the crop. It will be interesting to observe the results of this late kerosening, according to Dr. C. E. Cross. This leads up to a few timely suggestions plus some of the spring activities of the Experiment Station staff.

Speaking of Dr. Cross, let's lead off with a brief word as to some of his work, but first a tip on 2,4D. He suggests that growers who have a loosestrife problem and have been unable to use kerosene, might try 2,4D or "Weedone", as it's called. (Loosestrife is that weed which has each pair of leaves arranged opposite each other). Mix the material according to the manufacturer's recommendation or even a little stronger, and apply to the tips of each loosestrife plant with gloved hand moistened with the solution. Obviously it would not be a practical treatment where there is a heavy infestation. However, on scattered plants it definitely is an effective treatment. Remember that 2,4D is deadly to cranberry vines and that hand weeding is a waste of time for this particular weed. At present, Dr. Cross is working on an oil emulsion that may be diluted to any strength that may be desired. If

successful, it will greatly extend the spraying season for weed control.

Dr. H. J. Franklin, in charge of the Cranberry Experiment Station, is making an appraisal of the probable keeping quality of cranberries based on the study of weather developments. There will be considerable interest in this work when completed. The write-up of portions of the 1946 Cranberry Survey has been completed by the Station staff under Dr. Franklin's direction. It will be published as a bulletin at a later date.

Dr. H. F. Bergman makes a very timely suggestion on the fruit rot problem. There is considerable interest among cranberry growers to really slow down this particular disease. Dr. Bergman recommends a spray program, using two applications of fermate. The first application would be made when the buds are just ready to open. This probably would be some time between June 15th to the 25th. The amount of fermate recommended is 2 lbs. to a hundred gallons of water, using 250-300 gallons to the acre. The second application would be made when the bog is two-thirds to three-quarters out of bloom, using the same materials and amounts per acre.

Dr. F. B. Chandler and Dr. Bergman are completing the work of setting out the new cranberry seedlings. The purpose will be to observe their disease resistance, yields, and fruiting characteristics. This is in addition to the 1100-odd seedlings that Dr. Bergman hybridized (cross-pollinated) several years ago. Dr. Chandler is putting out his fertilizer plots and will be studying the effect of phosphorus on the keeping quality of cranberries. He will continue his work on

soil moisture content by means of tensiometers.

Joseph Kelley and the writer are busy making bog visits. Colored pictures are being taken of various bog operations, including the new vine setters, prefabricated pump wells, various types of heavy equipment in operation, and new sanding methods. Insect and weed collections are being prepared for use at cranberry meetings.

New Service for Cape Growers

In order to increase the service to Barnstable County growers, a new experiment will be tried during June and July. Briefly the idea is to set up temporary field quarters of the Cranberry Experiment Station at two different locations in Barnstable County, with one or more staff members present. County Agent Bertram Tomlinson who is making the arrangements has referred to them as "Cranberry Clinics." Growers can come to these two locations and bring their specimens of insects, diseases, and weeds to be identified by Station personnel and discuss any other bog problem that they may have. The schedule arranged by "Bert" Tomlinson is as follows:

Upper Cape Clinics at New England Cranberry Sales Company Screen House at West Barnstable Route 6 (tel. Barnstable 74-3) Wednesdays, June 9, 23, July 7 and 21, from 9 a. m. to 12 noon.

Lower Cape Clinics at National Cranberry Association Screen House, North Harwich (near old No. Harwich R. R. Station), Wednesdays, June 2, 16, 30, July 14 and 28. Tel. Harwich 158 from 9 a. m. to 12 noon.

The afternoon will be devoted to bog visits by prior arrangement, using the telephone number given, or by writing or phoning the Barnstable County Extension Office, 86. It is sincerely hoped that growers will use this service which should save considerable time and travel on the part of growers and Station personnel. It is entirely on a trial basis and will be discontinued if the service is not used.

Save This
Magazine for
Future Reference

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of June, 1948—Vol. 13, No. 2

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Rainfall "Plenty"

Rainfall for the month of May just have hung up a record of one sort, since it totalled, as recorded at the East Wareham Experiment Station 10.30 inches. In the opinion of Dr. Franklin, this has done no harm to the prospective crop, but probably would not have added to next year's prospects.

Much Acreage Being Held Under Water

Many of the growers are holding the water on parts of their acreage this year, to control insects and weeds.

Frost Damage Slight

Frost damage for the month of May was slight, if any, and insect activity is light for the whole season. With the excess of rain, there were few frosts in May, except for the last of the month.

Insects Appear Few

On June first the insect situation did not appear serious, and in fact there appeared to be fewer pests than usual. Not much fireworm was reported to the Experiment Station, and while gypsy moths were present and there was considerable "drifting", they were not very many boys.

WISCONSIN

Little May Frost Damage

May brought many cold nights, but in all there being about 15 warnings going out for all cranberry areas of the state. In early May there was one 10 degree reported, and in the middle one 15. There was some frost damage, but by the month's end "Del" Hammond of Wisconsin Cranberry Sales

Company thought this had not been too serious.

May Rainfall Deficient

Rainfall was deficient. As June began, growers were worried lest three or four frosts in a row would find insufficient water supplies for protection.

NEW JERSEY

Temperatures

Temperatures for May through the 25th have average 3.3 degrees below the normal daily mean of 63.7° at Pemberton. Frost warnings were sent out on the nights of April 22, 25, 28, and May 8, 19. Frost injury on both crops is probably negligible because of generally hard condition of plants, abundant water supplies, and due to the fact that more acreage was held under water until after mid-May than has been for several years.

Precipitation

Rainfall was frequent and abundant. The total for May was 8.09 inches; for April and May was 12.59.

Blueberry Crop

The bloom never looked better early in May, and indications were for a bumper crop again this year. As the month progressed, the picture changed, until as of the 25th prospects are for probably somewhat less than 1947. Pollination was affected by the cool, rainy weather so that the set on some varieties, notably Pioneer, is very poor. In addition, the cool, damp weather was extremely favorable to the development of a "mummy" berry infection that is common in all fields and quite serious in some. Winter injury is also becoming more and more apparent as the season pro-

gresses. It is too early to judge how much the crop will be cut from this injury.

Cranberry Work

There is considerable activity in planting and resanding. Just for example, Joseph J. White, Inc., has replanted 35 acres (partly in the autumn) and resanded 40 acres; Ethelbert Haines & Brother have planted 75 acres of new ground to Early Blacks and have resanded 80 acres of old bog; Theodore Budd has replanted 40 acres; and The Birches Cranberry Company has replanted six acres and sanded 24 acres. This is an indication of what a considerable number of New Jersey growers are doing.

It is anticipated that growers will make several trials of Fermate dusting from aircraft.

WASHINGTON

As May ended the weather was still "slow", and few of the tips were showing any pink, according to D. J. Crowley. There was no frost injury as to that time. Growers were hoping that some favorable weather would come to make up for lost time.

The abnormal amount of rainy weather handicapped several growers, who were planning to do a considerable amount of planting this year. Much of the work in late May was still in the sanding and scalping stage only.

Dr. J. Harold Clarke of Cranguyma Farm has been a recent visitor in Washington, D. C.

Ralph Blair has sold out his cranberry interests to his brother, Wilson, and is returning to his former home in Idaho.

THE STORY OF A BIG RHODE ISLAND BOG AND IT'S OWNER, "BILL" WYETH OF WAREHAM, MASS.

By CLARENCE J. HALL

When the subject of old cranberry bogs is brought up, thought usually is of Cape Cod or New Jersey. Yet there are many old cranberry properties in other areas, particularly in the New England states, other than Massachusetts. One such is the big bog at Greene, a village in the town of Coventry, Rhode Island. As a matter of fact, this is the only bog in "Little Rhody", regardless of age, except for one other very small one.

The Greene bog, according to a "History of Greene and Vicinity", written by Squire G. Wood (a brief booklet, with foreword by Mittie Arnold, privately published in 1936 on the tercentenary anniversary of the state) was started in the late 1850s, which makes it an old bog indeed. This is also a truly big bog—72 acres. It has been owned by the Summit Cranberry Company since 1936 and under this management has been given a new lease on life. The active manager is William H. Wyeth, now of Wareham, Massachusetts, recently of Beverly, Massachusetts. This company has also owned, since August of 1946 the "Harriet E. Sampson" bogs at Marshfield, Massachusetts, these latter comprising 40 acres, which makes the Summit Company an operator of considerable size.

"Bill" Wyeth has recently come a bit into the foreground in the Massachusetts industry as one of the prime movers in the proposal to establish a "Cranberry Institute." He is chairman of the Public Relations Committee of the Cape Cod Cranberry Growers' Association which sponsored the "mass" meeting to hear a discussion of agricultural institutes at Wareham Town Hall, April 26th. Although a relative newcomer to the cranberry industry, Mr. Wyeth has been interested in cranberry growing since his boyhood days. Much of his adult life was spent as field representative for an insecticide and manufacturing concern, the Niagara Sprayer and Chemical Company of Middleport, N. Y. For years he traveled the New England states, upper New York state, Nova Scotia, and into New Brunswick and Prince Edward Island, and has hundreds of friends

among farmers, especially apple and potato growers.

"Bill" Wyeth's Transition to Cranberry Grower

With this background, his transition into that of cranberry grower was not a hard jump, since he had also been much interested in and studied agricultural chemicals, farming equipment and entomology. He has always really been at heart a farmer.

Let's take the personal story of Wyeth, before going into that of this nearly century-old Rhode Island cranberry bog. "Bill" was born in Magnolia, a village of Gloucester town, famed fishing port of Massachusetts' North Shore. Yet even though coming from "North of Boston", he had Cape Cod cranberry antecedents. Incidentally, and although this has no bearing upon cranberries, an ancestor was a signer of the Declaration of Independence despite the fact this forebear spelled his name Wythe. His mother was a Knowlton of Sagamore on Cape Cod. As a very small boy he was taken down to "Uncle John's" at Sagamore, where he helped (or possibly hindered) in the harvesting of "Uncle John's" cranberry crop in the fall.

He remembers riding atop loads of cranberries, packed in barrels. "Uncle John" had a farm wagon painted blue, as did most Cape Codders at the turn of the century. There were two horses, one hitched ahead of the other to draw the blue wagon with its load of red fruit. The reins, he recalled, were made of rope. He never forgot those early cranberry days in the beautiful Cape fall weather.

In about 1912 his family bought a farm in the town of Essex,

on Massachusetts' North Shore. This was a truck and dairy farm, mostly truck. On this farm, as lad, he learned farming the hard way—by working at it. Growing up, he decided he had had enough of farming and that he wanted to make something of life off the farm. He got a job, for a brief time, as fireman on a locomotive of the Boston & Maine R. R. That didn't satisfy for long. He got back into the agricultural field, a way of speaking, by getting a job with the Ames Plow Company in Boston. After six months of training he was sent out on the road as salesman. He became an Ames specialty man on tractors. He traveled throughout New England during the period of World War I. Later agricultural dusting began coming into practice at the Niagara Company brought on spraying and dusting equipment. He went with the concern in 1920. He constantly travelled the northeastern part of the United States and into eastern Canada. For a time he was New England manager for Niagara.

In about 1935 he was ordered to the Cape to develop markets among cranberry growers for the new chemicals, including dusts. That brought him into contact with E. H. J. Franklin at the Cranberry Experiment Station, East Wareham and with cranberry growers. That revived his latent interest in cranberry growing. He began to reason something like this: "Cranberries are the only crop which seem to offer the maximum of financial security combined with the maximum of a pleasant way of life. He determined to cast his lot from there out with the cranberry industry, as a grower.

"I may sound crazy or insane when I say this", he says today "but I honestly am much in love with cranberry growing. I am just about as interested in growing a crop of fine cranberries purely for the satisfaction of the achievement as I am in the financial return. Growing and harvesting a crop of cranberries is to me a struggle well worth the battle.

Wyeth an Outdoor Man

Wyeth, it may be noted here like most cranberry growers, is a

loor man. He just naturally
s the life of a cranberry grow-
out in the open.

s previously stated, in 1936 he
ned a company with two oth-
of Beverly. After looking over
ous properties it was decided
uy the one at Greene. This
done two days before harvest
e in that year. The property
purchased from the Rhode
nd Cranberry Company, his
mediate predecessor in manage-
t being the late Horace Me-
alin of Eilver Lake, Massachu-
s, recognized as one of the
er cranberry operators.

The Greene Bog

ow for an abbreviated history
this big Rhode Island bog,
ch since its construction has
e through many changes in
ership. Of the village of
ene, the history before quoted
s, it makes up the extreme
terly part of Coventry, and
ere the village now stands there
"in 1854 but a little-used cart
h through what was then a
mp." Greene is two and a half
es from the Connecticut State
and is in a beautiful, hilly
ion, the bog itself being at an
tude of several hundred feet
ve sea level. It is about 15
es from salt water at Narra-
setts Bay, and is westerly of
S. Route 1, which in Rhode Is-
d runs between the capitol city
Providence and the city of
sterly. Even today this region
a bit more rural and primitively
ged than its location, only 20
es from the big city of Provi-
nce, would suggest.

Site of Bog was Natural Cranberry Swamp

The location of the bog was a
rural bed of wild cranberries.
ld cranberries were picked in
area quite widely each fall and
t to market in New York by
ling packet. The Greene site
s the largest and most produc-
e of these native meadows.
tting facts from the same his-
y, the Greene bog was started
Abiel T. Sampson & Company,
T. Sampson then being a resi-
nt of what was North Provi-
nce.

Work was started by digging a
g ditch, east from what was

then known as Beaver Dam,
through the center of the natural
cranberry swamp. Cross ditches
were dug, sand was spread, and
cultivated vines imported. Neigh-
bors of the community, with horses
and farm wagons, assisted in the
work. Since in 1854 Greene was
principally only a cart path, it
must still have been a rather wild
area when a few years later the
building of the ambitious project
began. What brought Greene into
being as a village, and gave it a
name, was the building of a rail-
road in 1854 to connect Providence
with Hartford, Conn.

A stopping place was made at
what became Greene village, this
being chosen as one of the points
to take on a supply of wood fuel
for the locomotives. The region at
that time was heavily wooded and
lumbering in the hills was an im-
portant industry. This new sta-
tion was called "Greene" by the
railroad, in honor of General Na-
thaniel Greene of Revolutionary
War fame, a native of the area.
The first station master was Squire
Wood, author of the history.

In the early 60s a house was
built on the bog property. First
crops were not large, but Mr.
Sampson kept on enlarging until
"the bog became the biggest in
the state". (There were other
cultivated bogs in Rhody in those

days). Through the sixties and
seventies the Greene bog was a
busy place, particularly at harvest
time, giving employment to men,
women and children, who got a
little ready cash for the coming
winter. During Mr. Sampson's
ownership of perhaps nearly 30
years, picking was all by hand
except in the emergency of frost,
when he would permit raking, pre-
sumably with the old-fashioned
cranberry rake which would have
been available at that time.

Several Hundred Employed in Harvest

It was said several hundred peo-
ple were engaged at the bog in
harvest from 7 a. m. to 5 p. m.,
with a few minutes off for lunch.
Two bushel baskets were furnishehd
each picker, with his name fast-
tened to the baskets with a tag.
At the end of each day the berries
were carried to the cranberry
house, measured, and credit given
in a book. Two cents a quart was
paid. A bushel or a bushel and a
half was the usual day's work,
although some were able to pick
two bushels, and more.

In 1867 a new cranberry house
was built, 100x40, with two stories
and a basement. A number of
years ago this so-called "cran-
berry" or screenhouse was burned
and a new one built on the same
location. This is the screenhouse

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University of Wisconsin

which Mr. Wyeth uses today.

Following the death of Mr. Sampson, the bog was owned by a succession of operators. One of these was one Elisha McCrillis, who ploughed up the best part of the bog, putting it into grass. This not proving successful, the bog lay idle for several years. A new firm from Boston took over, with an experienced bog manager, John M. Burke, and new dams were built, vines were set, more ditches and other improvements made. Following Mr. Burke, the manager was Frank Gorsline, who operated it for several years, and then for nearly 35 years it was in charge of Thomas Gaul.

Bog "Run Down" When Wyeth Took Over

After all these vicissitudes of different ownership and changes, when Mr. Wyeth's company took title, he found the bog in a considerable state of poor condition. In some sections, he said, grass was as high as in a hay field.

He had a hard job of renovation ahead, and is accomplishing this by doing a section thoroughly and then proceeding to work on another. A major turning point in his program, he says, came in 1941 when he flowed for a year for root grub. He reduced a large portion of this pest and also killed off a lot of grass and weeds. "We've been growing a few real crops since then", he declares. With parts of the bog still to be renovated, the 72 acres have produced a top crop of 3,000 barrels, which is not bad under the circumstances, but Wyeth is by no means yet satisfied with his production record.

When he took over, the bog was set to about 75 per cent Howes and the rest Early Blacks, but he is tearing out much of this Black acreage which is not in good production, and replanting with Howes. He now has about 90 per cent Howes. This theory of more Howes than Blacks is rather contrary-wise to the present Massachusetts' trend.

Wyeth, however, likes this Rhode Island property for Howe production. He says the Howes grown at Greene are almost always fine, large berries, excellent in color.

He feels this is definitely the variety which does the best there. **Bog Almost All in One Big Piece**

The Greene bog is all in one piece, roughly oval in shape, divided into sections by cross dikes, of course, with the exception of one two-acre plot off by itself. It is all gravity-flowed except for an 8-acre section. There are three reservoirs, "Little Grass", "Wickford" and "Main". These are fed by brooks and springs, and a good deal of this head of water is normally 7 feet deep, giving a pretty good water supply—although not so bountiful that it can be used wastefully. This is true particularly in such a frosty spring as prevailed this year.

Despite the altitude of the bog, which is reached after a steady climb of several miles along a sharply winding road, he does not consider the bog as a cold or frosty one. As a matter of fact, he has kept temperature records and found that last fall and this past spring Greene was consistently higher than many bogs in Southeastern Massachusetts. However, when there is a frost, he admits, at times it can be a "good one." He considers the growing season a shorter one than in the Cape area and thinks this may be due to the elevation of the bog or to the bottom, which is heavy muck. He has found out by experience that he cannot hold late water and still get a crop to mature.

Two Disasters Changed Temperatures

He believes that the frost condition has been improved since he took over. This was by means of two disasters over which he had no control, and were means which he certainly would not have planned. The first was the great New England hurricane of September, 1938, which leveled off much of the beautiful timber standing on the hills surrounding the bog. Incidentally, the total acreage of the property is 700, and at least 50 more acres of bog could be built. The property when he took over was "pretty as a picture," with its heavy white pine and oak coverage. After the blow

of the '38 storm he salvaged 7,000 board feet of pine—but would rather have the pine standing.

The second disaster, and the which caused the greater damage to his woods and to the beauty of the property, was a terrific fire, which occurred the following year. This fire swept a distance of 18 miles with a 5 mile front and completely burned over his land. His foreman of that time, Ralph Theroux, and others worked on the property, saved the bog by putting on a flood. They managed also to save the screenhouse, foreman's house, a cottage and a pile of cut timber, but were on fire at one time and another. Mr. Wyeth was away the time. He considers that with this denuded upland, frost temperatures are not as low as they were.

Mr. Wyeth's present foreman John C. Harju, Jr., whom he imported from Wareham, as an experienced bog man. Mr. Harju with his wife, lives in an old farmhouse on the property which dates from well back into the past century. This farmhouse, the screenhouse and cottage which Mr. Wyeth makes his personal headquarters, comprise the buildings on the property, except for a small pump house. Both the foreman's house and the cottage have hot and cold running water, baths, electricity and telephone.

Usually four or five men as foreman are employed the year around. His crew of the past spring has averaged 10. It is from this nucleus that he forms his harvesting crew in the fall, mostly from neighboring residents. He maintains a fleet of seven vehicles on the property. The screenhouse is ample to store sufficient harvest boxes for 4,000 barrels. There are but two separators, both Baileys, but by working into the night, when necessary, he can get his crop off to market satisfactorily. He ships mostly by rail from the Greene station. In the screenhouse he has a gravity flow system, by which berries are poured into a hopper on the ground floor and then go to the mills in the basement,

Wyeth Is an Independent

Mr. Wyeth, in marketing, is an independent; that is, he ships through the Beaton Distributing Agency at Wareham. He is emphatic that he does not believe in any one man or group of men controlling the entire cranberry industry. He is no enemy of the cops, but he believes that competition, "good, clean competition is the life of any industry."

In coming down to Southeastern Massachusetts from the North Shore to make his permanent home at Wareham, Wyeth was influenced by three things. First, he had good friends in Wareham and vicinity and Wareham is the scientific center of the Massachusetts industry. Secondly, it offers a base of operations from which he can reach his Marshfield bogs, a distance of about 35 miles, in about an hour, and the Rhode Island bog, 72 miles, in a couple of hours, more or less. With a foreman at each bog to handle immediate and detailed problems, he feels he can supervise both properties satisfactorily.

In his bog management he maintains about 100 bird houses to help in insect control, and he is firmly convinced that honey bees help out in pollination. He regards these as "insurance" and each year hires 40 or so colonies for the Greene bog and 25 for Marshfield.

As an outdoor man, Wyeth's hobby is fishing. In May he made his 16th annual trip to Maine for and-locked salmon. He maintains a 16-foot outboard skiff at Wareham for salt water fishing.

How the Name of "Summit Company Came About

How Wyeth came to hit upon the name of "Summit Cranberry Company" is a rather interesting story. The bog is not named after the village of Summit, a few miles away, as many think. It seems that he and "Joe" Kelley were going over to the bog early one morning shortly after he had bought it. There was heavy morning fog in the hills of the region and Wyeth, being fairly new to the roads, got himself completely lost. Suddenly he noticed the name "Summit" on a sign post and knew

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where he was. Then the sun burst out through the mists and there was the bog area before him.

He said, "I'm going to call our company the 'Summit Cranberry Company', and I'm going to call it that because I have reached a summit in my career by becoming a cranberry grower."

Even though "Bill" Wyeth reached a 'summit', he does not yet feel he has reached the ultimate peak, and that higher summits lie ahead which he will not have attained until he has this big Rhode Island bog in first-class shape and bearing to his satisfaction.

CONTRACT FOR NEW WASHINGTON CRANBERRY STATION IS LET

D. J. Crowley, director of the Cranberry-Blueberry Laboratory, Long Beach, Washington, has been informed by the office of President Wilson Compton of the Washington State College that a contract has been let out for an office and laboratory building at the Long Beach Station. This replaces a structure now there.

The new building will be constructed of tile and will be modern in every respect, including a central heating plant. Construction will start within the next few weeks, and the building will probably be ready for occupancy by

about October.

President Compton, with a party of College and State officials, visited the Long Beach Station in mid-May. A dinner was held, with Mr. Crowley, Mrs. Crowley and several cranberry growers being present. These included: Mr. and Mrs. Leonard Morris, Mr. and Mrs. Frank Glenn, Mr. and Mrs. Robert Ostgard, Mr. and Mrs. R. A. Wearne, Al Sundberg and also County Agent Nolan Servoss.

LONG BEACH, WASHINGTON, CRANBERRY CLUB

The May meeting of the Long Beach Peninsula Cranberry Club was held on Friday evening, May 14, in the N. C. A. building. Al Sundberg presided over the short business meeting and had the revised By-Laws read.

D. J. Crowley of the Cranberry-Blueberry Experiment Station gave an instructive talk on frost and weed control on the cranberry bogs.

Leonard Morris and Robert Ostgard told of their trip to Bandon, Oregon, where they attended a cranberry marketing meeting and visited cranberry bogs.

Dr. J. H. Clarke of Cranguyma Farm told the growers of the cranberry planting machine which had been brought to Cranguyma for a trial.

THE INDUSTRY WILL CONTINUE

OF one thing cranberry growers may be certain, as has often been mentioned before. This is the vagary of the weather. Practically the entire month of May brought a deluge of rain to the Massachusetts cranberry area, the 10.30 inches, as reported in the "Fresh from the Field" section. There was also rain and a late season in Oregon and Washington. Wisconsin wanted more rain than it got.

As unsettled as the weather, continues the marketing end of the industry. An attempt was made, and as this issue closed is being continued, to set up a cranberry institute. There seems to be a sincere feeling on the part of many that there can be more cooperation toward a better allocation of the crop between fresh and processed fruit, that the growers may receive a fair return for their investment and labor and the consumer be able to buy cranberries, in either form preferred, at a price in line with other products.

In a way, it might be said the industry is reflecting the uncertainties of conditions the world over. The "cold war" continues. Palestine is a troubled spot. In this country there are strikes and threats of strikes. Who will be elected to the Presidential chair in November?

However, to get back into our own realm—there is, we believe, another certainty besides that of the vagary of the weather. That is, that cranberries will continue to be grown and that a proportion of the people will continue to eat them because they like cranberries.

WE would like to call attention to the article in this issue upon the bog at Greene, Rhode Island. It is surprising in how many places the cultivation of the fruit began many years ago. The industry was making progress in many areas nearly a century ago. This possibly is another indication that it will continue to endure.

THE cranberry growers of Washington may be congratulated upon the fact they are to have new buildings at the Cranberry-Blueberry Laboratory at Long Beach. This is a need which has been felt for several years, as the "tending" of the cranberry vine revived from the doldrums

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where it fell not many years back. In this respect our special congratulations go to the director of the station, D. J. Crowley, who will have these improved facilities for carrying on his work.

AIRCRAFT of various kind have now become practically a commonplace over cranberry bogs in insect control. A 'copter buzzes around, a bi-plane or a Cub swoops low, and it seems an accepted procedure. Growers watch with professional interest to see how good a job is being done. It is a good "show" these daring pilots put on, but such an exciting procedure is now practically taken for granted in cranberry growing, as in many other agricultural pursuits. This is the season when the "ships" are at work—in Massachusetts, New Jersey, and this year for the first time the Wisconsin Cranberry Sales Company has a 'copter in the field. Tractors, bulldozers, are "every-day". It's a marvelous age we are living in—at least, mechanically speaking.



Pictorial Section

Above—A part of the sand pit at Greene, R. I., bog. This has all been excavated within the past year.

Left—Foreman at Greene, John C. Harju, Jr.

Next page—View of Foreman's home and screenhouse. Sanding scene. (CRANBERRIES Photos)





MISS LAMBERT, left; MISS BECHER, right.

(Photo Courtesy ACE)

Two Long-Time Employees of N. J. Co-op Retire

By RALPH B. CLAYBERGER

Back in 1907, the Growers Cranberry Company of New Jersey maintained its office in Philadelphia. Joseph J. White was president. He advertised for a young lady for office work. Fresh from graduating from Temple university, where she had majored in business, Miss E. C. Becher applied, and was employed on a temporary basis. Mr. White was soon convinced of her ability and progressiveness, and the temporary basis became a permanent one and Miss Becher steadily advanced until she became secretary and treasurer of the Company.

On her advancement to this position in 1915, she brought to the company her close friend, Miss M. C. Lambert, who took over the duties formerly performed by Miss Becher, as book-keeper. Both worked harmoniously as a team with but one aim—to make the Growers Cranberry Company the strong, successful Cooperative that it is today. It is doubtful if there is a cranberry grower in the state

of New Jersey who is not acquainted with Miss Becher and Miss Lambert, who have served the growers faithfully and impartially over all these years. In giving his report at the Annual meeting last month, the auditor said: "The books are in unusually fine condition and are beautifully kept. You are to be complimented on the excellence of your office force. I wish to express my appreciation of the whole-hearted cooperation extended to me by them in the course of my examination."

In the survey made by Booz, Allen & Hamilton in 1945, they reported: "The office force consists of Miss E. C. Becher and Miss M. C. Lambert. They handle both management and office functions. Excellent records are kept with regard to grower accounts. The accounting system is simple and direct and the records are kept in excellent condition."

In its 54 years the Growers Cranberry Company has had but three presidents, Joseph J. White, Franklin S. Chambers, and Theodore H. Budd, Sr. Miss Becher and Miss Lambert served under them all, and with distinction. They retired on May 1, much to the regret of all. Their retirement will be a source of sadness to all who have known them.

NECSO AGAIN TO GIVE 'COPTER SERVICE

New England Cranberry Sales Company is again to provide helicopter service for its members. The Company has been advised by Wiggins Airways, which supplies the machine, that a complete renovation has been made with new dusting equipment. It is anticipated this should eliminate many of the difficulties which were encountered in 1947.

The program will be operated from the Tremont packing house, that is, the schedule program.

Attention *Bog Owners*

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"FREDDY" BRAUN

(CRANBERRIES Photo)

STRAIGHT-WING INSECT CONTROL IN MASSACHUSETTS IN MAY

More than 2,000 Acres Done by Firefly, Inc., New Co. Whose Pilot, "Freddy" Braun, Makes Flying His "Life".

Considerable air insect control was practiced in Massachusetts during May, chiefly by Firefly, Inc., which operates out of the Cape & Islands Airways at Wareham. The new corporation was organized by the J. J. Beaton and Makepeace interests to work on their own properties, but with the idea of providing assistance to others when possible.

The president of Firefly, Inc. is G. T. Beaton, treasurer. Maurice Makepeace, directors Russell Makepeace, Frank Butler and "Mel" C. Beaton. The general manager and pilot is "Freddy" Braun, recognized as a skilled agricultural dusting and spraying operator. Formerly connected with Brockton Airport, he has been employed in cranberry work by Makepeace for the past two or three years.

Braun was born at Pearl River, near Niantic, N. Y. He learned to fly at White Plains, N. Y. During the war he was civilian instructor, teaching Navy pilots at the Uni-

versity of Virginia and on Cape Cod. He has done agricultural dusting since the war in Mississippi, New Jersey and Florida.

The corporation owns a war surplus Stearman and two Piper Cubs. The Stearman is equipped for spraying, and during May covered about 2,000 acres with DDT dust around the shores of bogs. As June came in he was operating a Cub, still using DDT, except it was in dust form, and had covered about 250 acres. Of flying he says "It is my life".

An Attorney's Talk Before Mass. Growers

Editor's Note—The following, which chiefly concerns water rights, was held over from previous issues, but is sufficiently interesting for printing at this late date).

Water rights for Massachusetts cranberry growers in the use of running streams are based on old mill laws, which were deliberately made very favorable to the mill operators, Fletcher Clark, Jr., of Middleboro, Mass., told the March 4th session of the Plymouth County Cranberry School. The so-called mill act, he said, was passed by the legislature February 27, 1796, and a cranberry act "tacked on" to it in 1866 which gave cranberry bog owners substantially the same privileges as concerned running streams that the mill owners formerly had.

The mill rights were made so favorable to the mill men, he explained, because it was regarded that the mills in Massachusetts and New England, generally, were of great importance in the upbuilding of the communities. The laws gave all the "breaks" to the owners, with typically Yankee foresight, and mills on running streams played a major part in building up New England. Mill owners were given rights in flowing adjacent territory, even though owned by others, quite like eminent domain.

He countered this, however, by saying that many cranberry bog water rights were in a "twilight zone", and cranberry growers had no right to abuse the rights of others, even though they did en-

y the special privileges which had been accorded the important mill owners of earlier times.

The first mill act that I can find", he told the class, "was that passed at the General Court at Plymouth held on the 4th and 5th

October 1636, which provided that 'John Jenney shall have the liberty to erect a mill for grinding and beating corn upon the brook of Plymouth to be to him and his heirs forever.'

"When Plymouth became part of the Massachusetts Bay Colony of course, was covered by the Colonial legislature. The act passed in 1796 contained this interesting preamble: 'Whereas the erection and support of mills to accommodate the inhabitants of the several parts of the state ought not to be discouraged by any doubts and disputes, some special provisions are found relative to flowing adjacent lands and mills held by several proprietors'. This preamble was followed by provisions of law that the owner may raise and contain sufficient water for a head to run their mills and that a jury would fix the damages offered.

"Frequently after that the mill acts were amended, each giving the proprietors of the mills more freedom in the flowing of lands above the mill, and keeping the aim for damage for such flowage down to a minimum, the purpose always being to encourage the building and maintenance of mills utilizing all the available water power.

"The mill acts were often fought over in the courts as being unconstitutional and cases were fought after the Federal constitution was established with its bill of rights in an effort to show that mill owners were taking property without due process of law, but in all cases the mill acts have been sustained."

He said that every riparian owner has the right to "enjoy" and use the water as it passes through his property, but the stream must be as substantially as big when it leaves his property as when it entered and that he may only use the water in a "reasonable" way. He said an owner may

only hold water for what may be a "reasonable" time as determined by the situation. The course of a stream must not be changed. Any dam must be erected on the property of the owner. Mill laws provided that only a mill of suitable magnitude adapted to the size and capacity of the stream could be erected, and this applied to cranberry bogs also. All property owners with a stream running through have equal rights in the waters of the stream, whether they are above or below a point at which the stream has been dammed.

The rights for other water supplies than running streams are entirely different, and in the use of surface water an owner had no right to cause it to overflow upon his neighbor, as surface water is not a running stream and so does not have the mill right privileges. For the use of water from "great ponds", a grower must get permission from the Department of Public Works.

In general, he said that while cranberry growers enjoyed the very special privileges of the mill owners, every case in which there was a conflict of interest had to be judged on its own merits, and these are as varied as can be. He

said there were very few suits under the cranberry acts, but such suits were "tricky" in character." The statute under which cranberry growers had the right to build a dam astride a stream running through their properties and impound the water for flowage and irrigation purposes was unusual, and the right must be used only in a "reasonable" way so as not to damage the inherent rights of others.

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Mr. Clark, who occupied the entire session, divided his talk into three parts: land titles; ownership of property, individual, partnership or corporation, and the final section on water rights. He spoke of the fundamentals of Massachusetts laws which were based on the ancient English interpretations. Usually he said, he did not recommend general partnerships for cranberry ownership, although many had been very successful. He told of the risks involved, as the acts of one partner binds all the others, and in case of suit everything the individual owned—as in individual ownership—was at stake. In the case of a corporation he stressed the fact of high state and particularly federal income taxes, which often cut down profits tremendously “as so many of you growers know.” He said there were advantages and disadvantages to all three types of ownership. He gave several suggestions; one was not to endorse anybody’s note, another was for the wife to own the home and the husband the business, a third was on January first of each year to “set down in a notebook an exact estimate of what a grower owned”, as this would be very helpful in settling an estate. He said even an imperfect will was better than no will.

In ending his lecture, he said, although he believed he was basically right in his conclusions, he

offered them in “all humbleness”, as there are so many different variations of circumstances in each individual situation.

Extended question periods after each phase of his discussion showed the interest of the school. Cranberry Specialist “Dick” Beatlie presided.

Discussion of Water Supplies On Cape Cod

Editor's Note—This is another article which has been held over from previous issues.)

Paul F. Howard, engineer of the Boston firm of Whitman & Howard, at the Cotuit meeting of the Upper Cape Cod Cranberry Club, March 8th, gave an extremely interesting discussion of the formation of Cape Cod and likely water sources and the driving and construction of wells for sprinkler irrigation. The Cape is almost unique geologically in its formation, he said, and water underlies the whole area, although in certain parts water would be difficult to get in adequate quantities.

Mr. Howard, who has done much work on the Cape, and is familiar with most of the area, had a vast knowledge of the structure and soils of the peninsula. He said the Cape can not be defined by lines that are man-made, such as Barnstable County boundary or the Cape Cod Canal.

25,000 Years Ago

Twenty-five thousand years ago, Eastern Massachusetts, ledge, flats, etc., ended at a point about at the Hotel Pilgrim in Plymouth to a line drawn to the former Squirrel’s Nest Inn at East Wareham. There was no more land to the eastward. Then came three glaciers, the “Great South Channel”, which was at Truro and Chatham and out to Georges Bank. The earth contained in this originated in Eastern Maine, and marks high on Mt. Katahdin and Cadillac clearly indicated how thick or high the glacier had been. Then came the “Cape Cod Glacier”, which was from Orleans to and including Barnstable and eastern Sandwich. The earth of this glacier was scooped up from Kittery and York counties in Maine. This is proven by Maine pollen still to be found. The clay of these counties is the same as that of Brewster and Dennis. Third there came the “Buzzards Bay Glacier”, which covered Bourne and Falmouth. Provincetown itself was not glacial made, but came from sands washed and blown in from dunes.

These three glaciers formed three “backbones” of the Cape: 1) Truro to Chatham, where two glaciers met; 2) Orleans to Sandwich the face of a glacier, and 3) through the “Plymouth woods” into Bourne and Falmouth and Woods Hole, this lay between two glaciers, also.

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Glaciers Formed "Runs"

Runs and streams were formed as the glaciers melted, and the melting ice front deposited soil materials. The elevation of the sea then was about 40 to 50 feet lower. Cape town water sources today are located in these runs or gullies, and here the soil material is "sorted", and these are the best sources for well water. The lakes and ponds were formed when buried ice melted and made the depressions or "pot holes." It is in some of these pot holes which were later filled with peat, that the growers have their bogs. Areas of some of these depressions, especially along the edges, may be fair water sources. Ponds in general are not "sorted" material and especially along the backbone, and these areas are not good locations in which to seek water. The soil material to be looked for is coarse sand, such as that in dunes, he said. Wells could go down 40 or 50 feet, below present sea level.

Wells Would Replenish

He said he understood 100 gallons a minute was necessary for

one acre for frost irrigation, and to irrigate a 5 acre section should not be much of a problem and that probably 10 wasn't too much of a one. A single well which supplied only 10 gallons a minute is poor, one which supplies 20 fair, 40 good, and 80 or better, excellent. He said with a five hour irrigation for frost, growers need not worry about replenishment of the well for the following night.

Technical Discussion

He then technically discussed the procedures for testing to locate a well water supply, and said he preferred the "open-end" method, using 2½ inch pipe, preferably of wrought iron, with couplings of malleable iron, not cast iron. Driving can be by any method, usually with an engine and "nigger head" drum. He told how to "wash" the material so the soil could be sampled. One of the surest signs of water, he said, was when this wash water runs away into the proposed well.

The "static" level should be within 10 feet of the surface and

depth of water in the well should be 20 feet. The preliminary testing should determine the maximum capacity, and this should be at least 10 gallons per minute, which was not really very satisfactory. He said the grower should drive enough wells so as to finally pump at the rate of 500 gallons a minute. He told how wells should be connected at the top, and that "dresser" couplings should be used. Pipe could be from 2½ inches for 40 g. p. m. up to 8 inches for 500 to 1,000 g. p. m.

The pump should be of the self-priming type and speed not more than 1800 g. p. m. He said the wells would have to be given maintenance, as there will be a tendency to clog, and this can be done by washing, or flushing back.

A companion talk by Henry N. Halberg, engineer in charge, United States Department of the Interior, Geological Survey, Boston, Mass., given at the March meeting of the Lower Cape Club, will be published in part next month.



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Latest Annual Report of Dr. H. J. Franklin

THE CRANBERRY STATION
East Wareham, Massachusetts
H. J. Franklin in Charge

Administration. Pursuant to providing acts of the legislature, considerable office changes were made in the main building of the station to accommodate increased personnel, an oil-burning plant was installed in the basement for heating the laboratory and offices, much new laboratory equipment was added, and a new full-time clerk was employed. These provisions should greatly increase the efficiency of the station and make it possible to finish in reasonable time some important lines of work that have long been in process.

General. An unusual combination of circumstances produced a large crop of cranberries in Massachusetts and the country as a whole in 1946, and there was a remarkable market demand for the fruit at record high prices. The state hog crop was the largest since that of 1923 and is returning nearly 32,000 dollars to the State Treasury.

Notable features of the 1946 cranberry season in Massachusetts were a very unseasonable frost on July 16-17 which destroyed over 1200 barrels of berries, mostly in Holliston, Plymouth, Waquoit, Sa-tuit, Wakeby, and Brewster; and excessive rain in August (12.61 inches at East Wareham) that caused bogs to be flooded to such an extent that, as estimated, 15,000 barrels of berries were ruined. The berries of the Massachusetts crop proved to have very good keeping quality in spite of this rain.

Injurious and Beneficial Insects Affecting the Cranberry. (H. J. Franklin.) Bulletin 239 was re-

vised and amplified and presented for republication.

DDT. Investigations made in 1946 indicated that this insecticide is effective against the cranberry tipworm and the cranberry weevil, and it was advocated as a control for these insects as well as for the gypsy moth and the black-headed fireworm in the 1947 Cranberry Insect and Disease Control Chart.

Chlordane (C₁₀H₆Cl₈) used both as a dust and in a spray was nearly so effective as DDT as a control for gypsy moth caterpillar and blunt-nosed leafhoppers (*Ophiola*).

Helicopters. Observations of these machines in commercial operations against cranberry pests in the spring and early summer of 1947 lead to the conclusion that

Set for Hail?

It costs considerable money to raise a cranberry crop and you can lose that investment the minute Hail strikes—**unless you have hail insurance.**

Last year I brought the Hartford Fire Insurance Co. Representatives to Massachusetts to make a survey in order to secure adequate coverage for your bogs against **Hail Storm Damage.**

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they are likely to soon come into general use on Massachusetts bogs. Prevalence of Cranberry Insects the Season of 1946:

1. Gypsy moth infestation moderate in Plymouth County and land; very light in Barnstable county.
2. Leafhoppers (*Ophiola*) not very abundant.
3. Fruitworm infestation very light, rather lighter than in 1945.
4. Black-headed fireworm not very troublesome.
5. Very few fire beetles (*Cryptocephalus*) found.
6. Spotted fireworms (*Cacotia*) very few.
7. Spanworms, both green and brown, about as usual.
8. False armyworm infestation about normal.
9. Cranberry girdler (*Crambus*) still much more troublesome than before the war, owing to neglect of bog resanding.
10. Spittle insect about as usual.
11. Tipworm apparently very much more prevalent generally than usual. Probably partly as a result of this, the average terminal budding of the vines for the 1947 crop on the bogs in this State was the poorest observed by the writer in his forty years of cranberry experience.

12. Bumblebees and honeybees were unusually abundant on the bogs everywhere throughout the cranberry flowering. A very remarkable and possibly very instructive incident relative to bee abundance was observed. The winter flowage was removed from a bog of two and a half acres in East Carver on June 20. This bog reached full bloom about August 8. Bumblebee workers and males came to this bog in astonishing numbers whenever the weather was fair throughout the blooming. It was estimated that a third of a million of these bees were there much of the time. Watching them at work, as they rose from the cranberry vines and went back to them here and then there, gave one the strange feeling that he was looking out on a bumblebee sea. Honeybees seemed to be entirely absent. The fruit, about 180 barrels of Early Black berries of fair size

and color, was gathered from this bog early in October.

Frost Forecasts. These are continued as a special service, with the 1947 charges for the telephone service increased materially over those of previous years to meet the larger costs caused partly by improvements. About 7200 acres of bog in the hands of 204 subscribers are covered by the telephone warnings, this being about three-fourth of the entire Massachusetts cranberry acreage with fair to full flowage protection. The accessory warning service by radio is co-operating as heretofore with the United States

Weather Bureau office at Logan Airport, the warnings being given mainly through station WEEL at Boston.

Control of Cranberry Bog Weeds. (C. E. Cross). A large number of experiments have been set out on the State bog and other bogs since May 1, 1946, the results of which have not been previously reported.

1. In the belief that one of the greatest weed problems faced by cranberry growers is that of controlling grasses and sedges which begin their season's growth after the cranberry vines have started, many tests were made in July and

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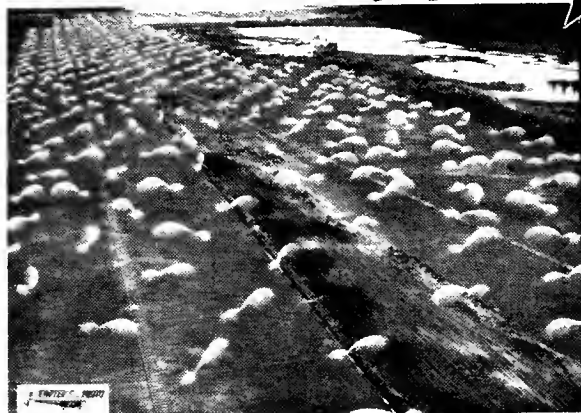


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GLENDORA

CALIFORNIA

August, 1946, with kerosene oils, Stoddard solvent, insecticide base oils, and a large number of strictly experimental oils known only by numerical designation. None of these oils has, as yet, proved satisfactory as a selective weed killer during the summer season.

2. Stoddard solvent, sprayed at 400 gallons per acre during the first two weeks of May, has been found an excellent selective killer of asters. Kerosene at 1000 gallons per acre will not kill asters nearly as effectively, though neither treatment injured cranberry vines or buds when applied before May 15. The Stoddard solvent treatment is more effective, more easily applied, less injurious to vines, and less expensive than the previously recommended control of asters with ferrous sulfate.

3. Paradichlorobenzene, scattered at 7½ pounds per square rod and covered immediately with an inch of sand, has previously been recommended for controlling poison ivy, chokeberry, loosestrife, and white violets. Experiments now show this treatment to be effective against wild bean (*Apios*) and three-square grass (*Scirpus*), and occasionally against the small bramble (*Rubus*). In addition, this treatment was found effective against poison ivy and wild bean when applied early in April while ivy and bean were still dormant.

4. Ferrous sulfate can be spread at the rate of 50 pounds per square rod without injuring cranberry vines. This heavy application, made in June, July or August, killed all white violets, asters, and needle grass. However, serious injury to cranberry vines resulted when this treatment was applied to bogs sanded within a year. Tender cranberry roots near the surface in the new sand were apparently severely burned.

Some study and experimental work has been done toward protecting cranberry bogs from winter-killing and frost by means other than flooding. This work looks promising, but is still in its preliminary stages and will not be described more fully now.

Cranberry Breeding. (F. B. Chandler, Collaborator; H. F. Bergman, U. S. D. A.). One hun-

dred and fourteen selections from the 10,685 cranberry seedlings produced by the U. S. D. A. have been set in Massachusetts for further testing: some in four bogs, and the others in two or three bogs. From these selections, it is hoped that some new varieties will be developed which will be resistant to false blossom and fungous diseases and will give good yields of desirable fruit.

The results of the breeding work and some of the information about these selections were published in CRANBERRIES for May and June, 1947.

Fertilizer Requirements of Cranberry Plants. (F. B. Chandler and Wm. G. Colby). Plots have been laid out and fertilizer applied to study nitrate vs. ammonia as a source of nitrogen for cranberries. The rate of application of nitrogen in the treated plots has varied from 10 to 80 pounds per acre. Fertilizer applications are being

made before bloom (June), before fruit-bud formation (late July) late in the fall, and early in the spring. These plots have not been established long enough to give information on yield, but vines on fertilized plots have much better vigor and bloom and are much heavier than vines on unfertilized plots on both hard-bottom and peat-bottom bogs.

New Jersey Legend

The cranberry has produced many legends—here is one from New Jersey:

It seems that thousands of years ago the aborigines of New Jersey and the Great Spirit knew each other better than our people of today. The Great Spirit would appear and converse with the wise men of the tribes.

This was long before they knew of the white man's God. The warriors believed that bravery, truth,

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New bogs under four acres can receive this protection for under a thousand dollars total. New Bogs five to ten acres would run under sixteen hundred dollars—pumpers included.

This is not an expense but an investment, as you have the equipment to move to other new bogs, to transfer to other builders of new bogs, or to use as a foundation for complete frost protection and irrigation system after first two seasons.

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honesty and charity were passports to the Happy Hunting Grounds. They believed that the Great Spirit was personally interested in their welfare.

Mighty beasts then roamed the forests of New Jersey, and the Great Spirit gave them the mastodon for their beast of burden. Now the mastodon was a huge beast, fierce and invincible, and his skin so strong and hard that it was not pierced by the sharpest spears or arrows. Being a king of beasts in size and strength, he rebelled at being a beast of burden, resented the indignity, and insisted that the other animals share the work.

The other beasts refused, and that meant war. The mastodons gathered from near and far, as did the other animals. The scene of the conflict came in what is now the three counties of Atlantic, Burlington, and Ocean. The slaughter was terrific. The sky darkened, the stars wept at the crash of the battle. The earth shook, and the roar was heard in adjoining regions like the shock of an earthquake.

Blood flowed. It seemed that the mastodons would be victorious. Then the Great Spirit descended to the top of a hill and became angry with the discontented mastodons and hurled great bolts of lightning at them until all were

killed except one large bull which managed to escape from the carnage. He fled to the northwest, swam the Great Lakes, and lived in the far north until the White Man came there.

The great mastodons and the

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CP-1	5/16	30.00	145	162
		32.30	150	168
		34.50	155	173
		36.80	160	178
		37.50	165	182



Controlled Power Sprinkler



Long Range Utility Sprinkler

Catalog No.	Main Nozzle Size	Lbs. Pressure at Sprinkler	G.P.M.	Diam. of Coverage	Diam. of Uniform Coverage
LR-3 3" Inlet	1"	80	300	325	300
		90	320	330	305
		100	340	340	310

Other sizes available in both Sprinklers. Write.

weight of the lesser animals had churned the earth until it had become as a sponge, deep and unsightly—a bog. Later the Great Spirit, in a mood of mercy, covered it with a soft green blanket of vines and caused the vines to blossom and the red cranberry to fruit.

At least, so sayeth the legend of how cranberries came to grow in New Jersey. (Reprinted from Atlantic City Press).

First of Season's Twilight Meetings In Massachusetts

First twilight meetings for Cape Cod cranberry growers were held June 3 at the Experiment Station, East Wareham, and June 4 at the United Cape Cod Cranberry Company bog near Monponsett, conducted by J. T. Brown, director Plymouth County Extension Service. Discussion concerned current control methods for fireworm, cranberry weevils, false blossom, and fruit rot. Specimens of early spring weeds were on display.

Speaking at the Experiment Station were Dr. Chester Cross and Dr. H. J. Franklin. Speaking at Monponsett were "Joe" Kelley and Cranberry Specialist J. Richard Beattie. About 60 attended the

Experiment Station meeting and about 65 at Monponsett.

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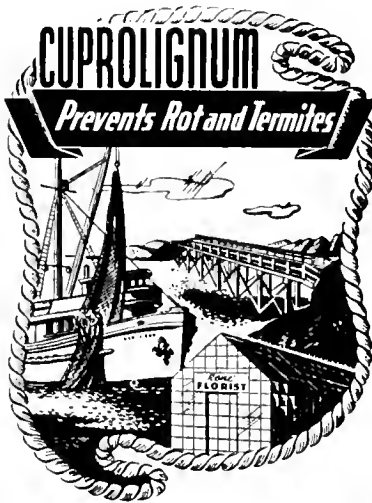
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A Letter from Germany

(From "Wisconsin Cranberry News",
publication of Wisconsin Cranberry
Sales Co.)

Appreciation for the radio programs broadcast over WFHR during the period that the German prisoners of war were stationed at the airport in Wisconsin Rapids was expressed in a letter received recently by the radio station

The letter was written by Hans Flessner for Aurich, Ostfriesland, and is dated April 1st. Besides appreciation for the radio programs, the writer also extended best regards to the cranberry marsh operators who employed the prisoners of war during the period of time they were in Wisconsin Rapids. It was typewritten.

The entire letter follows:

"Aurich, Ostfriesland, Leererlandstrasse, 24, 1 April, 1948.

Dear Sirs: You'll probably be surprised to get a letter from a German, but if I tell you that I am a former Prisoner of War from

the town-airport, Tri-City Airport, Wisconsin Rapids, you maybe understand why I wrote to you. I am back in Germany for about 1½ years, but as you know, life conditions are very bad in today's Germany. I always remember your town very well and I and my comrades, we liked it very much over there.

And now the question why I just write to you. Well, we had two small radios in our camp and after daywork and on holidays we used to listen to them. And most of the time we listened to WFHR, Wisconsin Rapids, because you always had such wonderful music and fine transcriptions on the air. We liked your station very much and when we travelled back by ship I promised them to write to you and express our thanks for the wonderful time we had through many days. If possible, please write sometimes.

Best regards to all our former employers in Cranmoor and around there.

Sincerely, Hans Flessner."

MASSACHUSETTS FROST WARNINGS

Massachusetts cranberry growers this spring are receiving frost warnings from eight distributing points. Only two attempts are made by the distributor to reach a grower. Supplementary radio warnings go out from Station WEEI, Boston at 2.29 p. m. and 8.59 p. m. daily when conditions warrant a forecast.

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SLAYER

(A Poem for cranberry growers)

I wake up in the morning,
I lift my battle cry,
I fall upon the foeman,
And smite them hip and thigh.

I slay my tens of thousands,
But still their ranks press on;
New legions rise against me—
New legions with the dawn.

A mighty man of valor,
A man of doughty deeds;
But I shall never conquer
My enemy—The WEEDS.
By Eliot Kays Stone
(Pennsylvania)

Public Relations Of Cape Growers' Association Meets

A meeting of the Public Relations Committee of the Cape Cod Cranberry Growers' Association of which W. H. Wyeth is chairman, was held at the Massachusetts Cranberry Experiment Station, East Wareham, June 5th. Three votes were taken.

One was that the committee recommend to the directors of the Association that the association assist in every way possible in the proposed "National Cranberry Week" observance to be held in early October in Massachusetts. This would be a non-brand observance which would promote the publicity of cranberries.

The second was that the committee recommend to the directors that a brief, historical pamphlet of the industry be published for distribution this summer, through summer hotels, drug stores, etc.

The third was that the committee recommend to the directors that a cranberry exhibition booth be set up at the Union meeting of Massachusetts agricultural associations at Worcester, Massachusetts, next January.

Cape Cranberry Growers' Clinics

Cape cranberry clinics are to be held at the New England Cranberry Sales Company screenhouse

at Barnstable June 9, 23, July 7 and 21 from 9 a. m. until 12 noon. These meetings are for growers of the Upper Cape.

For the Lower Cape growers the clinics will be at the National Cranberry Association screenhouse, North Harwich, June 2, 16, 30, July 14 and 28.

The afternoons will be devoted to bog visits by prior arrangement. Growers are urged to bring with them specimens, such as insects, weeds, cranberry vines, upon which they want discussion and advice.

These clinics are to be operated on a trial basis as scheduled, according to the announcement of Barnstable County Agent Bertram Tomlinson, and if it seems advisable to discontinue them growers will be notified.

NCA to Hold Its Annual Meeting, Hanson, June 29

The annual meeting of National Cranberry Association is to be held at the Hanson, Mass. plant June

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- 2** It covers the cranberry news in the various areas, month by month.
- 3** It prints biographical articles about individual growers and their cranberry properties.
- 4** It prints the latest news in mechanical developments.
- 5** It carries the advertising of those serving the industry.

TEAM WORK

By **TEAM WORK** the members of the New England Cranberry Sales Company, in conjunction with the other State Companies, have developed the business of marketing cranberries—have reduced its risks, and have gained advantages which **NO INDIVIDUAL** acting alone could possibly secure

The entire strength of the organization is directed toward **STABILIZING** the business of packing, shipping, and selling cranberries.

The market **ESTABLISHED** by the Selling Agents—the American Cranberry Exchange—secures for all members full value for their crops.

We are proud of the reputation of the American Cranberry Exchange—of the prestige and universal good will it enjoys with the trade, with the consumer, and with the grower. It is a valuable asset, earning dividends which every member shares.

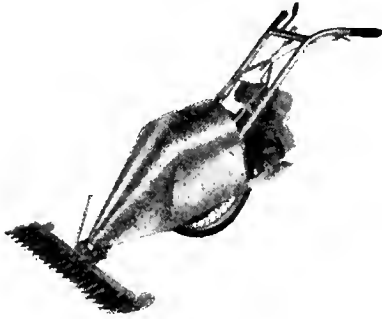
By becoming a member of the New England Cranberry Sales Company a grower safeguards his immediate interests and, what is much more important, helps stabilize his business.

New England Cranberry Sales Company

9 Station Street

Middleboro, Mass.

29. This will be an all-day meeting, as usual, with reports of the activities of the Co-op, and a luncheon at 12.30. All interested in cranberry growing are invited to attend, NCA announces.



JARI POWER SCYTHE

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Cranberry Growers Invited to Attend Insecticide Meet

This is being sponsored by the Massachusetts Tree Wardens and Foresters at "Edaville", South Carver, July 7.

The Massachusetts Tree Wardens and Foresters Association will hold its annual summer meeting at "Edaville", South Carver, Massachusetts, July 7.

The association issues an invitation to cranberry growers to join with its members, as the association feels no group is more familiar with the gypsy moth problem.

The day starts off with coffee, doughnuts and cheese at 9.30 a. m. There will be exhibits and demonstrations of every conceivable type of sprayer and duster, from hand type wheelbarrow, mist blower, turbine blowers, hydraulic sprayers, airplane sprayers and dusters, helicopters. The wind-up of the demonstration will be giant C-47 airplane, weighing 15 tons in itself, and capable of carrying just under 1,000 gallons of material. This "ship" will be furnished by the United States Department of Agriculture.

Also there will be demonstrations of the latest methods of weed control.

An old-fashioned clambake will be served at 1.30. Norman Holmes

will be bake-master. Reservations should be in not later than July. Tickets may be obtained from the committee in charge, which consists of V. Leslie Hebert, Westmouth, chairman, John F. Shield, Osterville; John Anderson, district moth superintendent, Jefferson Shores, Buzzards Bay, Antor Couto, Falmouth, John Kennedy, Plymouth, and A. Clayton Tucker, Buzzards Bay.

President Crawford of the Cape Cod Chamber of Commerce states that the Chamber heartily endorses the efforts of the tree wardens of the towns of Southeastern Massachusetts in being so prompt to adopt modern methods in attacking the gypsy moth situation.

Both NCA 'Copters Back in Service, Improved

The NCA helicopter received its first call for actual bog dusting on May 28. This was at the bog of William Mullens at Mashpee on the Cape, who had an infestation of fireworm. The two NCA helicopters had previously given service with DDT on uplands for gypsy moths.

Both 'copters have been remodeled during the winter with improved dust and spray equipment. Chief Pilot, as last year, is "Fred" Soule, and NCA requests that grower-members who wish 'copter service contact Soule, whose number is Wareham 1103.

Are We As "Modern" As We Think We Are?

Bertram Tomlinson, County Agent of Barnstable County, Massachusetts, has recently brought up an interesting item of information, through some correspondence of his with Gerard Chapman of Dennis, regarding this year's control charts. This is, that Mr. Gerard says he was advised 40 years ago that a double handle of salt in a bucket of water was a good spray for wild bean or "Indian Potato", as it was then called. Furthermore, he was told that kerosene was good for many spray pur-

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poses. Mr. Chapman tried out the salt with good results, but says he did not have the "nerve" to try a kerosene spray.

Mr. Chapman's advisor of 40 years ago was James A. Smalley, who after building bogs on the Cape became one of the first operators in the Wareham-Carver area. It would seem the late Mr. Smalley was considerably ahead of his day in chemical weed control experimentation.

However, some ten years after Mr. Smalley told him about using this, he was desperately in trouble with blackheaded fireworm and he turned to kerosene for help, putting two gallons in a barrel of water, with fish oil soap. He sprayed this on with a bucket pump and upon examination the vines showed that every worm was dead. He thought he had the solution to the blackhead, but the next year found he did not kill any by the same treatment. Mr. Chapman concludes that the first time he sprayed was exactly at just the right time to get a kill. Cranberry experimentation is nothing upon which the present day and age has had a monopoly.

OREGON NEWS

By Ethel M. Kranick

The chief topic of concern in the West in May was the weather. Intermittent rain and cold continued into the middle of May. Very lit-

tle growth was made by the cranberries until May, whereas usually the growth begins the first of April.

It is too early to make any estimate of crop. Up to this time, conditions have not been suitable for an above average crop.

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A New Marketing Group Is Formed In Wisconsin

A new cranberry marketing group has been formed in Wisconsin. The incorporators of the new enterprise are B. C. Brazeau of the Central Cranberry company, Richard S. Brazeau of the R. S. Brazeau company, G. A. Getzin of Getzin Cranberry company, and William F. Huffman of the Wm. F. Huffman Farms, Inc., all of Wisconsin Rapids.

The new corporation is capitalized for \$250,000 and all of the stock is held by the four individuals who are the incorporators. According to the articles of incorporation and bylaws, the corporation is set up to perform a large variety of services for its stockholder-growers. One of the fundamental purposes of the company is to handle the merchandising and selling of cranberries grown by the stockholders.

Officers Named

The officers of the new corporation are to be: B. C. Brazeau, president and general manager; G. A. Getzin, vice president; R. S. Brazeau, secretary; and William F. Huffman, treasurer. The officers are also the only directors of the company.

B. C. Brazeau, president, made the following statement about the new corporation: "Cranberry Growers, Inc., will engage in several important activities on behalf of its stockholders. One of its main objectives is to handle the sales of cranberries grown by its stockholders. This service also may be supplied to any of its grower-clients who engage the new organization to market its crop, even though the grower-client is not a stockholder in the new organization.

"Our institution is not a cooperative and is a straight business corporation."

Resign from Exchange

The incorporators of the new company were all formerly members of the Wisconsin Cranberry Sales company and the American Cranberry Exchange. They very recently resigned their member-

ships in both of those institutions. B. C. Brazeau, Huffman and Getzin were formerly directors of the American Cranberry Exchange. R. S. Brazeau was formerly a director of the Wisconsin Cranberry Sales company. They resigned these official positions at the time of their withdrawal of membership in the two cooperatives. Getzin is president of the Wisconsin Cran-

berry Growers Association, in which position he continues.

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Let's Look at the Record!

OVER a period of many years, Minot Food Packers, Inc., have fully cooperated with cranberry growers in their problems, and particularly as regards stabilizing the market with a "just price" for canned sauce.

WITH so much publicity as regards cut prices on the 1947 crop pack of canned sauce, even though we feel that it is not necessary to assure our growers, nevertheless we make public announcement that Minot Food Packers, Inc. have not reduced prices, nor did they offer any promises when quoting their prices on Minot brand and Conway's brand of Cranberry Sauce packed from 1947 crop berries or 1946 crop berries.

OUR policy, at all times, is that the growers should receive a "just price" for their cranberries and we, in turn, offer the canned product at a "just price" to the distributors.

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The Proof of A Sales Organization Is Its Returns to Patrons

As a Cape Codder once put it, "Cranberry raising is not merely a way of life, it is a way of making money." To all those interested in dollars and cents, the American Cranberry Exchange herewith presents its gross returns on cranberries sold on the fresh fruit market.

AVERAGE PRICE F. O. B. SHIPPING POINTS FOR CRANBERRIES SOLD ON THE FRESH MARKET

Massachusetts	\$26.63
New Jersey	26.25
Wisconsin	24.83
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Bandon, Oregon	27.65
Canada	28.06
AVERAGE	26.04

72.4% of the Exchange's sales were on the fresh market.

These returns were sent to the various state companies, less the Exchange's operating expense to March 31, of 3.603%, plus the advertising expense authorized by members—1.976%.

The American Cranberry Exchange was sold out on the fresh market the day before Thanksgiving, and left with orders on hand it could not fill.

The coming sales season is one in which every suitable berry should be sold fresh. The Exchange, which ended the past season with unfilled orders piled high, is well organized and prepared to handle any additional volume.

It has had 41 years of experience; and it has the EATMOR trademark, nationally advertised for 32 years.

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ROBERT S. HANDY, top Cape Grower
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Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE
Extension Cranberry Specialist



Massachusetts growers are still handicapped in their bog work because of the cold, wet season we have been experiencing up to the present time (June 28). Sunglasses and sun visors haven't been exactly standard equipment around the bogs this spring. Rubber boots, rain coats, and a change of clothing have been more in order. However, in spite of the weather, the bogs in general in Massachusetts look unusually well, and all indications point to a real bloom at the writing of this article.

Cranberry growers know only too well that there are a good many things that can happen between now and next September. Certain factors are beyond our control, but there are those that come within our jurisdiction. With this in mind, we offer the following suggestions for your consideration.

Growers hardly need to be reminded that this is a bad weed year, but new developments in weed control will help the situation considerably. Dr. C. E. Cross, our weed control expert, offers some very timely suggestions on this subject. He recommends the continued use of 2,4D to kill loosestrife, applying the material to the tip of the weed with a gloved hand moistened in the solution. Loosestrife is really plentiful and vigorous. Efforts to control it are definitely warranted. (1) To prevent the continued spread and build up for another season. (2) If we should have a good crop this year, this method of treating the tips of loosestrife with 2,4D gives it permanent kill. This advantage outweighs the crop injury involved.

Dr. Cross tells us that current tests indicate that 2,4D will not

kill grasses, rushes, and sedges when applied in the summer with a gloved hand moistened in the solution. Asters are misformed or contorted by this treatment and only rarely killed by it. Hardhack plants treated as for loosestrife look very sick a week after the application. Growers might well treat hardhack in the same manner and, at the same time, they are treating loosestrife with 2,4D.

Weather so far has favored the use of iron sulphate, but makes it practically impossible to use ferric sulphate without injury to cranberry vines. Dr. Cross suggests that during July iron sulphate work be continued to control long-leaved asters, haircap moss, white violets, and ferns. He suggests that those who have a flair for experimenting might try some Stoddard solvent applied through tubes or nozzles to the horizontal surface on areas infested with weeds. This oil should not be allowed to touch the new growth of cranberry vines at this time of year. If the oil is applied to the base of loosestrife, asters, small brambles, chokeberry, and various sedges, rushes, and grasses, it kills them very quickly. However, Dr. Cross wants it clearly understood that this treatment cannot at present be regarded as a definite recommendation, but states that recent tests are promising.

This brings us to the problem of summer insects, which again is a management factor within the grower's control. Dr. H. J. Franklin suggests that growers in Massachusetts consider seriously the blanket control treatment outlined in the 1948 Insect and Disease Control Chart. This refers to section "E" at the bottom of the chart. It states that dusting with 60 lbs. per acre of a 4% rotenone

dust about July 10 or possibly a few days later this particular season, is a good blanket control for the second brood of the black-headed fireworms, blunt-nosed leafhoppers and fruit worms. There is another blanket control not outlined on the chart, but worthy of the growers' consideration. Dr. Franklin refers to the use of 50 lbs. per acre of a 5% DDT dust which would be timed about July 10 or a few days later as outlined above. This treatment controls the second brood of black-headed fireworms, blunt-nosed leafhoppers, and gets about 50% of the fruit worms.

The interest in raising quality fruit is still very much in evidence, and rightly so. A reminder card was sent out in June to the growers by the county agents, stating that according to Dr. Franklin present prospects for storage quality was predicted as fair to good. This prediction was made after careful study of weather conditions up to the present time. However, bogs generally producing berries of poor keeping quality should be sprayed with fermate, according to Dr. H. F. Bergman, who has done considerable research on cranberry fruit worms. Growers were advised to make their first application when the buds were just ready to open. The time for the second application of fermate is nearly at hand or, in other words, when the vines are three-fourths out of bloom. Dr. Bergman recommends the application of 2 lbs. of fermate per hundred gallons of water, using 250-300 gallons per acre for the second treatment.

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THE NATIONAL CRANBERRY MAGAZINE

Issue of July, 1948--Vol. 13, No. 3

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

The bogs look "surprisingly" good in prospect as June ended. There is a heavy podding. On July first a third of early drawn bog was in bloom. Frost damage has been slight.

Rainfall for the month of June was 4.18 inches.

There has been very little insect damage to date.

Some hail fell in the Wareham-Buzzards Bay area on the afternoon of June 6th, but Dr. Franklin estimates there was no damage. This occurred during a severe thunderstorm, with a "cloudburst" of rain. At the time many bogs were getting into full bloom, this being true quite generally in Massachusetts.

It is felt the heavy rainfalls have done no harm, and there is now a general feeling of optimism for a good crop.

WISCONSIN

On the night of June 5 and the morning of June 6, there was serious frost damage. The damage is estimated by D. C. Hammond, Jr., manager of Wisconsin Cranberry Sales Company, as eight to ten per cent.

As of the end of June there were blossoms, and full bloom was expected by the first few days of July, which is about normal.

Hail damage has been quite serious in various sections of Mather and Warrens, both heavy producing areas.

There is a lot of winter injury which is showing up insofar as the fruit buds are concerned. They have been hit and are not producing fruit.

The water situation (as of end of June) was very critical. Approximately 50 per cent of the

NEW JERSEY

Temperature. June temperatures through the 23rd were way below normal and sunshine was getting to be just a memory. Summer temperatures arrived, however, on the 24th and did their best to make up for the deficiency chalked up earlier in the month. The normal daily mean temperature for June at Pemberton is 71°, while this year through the 29th it was 68.9° or 2.1° below normal.

Precipitation. With the superabundance of cloudy, wet weather one would expect an excess of rainfall, but the shower activity was somewhat deficient in the quantity it left, in spite of its frequency. Normal June rainfall at Pemberton is 4.63 inches, while through the 29th 3.36 inches fell, or 1.27 inches below normal.

Frosts. Frost warnings were sent out from the Weather Bureau on the nights of June 9, 16, 17, and 20. None of these nights proved to be dangerous. On June 5 a frost sneaked up, however, and temperatures as low as 28° were reported at some places on the morning of the 6th. Some tip injury was reported and one bog held till May 20th was reported to be badly hurt. Generally, however, damage from the frost seems to be slight.

Cranberry Bloom. Cranberry bloom looks very good this year. Weather for pollination, however, was very poor during the first three-quarters of the month, so that some of the early bloom may

not set too well. Ideal pollination weather at the end of the month has brightened the prospects considerably.

Blueberry Crop. Blueberry crop prospects at the end of June looked to be about two-thirds of the record crop of 1947. Most of this reduction is traceable to winter injury, but mummy berry and plum-eurolio injury have been quite destructive in some fields. Poor pollination weather during bloom is hard to reckon, but is no doubt another factor in the reduced crop prospects.

Harvesting of early varieties started generally during the week of June 21-28.

A Veteran Pilot Dies in Mass. as He Practiced Dusting

Joseph Messina, president of the Cape and Islands Airways, Wareham, Massachusetts, and a veteran pilot with thousands of hours of flying time to his credit, met instant death June 16, when a small plane he was flying crashed at the airport. He had been practicing technique for dusting cranberry bogs when the accident occurred.

Messina, who was 33, had been a pilot since he was 16, and held commercial and instructor's licenses. During the war he served with the Ferry Command and saw service in the Aleutians, Behring Sea, and China. He held the rank of major in the Army Air Force.

The Cape & Islands is continuing service to Massachusetts cranberry growers during the insect season.

Robert S. Handy, One of the Best Growers in Massachusetts, Says Answer to Success is "Work"

He was Recently Elected President of Upper Cape Cod Club and is a Director of NCA.

by CLARENCE J. HALL

Recognized as one of the better cranberry growers of Massachusetts is Robert S. Handy of Cataumet, Cape Cod, who in April was elected president of the Upper Cape Cod Cranberry Club. He operates about 40 acres of bog in the Cataumet area and adjacent North Falmouth. On these forty acres his average production is about 60 barrels to the acre. He has hit 90 to the acre.

That is good production in Massachusetts in anybody's language. Yet Mr. Handy's recipe as to how he does it is extremely simple. His answer is "work, good clean bog." By work he means proper care of the bog the year around. For one thing, he says: "You don't go dancing on frost nights, or vacationing in the worm season."

Mr. Handy is a third generation cranberry grower. His father was Henry Handy and his grandfather, Joshua, both of whom put in a few acres of bog, the latter putting in two acres near the "Old Homestead", 80 or more years ago. This bog is now owned by Mr. Handy's brother, Hermon, and is still a good producer. Mr. Handy's son, Arthur, now of Pocasset, which is but a few miles from Cataumet, is also becoming a cranberry grower.

Arthur, whom his father expects to gradually take over the management of his bogs, is a graduate of Dartmouth, where he majored in botany. Incidentally, Mr. Handy, himself, spent one year at Massachusetts State College, now the University of Massachusetts, but came home to assist his father.

A Real Cape Codder

To go back a little further into the antecedents of Mr. Handy, his immigrant ancestor, Richard Handy, came to the Cape and settled at Sandwich in 1664 as one of the original grantees. The township of Bourne, of which Cataumet, formerly called South Pocasset, was a part, was originally in Sandwich.

With this background, there is no question that Mr. Handy is a Cape Codder. Some Cape Codders can be garrulous; others the opposite. Mr. Handy is of the latter type. Your reporter, sitting in the neat parlor of his spacious home, which outside is painted "New England" red, with a big barn of

the same color behind it, found it a rather difficult matter to get much information. Not that Mr. Handy is not gracious, but simply that he is a man of few words.

To get back to his cranberry work. He has learned the business the hard way. He has wheeled sand, pulled weeds (he is still rather in favor of hand weeding, although he says chemicals are finding a place) and flowed his properties on frost nights. He has always been a man of nature at heart. He drove barges (a barge in old Cape Cod terminology being an open wagon, pulled by several horses). These barges met the railroad trains at the station and carried passengers to their destination. For 25 years he conducted an ice, market gardening, and poultry business. He built the 18-hole Pocasset Golf Course, in the years 1914-18. All of these activities are of the sort which would tend to keep a man out in the open and more or less close to Nature.

His first venture in bog building was in partnership with his father when they drained a 20-acre shallow pond. Their share in the area was six acres, but in later years six more acres were acquired. The bottom of this pond is deep peat and the bog has made a good production record. Other areas of bog property have been acquired from time to time, the latest purchase being the Miller bogs in the town of Falmouth, part of which were old plantings, already in production

when the Cape railroad was built in 1872.

Adopts Modern "Too's"

A believer in the old-fashioned theory of hard work, Mr. Handy nevertheless adopts the modern "tools" to better cranberry growing, as they come along. He is making use of the helicopter in his insect control program, which forty years ago when growers were using hand-spray pumps would have been called a fairy drench. He has sprinkler systems on two bogs and hopes to put in more. He likes sprinklers, particularly for irrigation, and also recognizes their value in frost protection.

Hobby—Gardening

Asked if he had any hobbies, Mr. Handy said he "guessed not." Then on second thought he said his hobby might be put down as growing flowers and shrubs about his place. A glance around the grounds showed this to be no idle boast. On the day of the interview he had a beautiful display of spring bulb flowers backed with flowering shrubs, evergreens and maple trees. His flower garden are so planned that he has bloom from early spring to late fall.

Another hobby which he enjoys is his membership in the "Tide Club", which meets monthly in the vestry of the Methodist church at Sagamore. The membership of this organization is limited to 30. It is a social group, often entertained by interesting speakers. The most distinguished member of the club is the Honorable "Joe" Martin, Speaker of the House of Representatives, United States Congress. Mr. Handy has long been a member of the Cape Cod Cranberry Growers' Association and is faithful in attendance at its meetings.

In marketing affiliations he is a member of National Cranberry Association, which he joined ten years ago. He is now in favor of a union between the two major co-ops, NCA and American Cranberry Exchange and Independent packers, marketing under nationally-established brands, well advertised. At least he wants harmonious relations within the industry, that growers may devote their attention to the growing of quality berries

and the entire crop be marketed under favorable conditions.

NCA Director

On June 29 Mr. Handy was re-elected to another term as a director of NCA.

In September, 1917, Robert Handy married Mary Carleton of East Sandwich, daughter of John F. Carleton, who was a cranberry grower and for many years a director of the New England Cranberry Sales Company. The Handys have three sons and three daughters. All but the youngest have been to college, each choosing a different one. The youngest is entering college this fall.

SCOOPS and SCREENINGS

Perhaps the most distant visitors to the National Cranberry Association at Hanson, Massachusetts, were Mr. and Mrs. Leonard Morris and daughter "Pat" from the Long Beach, Washington area and Einar Waara of Grayland, Washington.

"Bob" Kornfeld, editor of "Cranberry World", and Mrs. Kornfeld left the first of July for a visit with her parents in New Orleans.

Patients in rural hospitals in England will have the chance to

taste Cape Cod cranberries. Thirteen U. S. 4-H club members, part of an International Farm Youth program, will present the cranberries, gift of the Cape Cod Cranberry Growers' Association, to the English hospitals.

VERNON GOLDSWORTHY

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*Complete Marsh Management
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A SPECIALTY

As we open a new chapter in our unparalleled record of continuous business activity, may we assure you that the principles which have made this record possible will be maintained.

GOOD QUALITY—All materials—excellent workmanship.

SUPERIOR FRIENDLY SERVICE—Any hour, any day, in any quantity, anywhere.

REASONABLE PRICES—In spite of increased manufacturing costs your cranberry box is still listed at the 1947 price.

ORDER YOUR CRANBERRY BOXES WHERE YOU'LL GET
A GREATER RETURN FOR YOUR CONTAINER DOLLAR.

ORDER EARLY

MANY say the cranberry industry is in trouble—that is from the accumulation of berries left over from previous crops and not yet consumed. The strange part is that few seem really worried that the industry will not survive.

This was in strong evidence at the annual meeting of the National Cranberry Association meeting at Hanson, Massachusetts, June 29. It is evident in many other quarters as well, among those who belong to the American Cranberry Exchange and independents.

There is much bafflement among growers and they shake their heads in bewilderment. But then they say we have strength in our industry and a way out of the wilderness will be found. There are cross-fires and undercurrents. Yet when growers get together they find something constructive to say. They discuss and pass along information about insect or weed control, sprinkler systems or prefabricated flumes.

One of the most constructive ideas we know of and which should benefit cranberry growers in general is the plan of the Cape Cod Cranberry Growers' Association to publish and give away this summer 100,000 little four-page pamphlets upon the cranberry industry. These will be distributed in many places on Cape Cod, summer hotels, drugstores, etc. They will be, presumably, read by many people and the thought of eating cranberries will be placed in their minds.

These people will remember they were in the heart of the cranberry industry—that they saw cranberry bogs. They will have gained a little information from this folder as to what a cranberry bog, vine, and berry is.

This pamphlet, put out by the Growers' Association, is the product of cranberry growers, not of those belonging to one co-op or the other, or independents alone.

There are increased budgets this year for national advertising of cranberries. This is also good.

TO get upon another subject. This year in Massachusetts there are few insects. The air program with the planes and the 'copters is not finding much to do. Nature for some reason decided not to have a heavy infestation,

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CHARLES A. DOEHLERT,
New Jersey Cranberry and Blueberry Station
Pemberton, New Jersey

THE GI training period is ending. The industry must have been benefited by the young blood which this program brought in.

New Jersey Planter—Right

Many New Jersey growers are fortunate enough to own an Oliver Cletrac which is quite adaptable for vine planting. Harold Haines of the Growers Cranberry Company found himself among those growers who didn't have an Oliver but a Ford tractor. By removing the shovel section from his hydraulically-operated shovel and attaching his planter in its place the Ford tractor became as good a planter as the Oliver Cletrac.

Mr. Haines used nine 20-inch discs mounted at 6 inch intervals on a 16x72 inch rod as his planter attachment and it can be attached and removed quite easily.



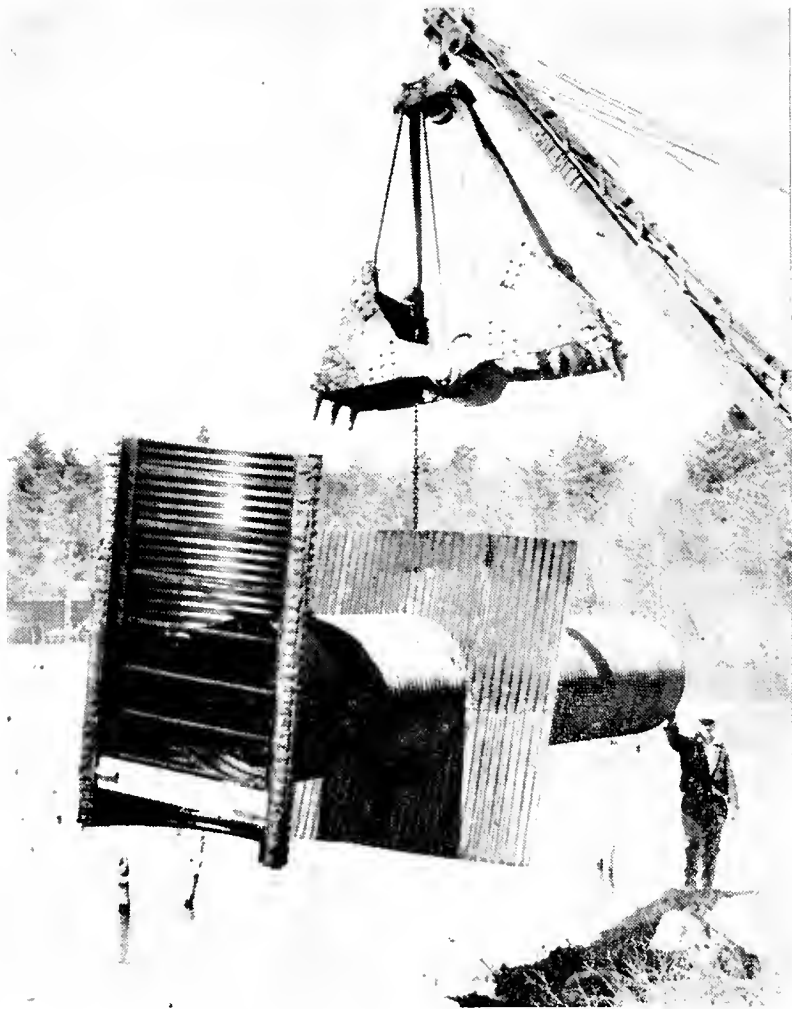


Photo by EARLE BOARDWAY

THE ONE THAT GOT AWAY

You seldom get to see a picture of the one that got away, but Roger Weston of Weston Bros., Carver, swears this is it. You see, just before this picture was snapped, Roger was swinging this Trufant flume into position to land it, when the leader broke. The flume got away and dropped eight feet into the reservoir. Roger hooked it again (at least he thinks it is the same one) and again had everything under control, as you see here.

Cultivated Thought

"No other human occupation opens so wide a field for the profitable and agreeable combination of labor with cultivated thought as agriculture. Every blade of grass is a study; and to produce two where there was but one is both a profit and a pleasure. The thought recurs that education—cultivated thought—can best be combined with agricultural labor, or any labor, on the principle of thorough work, and ere long the most valuable of all arts will be the art of deriving a comfortable subsistence from the smallest area of soil."—Abraham Lincoln.

"Cranberry Center" of New Jersey Gets an Air DDT Dusting

The entire community around the cranberry center of New Jersey—Pemberton—was dusted with DDT recently to eliminate the nuisance of mosquitoes and flies. The flying service was furnished free, with the borough of Pemberton paying for the material used, which was furnished at cost. Five blasts of the fire siren were sounded a few minutes before the application to give residents time to close their windows.

WISCONSIN VINE PLANTER

Photo shows the way Vernon Goldsworthy plants vines in Wisconsin. The machine is used on properties he is developing, or managing. Also by Tony Jonjak, the latter being the one chiefly responsible for the development of the settler. "Goldy" has planted more than 75 acres with it this past Spring.

The operating method is that vines are merely planted over new peat, at the rate of about a ton to an acre. The machine is rolled over them once each way, and it is reported as doing a fine job. Three men scatter the vines, there is one on the machine rolling the vines in, and one hauling vines. The planter with this crew will do about three acres a day. The soil must be very wet and sloppy to do a good job.

The tractor used comes equipped with a six or eight inch track. Wooden pads are added to the track. The tractor weighs about 3000 lbs. and will go where a man cannot walk.

Jersey Sprinkler is Being Used to Even Temperature on Bog

Rogers Brick of New Jersey has installed a portable sprinkler system for irrigation, but more espec-

ially to overcome an unfortunate "air-pocket", which makes one section of his bogs colder or hotter than the rest of his property.

Rogers feels pollination is retarded by too much heat or cold and trying to stabilize the temperature.

Clipping Machines

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Excellent Detailed Workmanship Throughout

Immediate delivery on a few models
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Write

Central Cranberry Co.

Wisconsin Rapids, Wisconsin

Marcus L. Urann Is Re-elected President of National Cranberry

About 350 Attend Annual Meeting at Hanson, Mass., on June 29.

The annual meeting of the National Cranberry Association was held at the main plant, Hanson, Massachusetts, June 29. About 350 were present, and President Marcus L. Urann presided.

Officers elected were:

President, Marcus L. Urann of Hanson; secretary and treasurer, John C. Makepeace of Wareham; assistant treasurer, John F. Harriott of Hanson; first vice-president, Carl B. Urann of Middleboro; second vice-president, Joseph W. Darlington of Whitesbog, N. J.; third vice-president, Charles L. Lewis of Shell Lake, Wis.; vice-president in charge of sales, H. Gordon Mann of Hanson; vice-president in charge of fresh cranberries, Russell Makepeace of Wareham; vice-president of the Western division, Marcus M. Havey of North Chicago, Ill.; vice-president of the Pacific division, W. S. Jacobson of Markham, Wash.

The Board also appointed for another term the present Executive Committee of the Association, consisting of Marcus Urann, Ellis D. Atwood, Mr. Harrison, Mr. Lewis, and John Makepeace.

President Urann's address is quoted in part. He said:

"Fellow Members:

"We meet today under new and strange conditions. There are world confusion, national disturbances, labor unrest, high cost of living, high taxes, and our people fearful of the future. With all of this doubt and fear around us, we must expect some growers will have the jitters.

"There are the conditions which have harassed other businesses, and which we have escaped up to this time, but which now have caught up with the cranberry industry because enough of us have not cooperated to assure an orderly market. With growers rocked to sleep by years of plenty and forgetting of economic fundamentals of our industry, such a situation as we now have is not unexpected. For 18 years I have written and

talked grower command of the market, and have tried to warn the growers what would follow the lack of grower control of surplus crops. It is this surplus and the lack of control of it that breaks a market.

"From 1930 when Cranberry Canners was organized, until 1945, the two cooperatives worked closely together with favorable results. But consumer habits have changed. There is a growing trend toward ready-to-serve foods. Sellers of fresh cranberries trying to get very high prices have stimulated this trend from fresh cranberries to canned cranberries. The proper course then was, and still is, to allocate the crop between fresh and canned so as to keep both markets sound.

"From the very beginning in 1912, we have always maintained that the objective of processing cranberries is to provide a market for tender and surplus berries, to support a fresh cranberry market by finding a new outlet for surplus berries, and to extend the demand for cranberries by providing a ready-to-serve sauce for those people who will not take the time to cook fresh cranberries; and, at the same time, develop and extend the demand for cranberry sauce in both time and distance to assure the sale of increasing crops. We must recognize and supply changing consumer habits and demand, or we will lose the market we now have for cranberries.

"We tried in many ways to arouse growers to consumer changes, and to compose these differences between the two cooperatives to prevent competition developing between fresh and canned outlets. In 1943 we offered to divide the berries of the two cooperatives so that the Exchange would have 60% of the crop and the processing would have 40%, and the National would not enter the fresh cranberry market, but leave it entirely to the Eatmor Brand. That was refused.

"In 1945 we offered to exchange barrel for barrel with the Exchange, giving them a barrel of the very best of berries to be sold

fresh in exchange for a barrel of their tender or surplus berries to be canned, and again we would not sell cranberries fresh. That, too, was refused.

"All the time the crops were increasing and all the time the quantity of berries sold fresh was diminishing. In the 1920's, over 600,000 barrels were sold fresh, this year less than half that amount with a 784,700 barrel crop.

"In 1946 there were 6,000,000 cases of cranberry sauce packed by all canners. The normal demand was 4,500,000 cases, but these thirty-odd canners who entered the canning field for cranberries and the growers who supplied them, over-estimated the demand for canned cranberries. They did nothing to extend the sales, but just attempted to stand under the umbrella of the National Cranberry Association and horn in on a business which they reasoned offered a chance to make some easy money.

"Up to that time, growers and independent canners thought there was nothing to do but can cranberry sauce, pass it out, and collect the money. All growers and all canners have had a very rude awakening. In selling so many berries to independent canners there can be no grower control over prices or sales policy. Such an agreement is contrary to law. Therefore, the industry finds itself today with somewhere from 350,000 to 400,000 barrels of berries in freezers or in cans between us and the consumer. Anything over 50,000 barrels at this season of the year in the hands of growers or canners is a surplus.

"We had a situation similar to this in 1937 when there was a surplus of something like 200,000 barrels on a 977,000 barrel crop, but in that year the berries were in the hands of the growers who put them in freezers and sold them over the following three years in such a way as not to disturb the market for fresh cranberries. But in 1948, many of the berries are in the hands of independent canners and dealers who care nothing about orderly marketing or grow-

er profit, hence they are not selling, and we have a surplus to plague all growers.

Some of this is poor cranberry sauce which hurts the consumption of all cranberries, both fresh and canned. Some brands today are selling as low as 90c a dozen, as against our price of \$2.00 a dozen, and which price we have maintained from the day we opened our price in August, 1947. The retail price of Ocean Spray Cranberry Sauce is from 19c to 23c throughout the country today, and is selling at that price because of the years of advertising and good will we have built among consumers. Cranberry sauce packed by independent canners is selling as low as 10c a can.

"In the sale of many other agricultural products, the price that can be obtained on the fresh market is based on the price which the canner pays for his processed supply. For instance, apple growers first offer their fruit to the canner. They get the price he is willing to pay for apples to be canned; then the price for fresh apples is based on the price the canner is willing to pay. Observe a large percentage of the apple crop is eaten out of the hand, therefore they will enjoy a more active demand, a large demand, and a quicker sale than you will have for cranberries which have to be cooked either at home or in the factory. But the sale of apples has been growing less for years.

"Again it has been reported that the greatest competition that the fresh cranberries have is the low price of canned cranberries. That is true and will be increasingly destructive unless both the fresh market and the canned market is dominated by the grower and he allocates the berries to the fresh and the canned on a consumer demand basis, and sales promoted to increase the consumer demand for both.

"If the low prices brought about by the competition between independent canners to sell their canned sauce continues, their cranberry sauce will continue to be offered at 10c a can, and if fresh cranberries must be sold at a

price to compete with 10c cranberry sauce, you will have a very low price for your fresh cranberries. The answer is for enough growers to put their canning berries in their own cooperative processing plant to assure an orderly market, to supply consumers a good sauce at a reasonable price, and to carry on an aggressive sales program.

"NCA has a capacity of 600,000 barrels. You must have the factories ready to process any surplus at any time, regardless of quantity or condition, in order to safeguard and protect the market for your cranberries.

"If you are looking for the bad, there is plenty of it. The sales of fresh cranberries have been going down for years; increasing crops; more severe competition for the consumer's dollar; less money to spend; and all kinds of ideas and panaceas being offered which never have and never will work. Growers hesitate when the complete remedy is plain and within their own reach.

"Too often men are influenced by fear and imagination, but let us cranberry men be made of sterner stuff, let us remember that we have good times and bad, but properly managed the cranberry grower can always make a reasonable profit. Count your blessings, consider your assets, marshal your forces.

"The National Cranberry Association has 1,200 odd members. These growers are united to sustain this market and make the cranberry industry what we set out to make it years ago, a strong and profitable investment, but a few growers can destroy what many are trying to build. We are producing a food, and have a moral responsibility to consumers. Our Ocean Spray brand is in over 90% of the retail stores in the United States. We have maintained a \$2.00 price and have sold 350,000 cases since January. In the face of the 10c retail price of independent packed sauce.

"We have built and improved our factories until today we can process 600,000 barrels of berries. We have freezers for more than 100,000 barrels. We have a de-

mand for our product every day in the year throughout the whole United States, which demand is growing. We have put over successful advertising campaigns, and have found new uses for cranberries.

"We have an Executive Committee to fix cooperative policies. We have developed the processing end of our business in factory and in market until we are prepared, if grower managed, to handle any quantity that increasing crops require.

"We have watched with increasing concern the gradually declining and the continuous falling off of the sale of fresh cranberries. We have waited for several years hoping that some arrangement would be made by which all fresh cranberries would be sold under the Eatmor brand and the processed cranberries under the Ocean Spray brand. There are in the two cooperatives nearly 80% of this crop, and the growers have it within their power to have an orderly distribution and a marketing situation where they can be of great service to the consumer who is our one and only consumer, and at the same time, as the laborer is worthy of his hire, we have the means and the right to assure the cranberry grower a legitimate profit every year to intrigue him to continue to assure a supply of cranberries.

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Phone COVENTRY 2982

"As a part of the marketing program, we must have more cranberries sold fresh. We want two ways to sell our crops. After waiting these years in vain for the two cooperatives to unite and have one strong, rugged cooperative, we have decided that we must get behind the fresh market and build it back again to the sale of 500,000 or 600,000 barrels fresh. In 1946 we felt out the market with 30,000 barrels. In 1947 we felt it cut a little more with 52,000 barrels. Now we have organized a Fresh Cranberry Department and placed a thoroughly able man at the head of it, Russell Makepeace. Our Board has allocated 200,000 barrels to be sold fresh this year.

"In marketing we must take into consideration the future with a 10-year program, for these temporary and unfavorable conditions will soon pass away, and you again will have, if properly handled, a demand in excess of the supply. Therefore, the burden and the responsibility of the proper allocation of the crop between the two ways of selling will be before our growers, and we must not repeat the jealousies, the selfishness, the lack of intelligence in proper distribution of the crop to the great advantage of the industry and every grower in it.

"It is admitted that Ocean Spray is the canned cranberry sauce of great preference throughout the United States, and it is generally

admitted that any other brand has the greatest difficulty to enter the field. We have 5,700 buyers who are sold to the idea of Ocean Spray for canned goods.

"Because we left the sale of fresh cranberries to the Exchange, it has been heralded from the house-tops for years that we are opposed to the sale of fresh cranberries and interested only in the sale of canned goods. Now we sell fresh cranberries and these dealers in fresh cranberries realize they misjudged us and are happy to realize that we are working with them as well as with the buyers of canned goods.

"The cranberry industry is safer and better today than it ever has been. True, there have been offshoots of too high prices for our products, and too high prices for bogs, but those are only the accidents that occur when growers fail to realize their responsibility through a progressive cooperative.

"We may have to battle with these low prices this year, but let us pay no attention to passion, avarice, or false propaganda, but keep our minds and hearts solidly on service to the members of the National Cranberry Association, and as long as they stand together and more growers continue to join with us, we can look forward to greater advantages to ourselves and serving consumers a better sauce, and gradually lower prices because of greater volume.

"On September 1, we should have the equivalent of 2,000,000 cases of sauce. If a normal crop, we may expect 400,000 barrels. This is allocated 200,000 to be sold fresh and 200,000 to be canned, or a total pack this year of 4,000,000 cases. We should carry over in 1949, 500,000 cases to be sold from January 1 to August 31, leaving 3,500,000 cases to be sold up to December 31, 1948.

"The factory cost of producing this sauce should be less than in 1947. The sale price will of necessity be influenced by the price of this surplus of independent sauce carried over from 1946 and 1947. We should this year help others sell this surplus so as to prevent a pyramiding carry-over.

"We look to this year and the future with confidence. The door is always open for the Exchange to cooperate with us. At their invitation, we this year appointed a committee to work with a committee appointed by the Exchange to determine if some plan of mutual collaboration is legally and economically possible.

"In the meantime, there is no objection to members of the Exchange to join NCA with their processing berries, the orderly packing and marketing of which is the sure road to an orderly market for both fresh and canned cranberries."

At the close of his speech, Mr. Urann asked all members to arise

Summer Suggestions:

SEPARATORS AND CARRIER EQUIPMENT

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ENGINES—Briggs & Stratton, 2-5 HP.

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HAYDEN SEPARATOR MANUFACTURING CO.

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WAREHAM 497-W

in respect to the memory of Frank Clements, a grower and employee of National Cranberry Association, who recently passed away.

The treasurer's report was read by J. C. Makepeace. Carl Miller explained the financial report. John M. Quarles, attorney for the corporation, spoke upon the banking relations.

A delicious lobster salad lunch was served.

In the afternoon, Gordon Mann, sales manager, "Andy" Anderston, Mid-West sales representative, Charles L. Lewis, Miss Ellen Stillman, director of publicity, and others spoke.

Wisconsin's NCA Unit Has New Building at Wisconsin Rapids

Wisconsin cranberry growers who are members of the Midwest Cranberry Co-op (NCA) have set up quarters in their new building at Wisconsin Rapids. Cornerstone of the structure was laid May 25.

In the cornerstone was a sealed box which contained articles of interest to future generations of cranberry growers. These included the Articles of Incorporation and by-laws of the Midwest, list of members and officers, and a short history of the Co-op.

The new building contains a directors' meeting room, store room and three offices which are to be occupied by Leo Sorenson, manager of the cooperative, Henry Bain, Wisconsin Cranberry Specialist, and a cranberry growers' frost warning service. Also included in the building is a laboratory with greenhouse attached in which Mr. Bain and Sorenson are at work in research on cranberry growing. The new building will give Wisconsin NCA members for the first time a center for their activities.

President M. L. Urann delivered

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For growers who know their growing.

Three Straight-Wing
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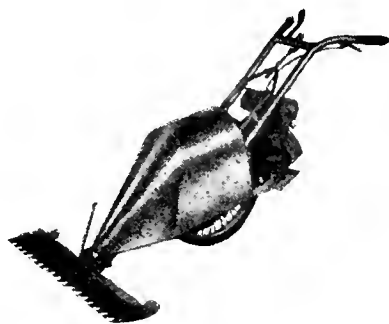
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a brief dedicatory address before the 50 growers gathered for the event, and Midwest President Henry F. Duckert read the honor roll of members.



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WEST NEWTON 65, MASS.

"Giant" Insect Control Program In Massachusetts

This Was at the "Edaville" Property of E. D. Atwood, So. Carver—Staged by the Massachusetts Fire Wardens and Foresters Association, Cranberry Growers Were Specially Invited—Feature Was a Huge C-47 Airplane Spraying Demonstration.

More than 500, including many cranberry growers, witnessed a demonstration of spraying and dusting of unusual magnitude at the "Edaville" property of Ellis D. Atwood at South Carver, Mass., July 7. This exhibition was put on by the Massachusetts Tree Wardens and Foresters Association at its annual meeting, and the growers attended by invitation, as announced in CRANBERRIES last month.

The feature of the day for the cranberry men was probably the demonstration of the huge C-47 airplane provided by the United States Department of Agriculture. This ship weighed in itself 1500 pounds and was capable of carrying just under 1,000 pounds of material.

There were three helicopters and various types of ground blowers. There were exhibits of insecticide materials.

A feature of great interest to the wardens and foresters was the Edaville Railroad, which made a number of trips around the five-mile track system circling the Atwood bogs. This 2-foot gauge railroad was distinctly a novelty to many of the men, as was also the railroad station and the mammoth Atwood screenhouse.

An old-fashioned clambake was put on at noon, bakemaster being Norman Holmes of Carver, who is an expert at this art. Three hundred and fifty sat down to the bake, which included everything, lobster and all, which go with this unique type of "feed."

The committee in charge included one cranberry man, John F. Shields of Osterville.

Mass. Cultivated Blue Crop to be Less than Normal

Troubles During the Winter and the Excessive Rainfall of Recent Weeks has Held the Crop Back.—Picking May Start July 20th.

The growers of cultivated blueberries in Southeastern Massachusetts expect a lighter crop than last year, and, in fact, a lighter crop than normal. The berries on July 9 were still light in color. Picking usually starts from July 15th to the 20th, but this year picking will probably not start before the latter date.

The past winter was rather tough on the blues and much rain

has held back the set of the fruit. The rain was probably more responsible, however, than the winter troubles.

New Jersey also has about one-third less production than normal. With this shortage in Massachusetts and the shortage in Jersey,

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If you are buying or selling Cranberry Property it will pay you to see us.	
A number of properties available, more wanted.	

Cranberry Growers

Please do not wait until the hole is dug to order your flumes. Prefabricated means we build them for you, you just install them. Give us time to do your work.

Flumes—Prefabricated

Sliding Gate Reservoir Flumes—the kind that let you sleep on frosty nights.

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With Armco Pipe

Long Lengths—few joints—easy to handle.

Galvanized, asbestos bonded, completely coated, with a paved bottom to take the wear.

And No Spiling

Instead, on short pipes, reservoir flumes, or where eels and muskrats are bad, use a corrugated-iron seepwall collar, extending two feet above, below, and both sides of pipe.

Assembled in a few hours

Excavating and backfilling your chief problem.

No Settlement

Except as the whole dike settles, even on the softest bottom.

R. A. TRUFANT — Hydraulic Consultant

Tel. Carver 64-11 - Bog Railroads For Sale or Rent - North Carver, Mass.

Massachusetts growers were hoping for a satisfactory price. It was anticipated there would be no difficulty in obtaining pickers.

A meeting of the Southeastern Massachusetts Blueberry Growers' Association is set for July 13, at the plantation of Ernest Maxim in Middleboro, when it is expected a more definite picture of prospects would be obtained.

An Old Letter

The writer was Josiah Freeman of Orleans, Massachusetts, probably the first grower in that Cape Cod town.)

Dear Sir:

I received yours of the 8th instant and will proceed to answer your questions:

"On what location do you prefer to plant vines?"

I consider them rather a marine plant and therefore should prefer to plant them as near salt water as possible and not have them overflowed with salt water.

"What soil do you prefer?"

A wet, sandy soil, the whiter the sand, the better. My reasons are,

there will be less grass to grow to choke the cranberry vine and the berry will grow larger.

"What is your method of setting cut—in hills or in drills?"

I have set them in hills and in

drills, and am not able to say which flourishes best.

"Do you flood?"

I do, where it is practical; it protects the vines from the frost.

"Do you consider it a profitable

Set for Hail?

It costs considerable money to raise a cranberry crop and you can lose that investment the minute Hail strikes—**unless you have hail insurance.**

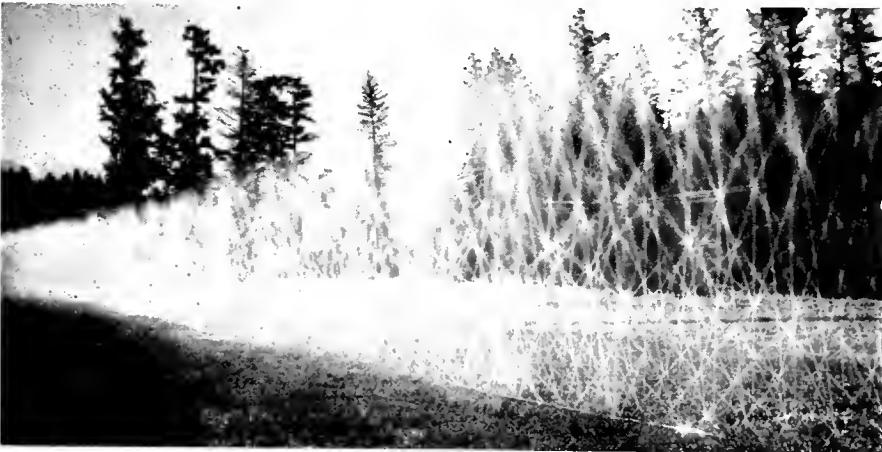
Last year I brought the Hartford Fire Insurance Co. Representatives to Massachusetts to make a survey in order to secure adequate coverage for your **bogs against Hail Storm Damage.**

This is now a reality. I should like to talk over the Hail problem with you.

CHESTER W. ROBBINS

Tel. Wareham 65

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But its Low-Cost Sprinkling and Pure Efficiency are helpful everywhere.

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Low Pressure! Less horsepower and no grief from high-pressure, high-speed pumping. Every drop the same size, falling gently like rain.

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LIGHTWEIGHT - PORTABILITY
and FAST COUPLING

OF

FLEX-O-SEAL PIPE

TO

GUARANTEE ESTABLISHMENT OF NEWLY SET BOGS
FOR FIRST TWO SEASONS

**ONE LINE OF PIPE WILL SOAK DOWN
AN 80 FOOT STRIP EVERY TWO HOURS.**

This line can then be easily moved by one man to new setting and repeated. In this way a large acreage can be safely developed by use of a single line of sprinklers and a cross header.

New bogs under four acres can receive this protection for under a thousand dollars total. New Bogs five to ten acres would run under sixteen hundred dollars—pumpers included.

This is not an expense but an investment, as you have the equipment to move to other new bogs, to transfer to other builders of new bogs, or to use as a foundation for complete frost protection and irrigation system after first two seasons.

ENGINE PUMPING UNITS - PIPE - SPRINKLERS IN STOCK

We will be pleased to discuss Costs and Set-ups at No Obligation.

VEG-ACRE-FARMS - IRRIGATION DIVISION

FORESTDALE—CAPE COD, MASS.

Phone Osterville 719

undertaking?"

I do if anyone has a proper place. I have raised three bushes of cranberries on one rod.

Respectfully,

Josiah Freeman.

An Old Letter

(Editor's Note: The following is a letter written by Cyrus Cahoon of Pleasant Lake, Mass., developer of the Early Black, to the Rev. B. Eastwood of Dennis, who in 1856 published "The Cranberry and Its Cultivation." The date of the letter is December 3):

Dear Sir:

1. My cranberries are grown on a soil of peat muck and loose beach sand (not common earth), which I am convinced is the element for cranberries to grow in.
2. I plant my cranberries in hills eighteen inches apart, by making a hole in the ground about three inches in diameter, and of sufficient depth to receive the root of the plants; then, after placing the vines in their places. I am careful to have them opened, and the soil placed in such a manner so as to spread the hills all around to the sides of the hole that is made to receive them, so that the hills after they are set resemble a saucer placed in the ground and partly filled with earth. If they are set in a bunch in the middle of the hole, and the soil placed or filled in close around them it keeps them too close or compact to do well.
3. My cranberries that I depend on are surrounded by wood and brush, so that they are not exposed to winds and are warm such a situation, I think, is much to be preferred to one that is bleak and cold.
4. I flood my premises at the time the worm makes its appearance and at no other time.

Yours in great haste,

Cyrus Cahoon.

Motor trucks and tractors have replaced horses and petroleum products have replaced enough oats, corn and hay to release some forty-four million acres of cropland for market production since World War I,

"There's Nothing"

OLD CAPE COD RHUME

"There's nothing to me in foreign lands

Like the stuff that grows in Cape Cod sands;

There's nothing in sailing of foreign seas

Equal to getting down on your knees

And pulling the pizen ivy out.

I guess I knew what I was about
When I put by my chart and glass
And took to growing cranberry sass.

JULY INSECT MEETINGS IN MASSACHUSETTS

Twilight meetings for Plymouth County cranberry growers were held July 12, Chippaway, Inc. bog at East Freetown; July 13, State Pog, East Wareham, 7 p. m.; July 14, Benjamin Ellis bog, Marshfield, Route 39, 7 p. m.

These were primarily fruitworm meetings for egg count demonstration. Other insects were discussed, however.

In Barnstable County fruitworm clinics are being held.

Notes

A dusting demonstration was held not too long ago under the auspices of the Growers Cranberry Company of New Jersey. Purpose was to test the relative values of various carriers for insecticides and fungicides. Two hundred persons witnessed the demonstration which was at the Gaunt farm at Pemberton. They watched Bancroft clay, Phospho dust, manganese talc and gypsum used. The results were not decisive, writes Walter Z. Fort in latest issue of "Cranberry World", but says they convinced many persons of the value of dusting from the air.

Ralph Thacher, NESCO's man in Barnstable County, Massachusetts, gave growers an example of alert service. He flew to North Andover to procure bees for a member.

Ads Paid Off

Writes C. M. Chaney in latest issue of "Cranberry World":
Our consumer advertising campaign on fresh Eatmor cranberries

started full blast the latter part of October and by November first there was conclusive evidence that it was really taking hold. I am firmly of the opinion that our advertising paid good dividends last season, not only to our members, but to all growers who sold and shipped on the fresh fruit market.

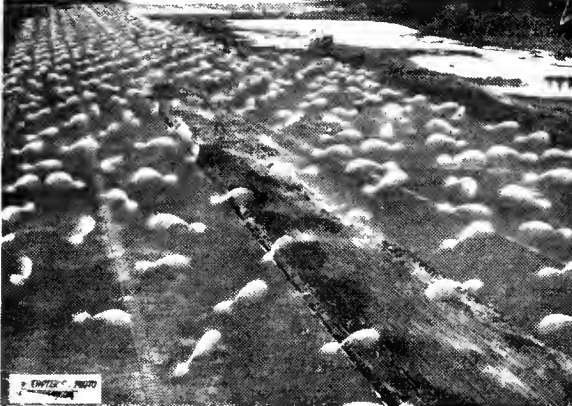
"An intensive advertising and merchandising campaign has been authorized by the members and directors and is being prepared by the management and our advertising agents. We have every reason to believe this campaign will help

market a much larger percentage of the 1948 crop through fresh channels."

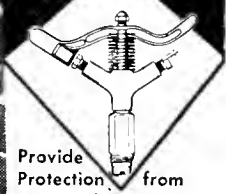
Speaking of summer insects, J. Richard Beattie, Massachusetts Extension Cranberry Specialist, writes in a bulletin to Massachusetts growers under date of July 7 that there is another blanket control not outlined on the Massachusetts Insect Control Chart, but which is worthy of consideration in Massachusetts. This is proposed by Dr. H. J. Franklin and he referred to the use of 50 pounds

RAIN BIRD

Protects Cranguyma!



1000
RAIN BIRD
SPRINKLERS
LIKE THIS



Provide Protection from Frost and Drought at Cranguyma Farms, Long Beach, Wash.

PHOTO COURTESY OF PORTLAND OREGON JOURNAL

SPREADING out in an impressive acreage in the great Northwest, Cranguyma Farms at Long Beach, Washington, represents an important part of our nation's cranberry production. Standing as dependable guardians against frost and drought 1000 Rainbird sprinklers provide the correct and necessary rainfall whenever it is needed. This outstanding installation is indicative of the dependability of Rainbird Sprinklers. The distributor or dealer listed below will be pleased to furnish additional information upon request.

PACIFIC COAST DISTRIBUTORS

R. M. WADE and CO. Portland, Oregon	ARMCO DRAINAGE & METAL PRODUCTS CO. Portland, Oregon	STOUT IRRIGATION INC. Portland, Oregon
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EAST & MIDWEST DISTRIBUTORS

L. R. NELSON MFG. CO.
Peoria, Illinois

MASSACHUSETTS DEALERS

JOSEPH BRECK & SONS 85 State St., Boston, Mass.	IRRIGATION DIVISION VEGACRE FARM Forestdale (Cape Cod), Mass.
--	--

RAIN BIRD SPRINKLER MFG. CORP.

GLENDORA CALIFORNIA

to the acre of a DDT dust which should be applied about July 10 or a few days later. This treatment controls the second brood of black-headed fireworm, bluntnosed leafhoppers, and gets about 50 percent of the fruitworm.

A Traveler to Cape Cod

If the traveler over Cape Cod will now and then turn his eye toward the borders of the many ponds which abound in that region, or occasionally examine the margin of swampy tracts, he will frequently perceive patches, as they are technically termed, of strange-looking, and at first sight, a seemingly-stunted vegetation, presenting very different appearances to those exhibited by fields of stately Indian corn; or tracts of farmland, where the tall stacks of the rye wave, and ears of wheat look golden in the sunshine of summer.

A certain precision of planting, and regularity of disposition, convince even the most careless observer, that these patches are by no means unproductive.

And if he chooses to inquire of

the next person he meets, he will learn that these, to him singular-looking specimens of farming, are cranberry grounds.

There are many parts of this great country where cranberries are grown, but it is confessed on all sides, that Cape Cod takes the

lead in this enterprise. Her few growers have achieved a reputation for their fruit, which already commands ready sales and the best prices. This circumstance has of late drawn attention to the growing of cranberries, as a money-making undertaking; and cur-

The Forges Contractors, Inc.

WATER ST.

PLYMOUTH, MASS.

Tel. 1763

Cranberry Bog Building and Rebuilding

Power Shovels, Cranes, Clamshells

Draglines. Bulldozers and Trucks

Dealers in:

Prefabricated half and full circle "Whipple Flumes".

New England Metal Culvert Co. Pipe.

P_{eter} A. L_e S_{age}

"KEEP SMILING"

Peter A. LeSage

PLYMOUTH

Tel. 740

Distributor of Cape Cod Cranberries

YARMOUTH

Tel. Barnstable 107

ousity having once been excited, it is not likely to be allayed, until growers in other parts of the states spring up, and like their Cape Cod brethren, succeed in making otherwise unproductive tracts of land both fruitful and a source of gain.

For at this moment there are thousands of acres of swampy and sandy places, in the great West

and in the South, which by a little labor can be converted into cranberry grounds.

(Editor's Note: A considerable part of foregoing sounds as if it had been written as of today. Yet it is a quotation from the opening pages of the B. Eastwood's book upon cranberries written in 1856. The words also certainly

have a prophetic quality as to the spread of cranberry culture.)

Chicken Vs. Cow

We Americans are eating 50 per cent more chicken than we did ten years ago. However, before the

Frederick V. Lawrence, Inc.

offers

CRANBERRY GROWERS
its services, backed by a complete line of construction equipment for building or repairing of bogs, flumes, pump wells.

SURVEYS AND QUOTATIONS
WITHOUT OBLIGATION

Main Office
FALMOUTH - Tel. 1800

Wareham 1180 - Hyannis 300



PROTECT

THIS YEAR'S PROMISE FOR
A
PROFITABLE
CRANBERRY CROP

Use **Black Leaf 40** in accordance with State recommendations for the control of

Blackheaded Fireworm Blunt-Nosed Leafhopper
Spittle Insect Red-Striped Fireworm

TOBACCO BY-PRODUCTS & CHEMICAL CORP.

Incorporated
LOUISVILLE, KENTUCKY

Colley Cranberry Company

SHIPPERS OF CAPE COD
CRANBERRIES

"SUITSUS" Brand

Plymouth, Mass.

Office
17 Court Street

Telephone
Plymouth 1622

poultryman, or the farm wife who depends on chickens for paying the "incidentals," get too enthused, it might be well to point out that the average American consumer still likes "red" meat better.

Recent studies indicate that each person in this country consumes about thirty pounds of chicken each year. The consumption of other meat is much higher, with the typical consumer eating 154 pounds a year.

A representative of a leading chain of food stores stated recently that this thirty-pound annual consumption of poultry per person could be increased fairly easily. However, he says that every one connected with poultry—the breeder, hatcheryman, producer and the poultry processor who prepares the poultry for market—has a definite part in giving the consumer poultry in such a way that more will be consumed.

THEY'RE PRETTY, TOO

Sunflowers, with some of the plants growing as high as ten feet, usually attract comments and

questions of visitors to the Mt. Carmel Experimental Farm of the Connecticut Agricultural Experiment Station. Grown between different corn breeding plots, the sunflowers serve three purposes.

First, they prevent cross polination of the different corn varieties. They show surprising results in smothering weeds and they provide a good manure crop to be turned under. Dr. Donald F. Jones, chief

Cranberry Growers . . .

You value the sound, proven recommendations of the East Wareham Cranberry Experiment Station in growing your crops successfully.

Equally invaluable to you is sound, properly written insurance fitted specially to the needs of Cranberry Growers.

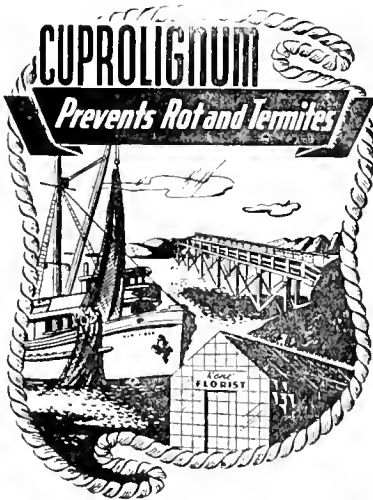
E. A. Thacher of this firm will be happy to discuss your requirements, and without charge or obligation, prepare a survey of your property and needs.

Brewer & Lord

INSURANCE

56 Batterymarch Street, Boston

Telephone: Hancock 60830



Specify and be sure you get

CUPROLIGNUM

to Save Costly Renewals on Flumes and Headgates

CUPROLIGNUM SHINGLE STAIN

For new clapboards, old stained or new shingles. Can be painted over if desired.

CUPROLIGNUM COPPER BOTTOM PAINT

with the addition of Cuprolignum gives added resistance to barnacles or teredoes by penetrating the wood cells, depositing toxics which remain after paint film has completely disintegrated.

New England Representative

ROBERT S. CHASE

195 Marlboro Street

Boston 16, Mass.

Manufacturers: RUDD PAINT & VARNISH CO., Seattle, Washington

eticist, says the sunflowers are easier to grow than hay crops and supply as much organic matter as most any one of the hay crops. They do a remarkable job in shad-

ing out weeds, also, he says.

He says that sunflowers can be grown every four or five years to provide a good supply of organic matter. The practice at the Mt.

Carmel farm is to plant up to as late as July 15 and to disk the crop down before the seeds are fully mature. After this disking, the ground is usually seeded to rye or rye grass.

Save Priceless Water

**BUY
PORTABLE OVERHEAD SYSTEMS
for
IRRIGATION AND FROST CONTROL**

**STEEL or ALUMINUM PIPE
Equipped with
McDOWELL STEEL COUPLINGS**

**There is no other similar or equal equipment
NO LATCHES NO HOOKS**

Write or phone. Our local representative will call.
No charge for Design and Blueprints to suit your particular bog.

LUNDQUIST CO., Inc.

TEL. PUTNAM (CONN.) 1917

WEST WOODSTOCK, CONN.

N. C. A. Cranberry Week

Definite date has been set for "National Cranberry Week" as October 18-23, by National Cranberry Association. This is being sponsored by NCA, but according to NCA officials it has been "op-

Let Us Handle Your Power Needs for Bog Pumps

International
and
Continental Red Seal
Industrial Engines
SALES and SERVICE

J. M. HACKETT
Tel. Rockland 1864
NO. HANOVER MASS.

Every Cranberry Grower

AIMS TO INCREASE HIS CROP; CONSEQUENTLY INCREASING THE SUPPLY OF CRANBERRIES.

THEREFORE HE SHOULD STRIVE TO INCREASE THE DEMAND; TO BROADEN THE MARKET.

There are only two ways to do this effectively:

BY NATIONAL ADVERTISING.

BY DISTRIBUTING SHIPMENTS SO AS TO SECURE AND MAINTAIN A STABLE MARKET.

An individual grower is helpless to attain either of these objectives; each demands CO-OPERATION IN A LARGE WAY; the effectiveness of each will be increased by the completeness of co-operation.

PROFITS AND VALUES OF CRANBERRY BOGS depend, therefore, on COMPLETE AND SUCCESSFUL CO-OPERATION.

Every grower of good cranberries can fully participate in this important work by joining at this time THE NEW ENGLAND CRANBERRY SALES COMPANY and THE AMERICAN CRANBERRY EXCHANGE, strictly cooperative, grower-controlled membership organizations which have for over a generation carried on NATIONAL ADVERTISING AND ORDERLY DISTRIBUTION OF CRANBERRIES.

New England Cranberry Sales Company

9 Station Street

Middleboro, Mass.

ened" to the industry so that other packers of cranberries and cranberry products may share in its benefits.

If the program occurs as outlined by Miss Ellen Stillman of NCA, it will be quite an event. The object is to stimulate the sale and use of cranberries.

Preceding the official "week", there is planned a Cranberry Festival at Ellis D. Atwood's "Edaville", South Carver. This, it is hoped, will furnish material for newspaper, radio and other publicity. A "National Cranberry Queen" will be chosen, this selection to be from a cranberry queen previously elected to represent each cranberry-growing state.

Publicity will be directed by a professional publicity man of New York City who has already been engaged. As part of this program are the following plans: newspapers will be furnished with cranberry recipes and cranberry feature stories for use during "Cranberry Week"; state publicity bureaus will be given material; trade papers in the grocery and fresh fruit industry will be given material; magazines which are printed several months in advance have already been given material. Personal and mail contact is to be made with chefs in hotels and restaurants requesting the featuring of cranberry dishes during that week; an attempt will be made to get national radio publicity that week; cranberry recipes will be furnished 1400 radio stations throughout the country; mayors of cities will be given gifts of cranberries and this presentation may be televised in cities which have television stations; cranberries will be given away on radio programs which have "give away" programs; Senators and Representatives from all the cranberry states will be asked for support; the support of can manufacturers and other allied industries will be re-

quested.

CRANBERRIES Magazine has been asked to assist in locating the cranberry grower in any area who has been engaged in the cranberry business the longest number of years. Many growers have been busy at cranberries, from picking and weeding as boys (or girls) for a period of 40 years or more.

Also wanted is longest cranberry

bog worker in point of years of activity.

Both these individuals when selected will be honored during "Cranberry Week."

All readers are requested to send in to CRANBERRIES their nomination (it may be the one) with sufficient data to enable this selection to be made. Choice will be made by NCA.

Beaton's Distributing Agency

NATIONAL DISTRIBUTORS

of

Cape Cod Cranberries

for over a quarter century
in United States and Canada

Wareham, Mass.

Tel. Wareham 130 or 970

Are Americans Rich ?

YES, THEY ARE RICH IN MANY THINGS.
ONE OF THEIR RICHES IS THE OPPORTUNITY
TO USE THE ADVANTAGES OF SUCH AN
EFFICIENT SERVANT AS ELECTRICITY.

Plymouth County Electric Co.

WAREHAM — — PLYMOUTH

Tel. 200

Tel. 1300

ARIENS TILLER THE ONLY TILLER WITH...

- Full horsepower motor
- Standard two speeds—forward and reverse.
- Positive action, multiple disc clutch.
- Full sized $\frac{3}{4}$ " electric alloy steel tires.



ARIENS COMPANY • BRILLION, WIS.

Let's Look at the Record!

OVER a period of many years, Minot Food Packers, Inc., have fully cooperated with cranberry growers in their problems, and particularly as regards stabilizing the market with a "just price" for canned sauce.

WITH so much publicity as regards cut prices on the 1947 crop pack of canned sauce, even though we feel that it is not necessary to assure our growers, nevertheless we make public announcement that Minot Food Packers, Inc. have not reduced prices, nor did they offer any promises when quoting their prices on Minot brand and Conway's brand of Cranberry Sauce packed from 1947 crop berries or 1946 crop berries.

OUR policy, at all times, is that the growers should receive a "just price" for their cranberries and we, in turn, offer the canned product at a "just price" to the distributors.

*It will pay you **DIVIDENDS** to deal with*

MIN-OT FOOD PACKERS, INC.

BRIDGETON

NEW JERSEY

Represented by

BEATON'S DISTRIBUTING AGENCY

WAREHAM, MASS.

OUTLOOK FOR 1948

Of course it is too early to give predictions about 1948, but these facts stand out already:

1. Consumer incomes are still high.
2. Prices of other fruits are strong.

Therefore, we have no reason to believe that this will be a bad year for selling fresh cranberries. For weeks now we have been visiting the trade. The strong end to last season's fresh market should be helpful in the marketing of the 1948 crop.

There are many factors which will be necessary to a successful year—the right price, the right advertising, the right timing of sales. That is our job.

Also there are the factors which depend on the growers: good keeping quality, good grading, good pack.

With all these factors properly controlled there is no reason for pessimism.

For strong, hopeful action in this year of fresh fruit sales, join with the

The American Cranberry Exchange, Inc.

The Cranberry Growers' Cooperative
Agricultural Lic. No. 1

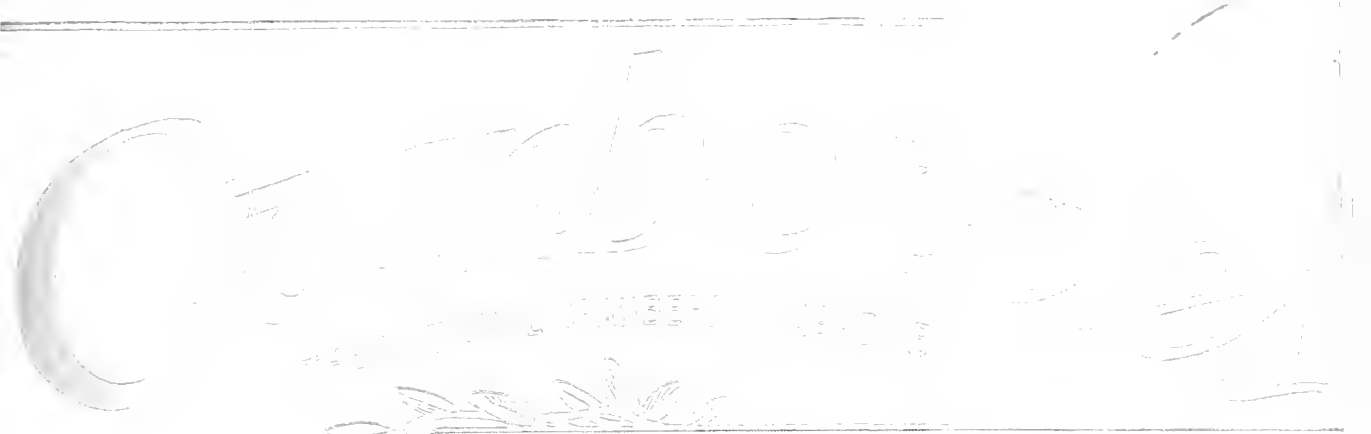
Marketers of



**Eatmor
Cranberries**

Chicago

New York



CAPE COD
NEW JERSEY
WISCONSIN
OREGON
WISCONSIN



CALVIN BURLEIGH ELDREDGE

(CRANBERRIES Photo)

SERVICE

. . . to be complete must be experienced, thorough, and dependable. Whether it be sales for the fresh market, or for processing, or supplies of every kind needed by the grower, we have the skilled organization, the widespread facilities, and the lengthy experience that make ours a truly complete Cooperative. You are invited to become a member of this progressive Cooperative, the oldest in the Cranberry industry.

Growers Cranberry Company, Inc.

Oldest Cooperative in the Cranberry industry
Oldest agricultural Cooperative in New Jersey

PEMBERTON, NEW JERSEY

It is **NOW** Only
A Short Time to Harvest.

The Wisconsin Cranberry Sales Company gives its
Members the **best of service** always.

Wisconsin Cranberry Sales Company

(A Cooperative)

Join with NCA to build A Bigger Market for Bigger Crops

Here are the publications in which NCA will tell the Ocean Spray story this fall, in the largest and earliest advertising campaign in its history.

To Consumers:

THIS WEEK
AMERICAN WEEKLY
WOMAN'S DAY
FAMILY CIRCLE
WOMAN'S HOME COMPANION
BETTER HOMES AND GARDENS
LADIES' HOME JOURNAL
GOOD HOUSEKEEPING
PARENTS' MAGAZINE
McCALL'S
WESTERN FAMILY

Plus a long list of daily newspapers.

To the Grocery Trade:

CHAIN STORE AGE
COOPERATIVE MERCHANDISER
FOOD TOPICS
PROGRESSIVE GROCER
SUPER MARKET MERCHANDISING
GROCER GRAPHIC
VOLUNTARY AND COOPERATIVE GROUPS MAGAZINE
FOOD TRADE NEWS
GROCER'S DIGEST

To Restaurants:

AMERICAN RESTAURANT MAGAZINE

To Home Economists:

WHAT'S NEW IN HOME ECONOMICS

These advertisements will make 100,000,000 impressions between September and December . . . creating a bigger-than-ever consumer demand for your crops.

NATIONAL CRANBERRY ASSOCIATION

The Growers' Cooperative

Branches at:

Hanson, Massachusetts
Onset, Massachusetts
Plymouth, Massachusetts

North Harwich, Massachusetts
Bordentown, New Jersey
North Chicago, Illinois

Coquille, Oregon
Markham, Washington
Long Beach, Washington

DIRECTORY FOR CRANBERRY GROWERS

MASSACHUSETTS

Call
WAREHAM 162

S. C. M. Packard & Co.

Hardware—Locksmiths
For Maintenance Supplies

An Ad

in
CRANBERRIES
is *your* message
placed before the in-
dustry.

Extensive Experience in ELECTRICAL WORK

At Greenhouses, Bogs and
Pumps Means Satisfaction

ALFRED PAPPI
WAREHAM, MASS. Tel. 626

USE DYNAMITE

The modern way to re-
move stumps, excavate
rocks, DIG CORES FOR
DIKES, and other blasting
work in cranberry growing.
Speeds up work—reduces costs.
CONSULT WITH US ON ANY
WORK YOU ARE PLANNING.

Trained by Hercules Powder Co.

ALTON J. SMITH

High St., Hanson, Mass.
Tel. Bryantville 297

Diesel Bulldozer

E. G. HOWES

WEST WAREHAM, MASS.
Tel. Wareham 405-W-2

Experienced in Bog Work

"CRANBERRIES"
ADVERTISING
PAYS BIG
DIVIDENDS!

Reasonable Rates
on Request

JET WELLS

If you are going to use
irrigation and need a wat-
er supply

CONSULT US!

We will look over your situ-
ation promptly, and without
obligation.

We install JET Wells
(A superior method)

Fre-Flo Wells of N. E.

H. Trainor, Coventry, R. I.
Phone COVENTRY 2982

Edwin K. Greer Co.

WAREHAM, MASS.
Est. 1891 Tel. Wareham 108

PIONEERS RETAILERS OF
BUILDING MATERIALS

CATERING To The CRANBERRY
INDUSTRY

LUMBER DRAIN PIPE
WOOD PRESERVERS BOLTS
TOOLS

H. R. Bailey Co.

South Carver
Massachusetts

WISCONSIN AIR COOLED MOTORS

6 and 8 H. P.
in stock

Morris April Bros.

Bridgeton - Tuckahoe
New Jersey

Apples
Cranberries
Peaches

GROWERS AND
SHIPPERS

Wood County National Bank

Wisconsin Rapids,
Wisconsin

MEMBER FEDERAL DEPOSIT
INSURANCE CORPORATION

SERVING THE CRANBERRY INDUSTRY

ADAMS & GOULD

Lumber Dealers

"Everything Under Cover"

East Wareham, Mass.

Tel. Wareham 648

Building Material for Bog,
Screenhouse and Home Uses

Paints - Hardware

**Attention
Cranberry
Growers !!**

We have

Drain Pipe

Large Sized Terra Cotta
Makes a Permanent Installation

RALPH W. ELLIOT

Sandwich Rd., Wareham, Mass.

Tel. Wareham 794

Mail Address: Buzzards Bay, RFD

Plumbing and Heating Service

Cape & Vineyard Electric Company

Offices:

Chatham

Falmouth

Hyannis

Vineyard Haven

Established 1848

Hall & Cole

Incorporated

Commission Merchants
and Jobbers

94 Faneuil Hall Market 102

BOSTON, MASS.

APPLES AND CRANBERRIES
SPECIALTIES

Car Lot Receivers

Acushnet Saw Mills Co.

GOOD
WOOD BOXES

Cranberry Growers
Order Harvest and
Shipping Boxes

New Bedford, Mass.

Est. 1865

Harvest and Shipping Boxes

Jesse A. Holmes & Son

Carver, Mass.

Tel. Carver 10-3

KROP-SAVER

brand

INSECTICIDES

FUNGICIDES

For the Cranberry Grower

CROP-SAVER
CHEMICAL COMPANY, Inc.

3511 West Potomac Avenue
Chicago 51, Illinois

The National Bank of Wareham

Conveniently located for Cranberry men

Funds always available for sound loans

Complete Banking Service

Member Federal Deposit Insurance Corp.

Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE
Extension Cranberry Specialist



Summer finally arrived in Massachusetts and the cold, wet spring of 1948 is almost forgotten. It is surprising how a few good, bright days can change one's outlook and improve our general disposition—at least that is one of Joe Kelley's observations.

We won't discuss the prospective crop at this time, since growers will have C. D. Stevens' official estimate by the time the August issue of "CRANBERRIES" is read. It is sufficient to say that the crop in Massachusetts looks unusually good. A few suggestions for the pre-harvest season seem in order at this time.

August can be a critical month. Growers well remember what the prolonged drought of last August and September did to the crop. Dr. Franklin is a firm believer in irrigating bogs when they need it. Dr. Chandler's experiments with tensiometers in studying the movement of water through the soil should be very helpful in determining when to irrigate bogs. Bogs should be irrigated before they show damage by drought, according to Dr. Franklin. It is a good plan to raise the water in the ditches up to approximately 10 in. from the top of the bog's surface during these dry periods. Of course, this would be difficult with many bogs that are out of grade, but where water can be used in this manner it is a sound practice. If we have heavy rains, of course, the water should be lowered for a few days and then raised again as the occasion demands. The use of overhead irrigation systems by those who have them are also very effective during periods of drought. Dr. Franklin does not, however, favor flash floods for irrigation purposes. His experiences with such floods have shown a marked

increase in fruit rot damage.

We have been fortunate so far this year in having a rather moderate insect year. So far, the damage has been rather spotty. We shouldn't expect too much trouble for the remainder of the season. However, there are two insects that sometimes cause trouble during August, but usually to a very limited extent. Growers should check their bogs carefully to determine their presence and check any infestation before it develops. Dr. Franklin refers to the **cranberry flea beetle** that is found in our gardens. This is a small, black, shiny insect and hops very actively when disturbed. It feeds on the leaves of the cranberry vines and can cause severe damage when present in large numbers. Dusting with pyrethrum (using 1.2 pyrethrins or its equivalent in killing power) at the rate of 60 lbs. per acre is the control measure recommended by Dr. Franklin. The second insect is the **fire beetle**, which is a small brown beetle approximately $\frac{3}{8}$ in. long, with interrupted stripes along its wing covers. When abundant, this pest will brown up the vines and cause considerable damage. Spraying in mid-August with 3 lbs. of lead arsenate in a hundred gallons of water at the rate of 300 gals. per acre should control this pest.

Now just a word on weed control at this time of year. Dr. Cross has found that **loosestrife** is not killed quite so readily this late in the season as expected, using the 2.4D treatment. In fact, several growers have reported rather unsatisfactory control with this treatment when loosestrife is in the flowering stage, even with increased concentrations of the chemical. He recommends that the 2.4D treatment for this particular

weed might well be discontinued for this season. However, picking or mowing off the tops when it isn't too abundant is still in order. Next spring is the best time to clean up this weed, using the kerosene treatment. Speaking of kerosene, Dr. Cross tells us that kerosene can still be used effectively on new bogs (still in the hill stage) where weeds are abundant on such bogs. Be sure to pick as cool a time as possible—preferably in the early evening. Under such conditions, 300 to 400 gals. per acre of water-white kerosene should clean up the grasses, sedges and rushes without too much injury to the vines.

If this crop materializes, boxes may be a problem. It might be well to check your supply and be sure you have plenty of both picking and quarter-barrel boxes on hand. Nails are very scarce, and your manufacturer would appreciate knowing your needs in order that he may make his plans. Possibly you have been postponing a few repairs in the screenhouse, waiting for a rainy day, but the harvest period is just ahead and maybe that loading platform should be reinforced or the separator needs some adjustments. Let's be ready before the rush of picking is here. One final suggestion, even if the temperature is nearly 90° in the shade at the writing of this article. It really requires some imagination, but let's be sure that we are prepared for the fall frost season. August is a good time to check that old pump and its installation and be prepared for frost should it become necessary. Best of luck for the harvest season.

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CRANBERRIES

It's a good
Thought to subscribe
For your Foreman,
Too

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Bogs looked good as August began. They were green and beautiful in appearance, but a large crop did not seem in prospect, according to several sources usually competent in judgment.

The first days of July were rainy, then the month was mostly dry, total precipitation being 2.79 inches. The hottest day of the month was July 11 with a temperature of 91, the lowest was July 7th, with a temperature of 49.

On July 20th the Cranberry Experiment Station sent out an "attention" to cranberry growers. This was to the effect that the fruit worm situation was serious, and the infestation was more severe than had been previously expected. Counts revealed, according to the notice, that as many as a third of the berries were infested. The second brood of fireworm was hatching also. Blunt-nose leaf hoppers were plentiful. The Experiment Station recommended a "blanket" control.

NEW JERSEY

The July daily mean temperature at Pemberton was 74.4 degrees, which is 1.6 degrees below normal. Precipitation was just a trifle above normal, namely, 4.50 inches as compared with the average monthly record of 4.22 inches.

On some bogs, appearances are very favorable for a good crop, even where the ice was not dropped last winter.

Theodore Budd is doing some good work with a long spray boom patterned after a Wisconsin boom. The boom is not too heavy for two

strong men to carry and covers a swathe 40 feet wide. Mr. Budd feels that he is getting good uniform coverage with a great reduction in the amount of tramping on the vines. With one boom he has sprayed as much as 35 acres in one day.

Stoddard Solvent is showing up very well for control of loostetrife.

WASHINGTON

The Cranberry-Blueberry Experiment Station at Long Beach held its annual Field Day on Friday, July 30th. There were over two hundred growers present, including several from as far away as Bandon, Oregon. There were about 80 growers present from the Grayland District.

The forenoon was spent at the Experiment Station where there was a discussion of the experimental work being carried on at this Station. At noon the crowd adjourned to the Long Beach Grange Hall where a free lunch was served to more than two hundred people. This was really a regular dinner, with baked ham, scalloped potatoes, salad, and ice cream and cake for dessert. Mrs. Marguerite Glenn of Cranguyma Farms was the chairman of the committee that provided the refreshments. Her assistants on the committee were Mrs. R. W. Wearne, Mrs. Guido Funke, and Mrs. Wilson Blair. In addition she had the hearty cooperation of a number of men and women members of the Cranberry Club, who helped to serve the luncheon.

Visitors from the College included Regent John W. Binns, Director

M. T. Buchanan, Juno Roberts, Head of the Agricultural Engineering Division, William Johnson, Assistant in the Agricultural Engineering Division, Dr. J. W. Kalkus, Superintendent of the Western Washington Experiment Station, accompanied by Drs. E. P. Breakley, C. D. Schwartze, Karl Baur and G. S. Batchelor.

Attending from southwestern Oregon were Mr. and Mrs. L. M. Kranick, Mr. and Mrs. Sumner Fish, Mr. and Mrs. Jim Olson and children, Mr. and Mrs. Lewis McGeorge and daughter.

From Clatsop County, Oregon, the following attended: County Agent Gordon Hood, Jack Dellinger, E. W. Anderson and son Eric, Fred Roawens, and Mr. and Mrs. Peter Haag.

The list from Grayland is so large that it isn't possible to get them all mentioned, but they certainly made a noteworthy delegation.

At the conclusion of the luncheon talks were made by the following: Albert W. Sundberg, president of the Long Beach Cranberry Club, Director M. T. Buchanan, Regent John H. Binns, Dr. J. W. Kalkus, Dr. J. Harold Clarke and D. J. Crowley.

The cornerstone of the new Experiment Station building was laid by County Commissioner Robert Kirkman, representing the County Commissioners of Pacific County. He was followed with a talk by Regene Binns, who thanked the Commissioners for the property which they deeded to the State College.

Other items on the afternoon program included a visit to Cran-

(Continued on Page 16)

Fruiting Characteristics of The Searles Cranberry

By HENRY F. BAIN

Blooming and fruiting records of the Searles variety on four Wisconsin cranberry marshes, for the seasons 1944 to 1947 inclusive, are reported here.

Some of the data in tables 1 and 2 appeared in previous articles (1, 2, 3), and the method of taking the readings was described in detail in one of them (1). Briefly, the method consisted of making counts of the various relations on $\frac{1}{4}$ th square-foot sample areas, usually at 10 locations per section (to a certain extent chosen at random), and averaging the counts and multiplying by four to obtain the square-foot readings entered in the tables (exceptions indicated in footnotes to the tables). Beginning in 1946, a square-foot hoop was substituted for the original $\frac{1}{4}$ th-square-foot counting ring, and the quarter most nearly representing average vine and berry conditions inside the hoop was counted. From the same date, numbers of flowers and berries borne on individual uprights were recorded, which necessitated some changes in the form of the table for the second two-year period.

The Searles variety frequently produces many small, weak branches that may or may not eventually develop into fruit-bearing uprights. Every leaf-bearing branch, regardless of its size or probability of future fruiting, was classified as an "upright". For this reason, the numbers of uprights per square foot, as given, ran higher, and the percentages which bloomed and fruited ran lower, than if the small branches had been disregarded.

The arbitrary number of samples counted was too small to completely cover variability in numbers of uprights in the vines, and of fruiting uprights in relation to the total stand. The resultant sampling error applies to figures in all categories derived from these two measurements. In cases in which section yields were obtained, a fair measure of the adequacy of sampling may be gained by comparing

the numbers of berries set per square foot with subsequent yields, and applying the rule-of-thumb approximation that one berry per square foot is equivalent to one barrel of berries per acre (which is reasonably close when berry size is near 100 to the standard half-pint counting cup). The ratio, final yield to number of berries set per square foot, varied from 39% to 86% and averaged 52% the first two years, and from 50% to 90% and averaged 71% the last two years. (These percentages would have been somewhat higher if corrected for the undetermined losses that occurred between the times of sampling and the times of measuring yields.)

"Average" figures in the tables were weighted to equalize irregularities in numbers of samples counted on some of the sections.

The period covered by the records was characterized by such great variation in weather conditions, other crop hazards, and yields, that it appears probable that the production expectancy of the variety was fairly well included in the figures in the "Extremes" columns. Values in the "Averages" columns, however, merely represent the performance on the sections noted and for the particular four-year period; average yields are of course subject to variation and are amenable to some degree of grower control.

A summary of the essential figures in the large tables follows:

The "numbers of berries set per blossoming upright" figure provides an excellent index of fruiting relations in vines. Depression of the figure below 1.00 is positive evidence of damage of some sort. Most of the low readings recorded in the tables resulted from water injury.

The curves in figure 1 show the interrelations between numbers of uprights fruiting, percentage of flowers setting fruit, and percentage of uprights fruiting, as the numbers of berries set per square foot (i. e., indicated yields) progressively increased. To prevent frequent crossing of curves and to keep the dimensions of the chart within bounds, it was necessary to adopt the awkward system of basing the curves at different levels and to use different scales as needed to flatten them to comparable degrees.

The two "uprights blooming" curves (numbers and percentages) followed the yield curve rather closely in its upward course across the chart. In two cases out of the 26 samples (nos. 6 and 13), considerably more uprights than usual bloomed in relation to berries set (see "numbers of uprights blooming" curve); in both there were sharp dips in the flower-set curve, indicating that poor set was responsible for the deviations; reference to table 1 shows that both samples were taken in vines having water injury. Likewise, two of the three lesser deviations (samples 16, 19, 21) were accompanied by poor set, and the third (no. 16) was conditioned by the small number of flowers per upright resulting from water injury (see table 2). The last three samples on the curves represented exceptional growth conditions in local "heavy-crop" areas; numbers of flowers were unusually high, resulting partly from abnormally high numbers of uprights blooming, partly from the numbers of blossoms per upright; the percentage set held at high levels; the cumulative effect was to increase yields in relation to numbers of uprights fruiting.

The flower-set curve had greater extremes than the two uprights-blooming curves, but at the same time it tended to follow a horizontal course across the chart. The

(Continued on Page 20)

Total number of uprights per square foot	Average, 451; range, 705, 308
Number of uprights blooming per square foot	Average, 121; range, 352, 46
% of uprights blooming	Average, 27; range, 66, 14
Total number of flowers per square foot	Average, 300; range, 1128, 55
Number of berries set per square foot	Average, 109; range, 484, 43
% of blossoms setting	Average, 37; range, 85, 9
Numbers of flowers per blossoming upright	Average, 2.45; range, 3.50, 1.19
Numbers of berries set per blossoming upright	Average, 0.90; range, 1.66, 0.22
Numbers of berries set per fruiting upright	Average, 1.25; range, 1.77, 1.03

Table 1.- Fruit Set per Square Foot in Searles Cranberry Vines, 1944 and 1945.

Marsh	Badger		Biron Cranberry Company				Cranberry		Lake Development Co.			Midwest Cranberry Co.			Averages		Extreme	
	1944	1945	1944	1945	1945	19	1945	1944	1945	1945	1944	1945	1945	1945	1945	High	Low	
Sample Number	1	5	4	8	8	7	8	11	10	11	12	13	14	15				
Section	West S.	A-1	A-6	A-1	A-6	N-2-2	S-3-4	N-2-1	N-2-1	N-2-2	16	25	27	27				
Number of uprights not blooming	509	346	357	328	436	345	317	236	160	299	389	332	252	288	352	511	180	
Number of uprights blooming	88	104	115	200	72	124	124	72	344	150	131	304	208	352	129	352	72	
Total number of uprights	597	450	482	528	508	469	444	308	524	449	520	636	460	640	481	705	308	
% of uprights blooming	15	23	24	38	14	27	28	23	66	33	25	48	45	55	27	66	14	
No. of uprights having 1 flower	15.6	14.0	13.2	8	13.6	22.7	16.8	14.0	24	21.6	24.0	42	33	40	19.3	42.0	8.0	
No. of uprights having 2 flowers	30.0	34.4	29.2	36	25.6	45.8	31.2	31.6	52	58.4	56.0	60	40	56	39.7	61.6	25.6	
No. of uprights having 3 flowers	28.4	34.0	37.2	60	28.8	47.6	51.2	19.6	136	48.0	36.6	104	65	96	43.2	136.0	19.6	
No. of uprights having 4 flowers	12.0	18.8	24.8	44	3.2	12.9	19.6	6.4	100	19.2	11.4	74	52	116	20.9	116.0	3.2	
No. of uprights having 5 flowers	2.0	2.4	10.8	48	0.0	2.7	2.8	0.0	32	2.4	2.9	24	18	40	5.7	40.0	0.0	
No. of uprights having 6 flowers	0.0	0.0	0.0	4	0.0	0.0	0.4	0.0	0	0.0	0.0	0	0	4	5.1	4.0	0.0	
Blooming uprights having 1 berry	53.2	67.2	59.6	84	38.4	78.7	63.2	32.6	188	89.6	75.4	110	93	164	65.7	188.0	32.6	
Blooming uprights having 2 berries	14.8	14.8	25.6	72	2.4	9.8	17.6	4.0	112	23.6	14.9	32	50	88	18.7	112.0	2.4	
Blooming uprights having 3 berries	0.8	0.8	3.6	24	0.0	1.3	1.2	1.2	12	2.4	0.0	4	14	36	2.6	36.0	0.0	
Blooming uprights having 4 berries	0.4	0.4	0.0	8	0.0	0.0	0.0	0.0	0	0.8	0.0	0	2.4	4	0.4	8.0	0.0	
Total number of flowers	219	272	335	700	164	322	328	162	1096	371	306	890	606	1128	344	1128	162	
Total number of berries set	87	101	122	332	43	102	102	44	448	159	105	166	248	484	112	484	43	
% of flowers setting berries	40	37	36	48	26	32	31	27	41	43	35	19	41	43	33	48	9	
No. flowers per blossoming upright	2.49	2.63	2.92	3.50	2.30	2.59	2.64	2.26	3.18	2.48	2.34	2.93	2.91	3.20	2.64	3.50	2.26	
No. berries per blossoming upright	0.99	0.97	1.06	1.66	0.60	0.82	0.82	0.62	1.30	1.07	0.60	0.55	1.19	1.38	0.87	1.66	0.22	
No. berries per fruiting upright	1.26	1.21	1.35	1.77	1.08	1.13	1.24	1.17	1.44	1.30	1.17	1.22	1.50	1.63	1.28	1.77	1.08	
Uprights blooming but not fruiting	19	20	25	12	32	42	42	34	32	27	41	168	42	56	42	168	12	
% of uprights blooming, not fruiting	21	19	22	9	45	34	34	48	10	18	31	35	20	16	32	78	9	
Section yield, barrels per acre	34	---	---	---	---	42	---	38	---	---	54	75	171*	---	---	---	---	

1.- Single sample in heavy-crop area.
 2.- Five samples counted. Extremes water injury.
 3.- Young section, not fully vined in.
 4.- 5 samples counted.
 5.- 2 samples, outside bee cage.
 6.- 5 samples, inside bee cage.
 7.- Selected 'high population' sample in bee cage.
 *.- Calculated rate in bee cage.
 Some water damage.

Table 2.- Fruit Set per Square Foot in Searles Cranberry Vine, 1946 and 1947.

Marsh	Rodger Cranberry Company		Biron Cranberry		Cranberry Lake Lev. Co.		Midwest Cran. Co.		Averages		Extremes		Averages for 4 years
	1946	1947	1946	1947	1946	1947	1946	1947	High	Low	High	Low	
Section	R. Jumbo	Res. 3d B. Jumbo	A-63	A-64	B-65	N-2-7	C. 3-Ac ⁸ S. 3-AO ⁸	1047					
Sample Number	13	17	19	20	21	22	23	24	25	26			
Number of uprights not blooming	3.9	34	37	37	37	294	317	270	253	286	308	376	330
Number of uprights blooming	149	177	160	156	208	48	96	134	172	63	113	288	131
Total number of uprights	458	517	467	462	532	340	373	404	425	351	421	592	451
% of uprights blooming	33	34	34	34	45	14	25	33	41	18	27	45	27
Uprights having 1 flower	25.6	16.2	16.4	16.4	12	1.6	2.4	10.4	11.2	7.2	9.5	25.6	13.6
Uprights having 2 flowers	25.6	15.4	15.6	15.6	8	37.2	25.6	33.6	11.4	6.4	18.3	37.2	21.4
Uprights having 3 flowers	22.8	14.8	14.8	14.8	32	0.4	0.4	4.4	13.6	6.4	9.3	30.0	0.4
Uprights having 4 flowers	54.4	44.8	44.8	44.8	32	4.0	6.4	36.0	52.4	16.0	26.8	54.4	4.0
Uprights having 5 flowers	3.6	6.4	6.4	6.4	16	2.0	10.0	17.6	5.2	2.0	5.7	17.6	0.0
Uprights having 6 flowers	4.0	15.8	15.8	15.8	8	0.0	0.0	1.6	5.2	4.8	5.6	26.4	0.4
Uprights having 7 flowers	12.0	4.6	4.6	4.6	16	0.0	1.2	13.6	39.2	10.4	17.6	56.0	0.4
Uprights having 8 flowers	6.8	18.0	18.0	18.0	8	4.8	4.8	11.2	12.4	6.0	7.2	18.0	0.8
Uprights having 9 flowers	2.8	2.0	2.0	2.0	0	0.0	0.0	1.6	0.0	0.0	2.0	2.0	0.0
Uprights having 10 flowers	2.8	2.0	2.0	2.0	4	0.0	0.0	0.0	1.2	0.0	0.3	7.2	0.0
Uprights having 11 flowers	2.8	2.0	2.0	2.0	4	0.0	0.0	0.0	0.4	0.0	0.3	60.0	0.0
Uprights having 12 flowers	0.0	0.0	0.0	0.0	24	0.0	0.0	3.2	3.2	1.2	3.5	24.0	0.0
Uprights having 13 flowers	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Uprights having 14 flowers	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.5	3.2	0.0
Uprights having 15 flowers	0.0	0.0	0.0	0.0	4	0.0	0.0	0.0	1.2	0.0	0.5	12.0	0.0
Uprights having 16 flowers	0.0	0.0	0.0	0.0	12	0.0	0.0	0.0	1.6	0.0	0.9	2.4	0.0
Uprights having 17 flowers	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Uprights having 18 flowers	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Uprights having 19 flowers	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Uprights having 20 flowers	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Uprights having 21 flowers	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Total number of flowers	266	425	450	450	820	55	94	262	413	161	259	820	300
Total number of berries set	161	276	276	276	248	47	74	155	185	55	107	248	109
% of flowers setting berries	38	41	41	41	30	85	79	59	40	34	41	85	37
Number of flowers per blossoming upright	1.78	1.46	1.46	1.46	3.06	3.19	1.68	1.95	2.39	2.56	2.25	3.06	2.45
Number of berries per blossoming upright	0.68	1.00	1.00	1.00	0.93	1.01	1.26	1.15	0.95	0.87	0.94	1.26	0.90
Number of berries per fruiting upright	1.03	1.25	1.25	1.25	1.22	1.06	1.43	1.31	1.17	1.23	1.23	1.43	1.25
Uprights blooming but not fruiting	52	33	33	33	54	2	3	16	31	18	26	66	34
% of uprights blooming but not fruiting	34	13	13	13	24	3	4	12	18	29	23	41	27
% of berries borne on 1-flower uprights	5	7	7	7	20	82	3	22	9	12	17	82	22
Yield on sampled section, lbs. per acre	51 (b)	102 (b)	61 (a)	70 (a)	185 (b)	32 (a)	67 (a)	123 (b)	9	12	17	82	22

1.- Cold year. Cup count few days before harvest, 192.
 2.- Water Damage symptoms throughout section.
 3.- Cold year. Cup count few days before harvest, 103.
 4.- Frost through centers of beds, 44% of fruit buds in samples killed.
 5.- Single sample in heavy-crop area.
 6.- Severe water injury. Honeybees worked actively.
 7.- Frost through centers of beds, 24% of fruit buds in samples killed.
 8.- Slight water injury in one-third of section.
 (e).- Harvest record.
 (b).- Shipped record.

AGRICULTURE'S GAIN

IF the presidential candidate of the Republican party, Thomas E. Dewey, present governor of the State of New York, is elected, agriculture in general will have a President who is genuinely interested in agriculture. A president who owns and operates a large farm, run on a strictly commercial basis, should have the understanding of all farming problems—problems including costs of machinery, soil and seed problems, and marketing problems. A president who during the Republican convention went on record as favoring the farmer co-operatives will be welcome.

Agriculture in general or the individual farmer does not expect or want more gifts from his government or more restrictions. And he does not want controls placed upon other groups so that the agricultural group may profit. But he does want an intelligent and constructive program. When surpluses arise he wants the matter handled sensibly with least harm possible.

In short, cranberry growers and all farmers would welcome a government agricultural program which would be an assistance rather than a burden.

AMERICA is still the country where there is freedom of thought and action. It should be the hope of all good Americans that this will continue. In fact, it is their duty to see that it does. We can still agree with the song Kate Smith made famous, "God Bless America."

THE picking of a fruit, such as blueberries, vegetables, or even flowers eases mind from the troubles of the world. The sound of a lawn sprinkler is soothing. To those who love the growing of things there is peace in this troubled world.

WEEDING

A deep, green carpet, criss-crossed by ditches, lies the bog,
Its borders dikes of yellow sand with willows by
The black, dead reservoir. For weeks we weed on hands

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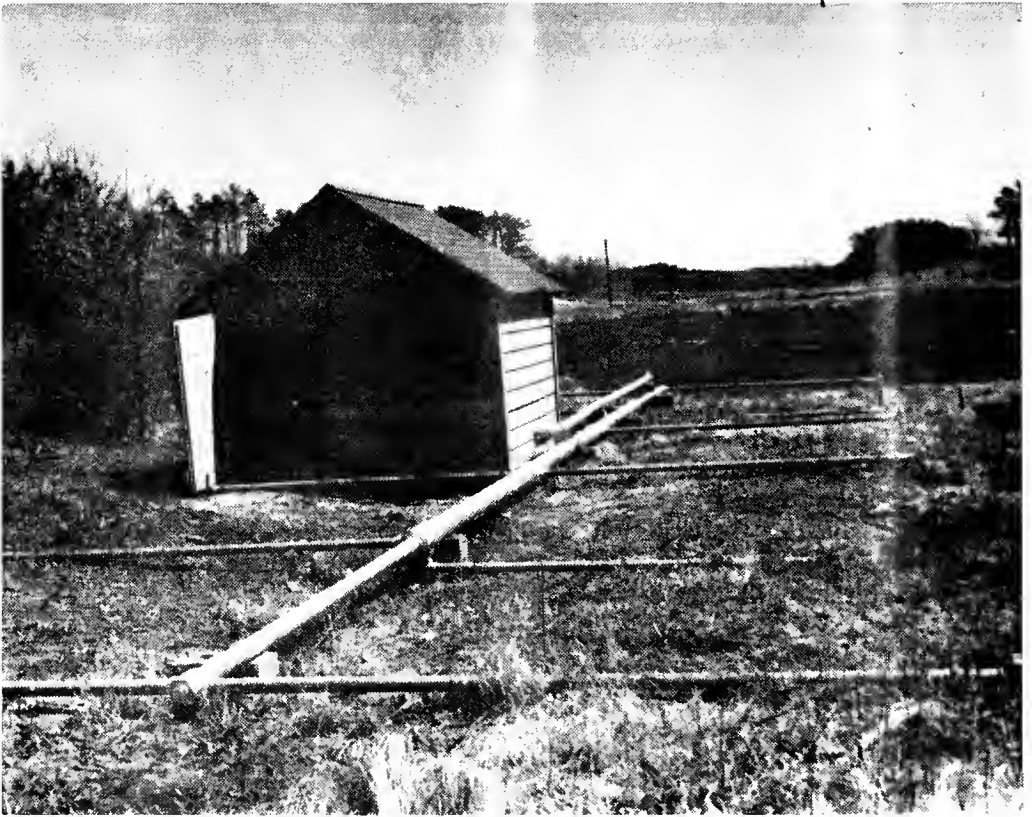
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CHARLES A. DOEHLERT,
New Jersey Cranberry and Blueberry Station
Pemberton, New Jersey

And sensitive knees in dark, sharp vines;
the sun is hot;
Our backs are stiff; in our nostrils the
breeze and pungent smell
Of juices of weeds, which stain our hands
and make the cuts
And scratches smart. Rising from sleep
'neath pines and stars,
Carefree we note the dragon flies and sing,
discuss
All things, and question, puzzle, search.
The summer gone,
Browned, broader in frame, we know our-
selves, each other more;
Most prized, the feel of the soil, our lasting
heritage.

The above is a poem submitted by Kathryn A. Trufant
(sister of Russell A. Trufant, North Carver, Massachusetts).



KENDRICK WELLS

(CRANBERRIES Photo)



C. J. Hall, "Cranerry Magazine", Wareham, Mass., James R. Moore, "Ohio Farm Bureau News", Columbus, Ohio, Governor Dewey, and Bert Livingston, "Florida Grower", Tampa, Fla.

Photo courtesy Agricultural Advertising & Research, Inc.

Your editor, Clarence J. Hall, was honored by being a guest of New York State Governor Thomas E. Dewey, Republican nominee for the United States presidency, at Pawling, New York, July 24, along with about 75 other editors of farm publications from all over the country. Also attending from the cranberry industry was "Bob" Kornfeld, editor of the "Cranberry World", New York City.

The meeting was called to discuss the agricultural problems of the country, particularly to stimulate the production of meat, poultry and livestock products to achieve a stabilized agriculture and to provide Americans with the kind of diet they want.

The meeting opened at 12:30 at the Pawling Grange hall, with the Governor welcoming the editors, newspaper and magazine reporters and others. A bountiful country-style luncheon was served, with delicious baked ham as the main dish. Following the luncheon, the Governor set an example by taking off his coat and asking all others to do likewise, as he said it was to be a "shirt-sleeve" conference, with no formality. His guests were more than pleased to comply, as the day was definitely hot.

Attending the discussion were Senator George D. Aiken of Vermont, acting chairman on the Senate Committee of Agriculture, Representative Clifford R. Hope of

Kansas, chairman of the corresponding House committee; Dean William Meyer of the Cornell College of Agriculture, and Dean William Hagan of the Cornell School of Veterinary Medicine.

Price Controls Discussed

The Governor earnestly solicited advice from the assembled editors in devising new programs for meeting agricultural needs, and he said that the huge grain crop in prospect gave a sound basis for readjustment, if handled properly. There was much discussion as to the restoration of price controls and subsidies. Some editors favored the return of this Government control. Others did not.

(Continued on Page 16)

A Cape Grower Brings Water To His Bogs by Driven Wells

Francis K. Kendrick Plans Eventual Sprinkler System For Bogs Which Have Been "Dry" for 70 Years or More.

One of the first Massachusetts growers to have come to the conclusion that if you do not have any surface water available for frost or winter flowage, the thing to do is to do something about it, is Francis K. Kendrick of East Harwich. In doing something to remedy the situation, he has driven 12 wells on his bogside. With this he can now get a degree of winter coverage and frost protection. His eventual goal is a sprinkler system, supplied by this water source.

Mr. Kendrick has only been a grower the past two years. Prior to that he was a commercial fisherman, operating fish weirs off Chatham, going out to tend them from Harwichport. A heart difficulty compelled him to do less strenuous work and he took on cranberry growing.

He now owns about 16 acres of bog, in various parts of East Harwich. The bog, or rather series of small bog units, on which he is installing the well system, comprises 8 acres, about half a mile from salt water, off Kendrick road at East Harwich. These bogs are old properties which Kendrick bought from the late Carroll Nickerson, built by the latter's father, Warren J. Nickerson, 70 or so years ago. Mr. Kendrick has in his possession deeds dated 100 years ago, which tell of "splitting up" a heavy cedar swamp which was the location of the bogs. The bogs were presumably started some few years after that.

These bogs, long and narrow in shape, are set to Early Blacks and Howes. Weedy, grassy, and rather neglected when he acquired them, Mr. Kendrick is attempting their renovation into first-class properties. He is doing a good deal of the work himself, and when a representative of CRANBERRIES called upon him he was operating a power scythe, mowing

the grass around the shores. Cape growers of not many years ago would have been mowing them by hand. But methods change, even in the more remote sections of old Cape Cod, where cranberry culture began.

There being no brooks or streams to dam, no pond to tap, Mr. Kendrick decided the only way to get an adequate water supply was to drive some wells. He drove 12 wells 14 ft. deep to where they reached spring water supply. The pipe driven is 2" with three foot strainers, 10 feet apart and 10' either side of the main line, making a well area of 10 by 20. Incidentally, he says if he was doing the job over again he would double the size of pipe and strainers. He uses a Chrysler pump, purchased from OCD surplus, made available through William H. Richards, Veg-Acre Farm, Forestdale, Mass. The pump gives a supply of about 400 gallons a minute.

So far, he has used the outfit for winter flooding of one bog, which he can accomplish in about 20 hours. By beginning early in the morning he can cover a portion of the bogs with a partial frost protection—full ditches and a little into the vines in about 12 hours, or in time generally for the arrival of frost.

His discharge pipe is one of four inches and from this the water is turned directly into one of the bogs. His pipe is of the coupled irrigation pipe.

The ultimate goal of Mr. Kendrick is a sprinkler system, when the wells can be operated to a great deal more advantage. He plans to supplement this well bed with two other systems of wells lower down in his chain of bogs.

As mentioned before, this bog is located in a rather isolated section of the Cape, even though not far from main highways. It is surrounded by small, steep hills and as the interview was in progress Mr. Kendrick pointed to the sky, where an eagle was hovering. Five of these noble birds apparently have their nests in the vicinity of

the bog, he said, as they often wing about overhead.

All of which goes to show, if this article has a moral, is that progress and modern methods are coming into effect even among smaller growers in lonely location, and that an old Cape bog which has been strictly a "dry" one for something like three-quarters of a century will eventually have winter flowage and frost protection.

Mr. Kendrick is a member of NCA and of the Lower Cape Cod Cranberry Club.

Ground-Water Resources of Cape Cod

by HENRY N. HALBERG

EDITOR'S NOTE:

The article "Ground-Water Resources of Cape Cod, Massachusetts" was presented before the Cape Cranberry Club in Harwich last March. The author, Henry H. Halberg, is engineer in charge U. S. Geological Survey, Boston, Mass. Lack of space has prevented this article appearing in an earlier issue.

Geograph & Geology of Cape Cod

Some of the most prominent features of New England present topography and geology are the result of glaciation. About 100,000 years ago during the Great Ice Age, known to geologists as the Pleistocene epoch, this section of the country was overridden by ice sheets which had their source around Labrador and Hudson Bay. As the ice sheets moved southward over New England they planed down the rocks and soils and picked up the loose materials, carrying them forward to be deposited later as filling in old rock valleys such as the Connecticut Valley. In central and northern New England the general topography was not changed much; but in eastern Massachusetts and Rhode Island it was changed considerably in many places, owing to the filling of the pre-glacial bedrock valleys and deposition of hills of material known as moraines and drumlins.

Cape Cod is part of what is called the Atlantic Coastal Plain. It is underlain by interbedded sands and clays of Cretaceous age, which are much older than the glacial deposits, though much



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younger than the New Bedford bed-rock upon whose seaward-sloping surface they rest. The surface of the Cretaceous sediments was hundreds of feet below the present sea level during the glacial epoch and the glaciers overrode this low area and dropped their loads of "Glacial" material, building up the Cape to its present level. The old bedrock beneath the Cretaceous sediments is at an unknown depth, but is at least several hundred feet below the surface. A well put down in Provincetown was drilled 420 to 450 feet without hitting bedrock. Near Woods Hole a seismic survey indicated bedrock to be almost 300 feet below the surface.

In the Cape Cod area the last of the glaciers reached a line as far south as Martha's Vineyard and Nantucket, and probably eastward into the Atlantic, before its advance stopped. The ice then retreated, dropping a part of its load on the islands. It stopped again on the Cape in its retreat and formed a moraine or ridge-like deposit of glacial drift. The prominent range of hills on the south side of Cape Cod Bay, that is, along the north side of the Cape from Sandwich to Orleans, and the hills on the east side of Buzzards Bay are moraines formed this way. Such hills are formed when the ice melts as fast as it advances, so that its forward edge occupies the same position for a time and

the debris carried by the ice is deposited in a narrow ridge instead of a broad plain. The material in the moraines is called till. It is composed of an unsorted heterogeneous mixture of boulders, sand, gravel, silt, and clay.

East of the ridge of hills along the east side of Buzzards Bay and south of the ridge of hills along the north side of the Cape is a plain of outwash material called the Mashpee Pitted Plain. Outwash sediments are deposited by melt waters flowing from the ice, in this case from the ice as it was forming the two moraines. The running water sorts the materials and lays them down in beds of silt, clay, sand, and gravel—the finer sands, silt, and clay traveling the greatest distances.

Another similar area is the land between the hills on the north side of the Cape and Cape Cod Bay. Also, just north of the Canal, is another outwash plain, extending from Sagamore to Wareham and north about as far as Long Pond. Northeast of here, toward Plymouth, are hills of till made up of unsorted material similar to the other moraines.

Ground Water

Source and Occurrence

The source of most ground water is rain or snow falling upon the land surface. Some of it is evaporated again or is used by plants and returned to the atmosphere. Some of it runs off into bodies of

surface water. The remainder is absorbed by the soil and seeps down through a belt of incompletely saturated soil and rock material known as the zone of saturation, where it moves slowly to some spring or seep at a lower elevation. This zone of saturation is the main body of ground water from which water can be drawn. Its upper surface, where not confined under pressure by a clay bed, is known as the water table and is the level at which water will stand in wells tapping the zone of saturation. A water-table bed is, therefore, one in which the upper surface is not confined by an impermeable stratum, such as clay, and the water in it is received by percolation from the land surface. Most of the ground water on Cape Cod is found in this type of bed.

In some places a body of ground water is "perched" on a local impervious stratum above the water table which separates it from the main body of ground water. In this case a "perched" water table exists, which will be at a different elevation from the main water table.

In some places the upper surface of a water-bearing bed is in contact with a confining impermeable stratum which separates this lower water-bearing bed from the water table bed above. This lower, or artesian, bed does not receive its water by vertical percolation from the surface, but by

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lateral percolation from some point of higher elevation which may be at some distance away where the artesian bed comes to the surface or is not confined by the impervious stratum. Artesian wells are those which tap this type of bed. Their water level generally stands at different elevations than the water level in wells tapping the water-table bed above. If the point of intake of the water in the artesian bed is sufficiently high above that of the wall, the water can flow out of the well. The Cretaceous beds underlying the glacial deposits on Cape Cod probably contain good water-bearing strata.

(Continued next month)

J. W. Darlington

The cranberry industry suffered a great loss in the death of Joseph White Darlington, Sunday, August 14th. He was killed while flying his own plane near Whitesbog, New Jersey. No details of the fatality are known as this issue goes to press, except that memorial services will be held at the

FOR SALE—323 acres virgin bog land. Located on Pacific Ocean—Vancouver Island, British Columbia. 90 acres cleared, remainder light timber. Inquiries invited % this magazine.

home of Dr. Emlen P. Darlington, New Lisbon, N. J., Thursday, Aug. 20, at 2 p. m.

Fourth Generation Cranberry Grower

Calvin Burleigh, son of Calvin Clement Eldredge and Mary (Atkins) Eldredge, is one of the industry's youngest growers and has one of the longest lines of cranberry men behind him.

The cranberry tradition descends through the maternal side, and Alvin Cahoon, one of the Cape's pioneer growers around 1840, is his great-great-grandfather. Joseph N. Atkins, who was a sea captain as well as bog owner in the 1880s, is his great-grandfather, and Joseph B. Atkins, a grower from boyhood to the present time, is his grandfather. Calvin's mother and father are growers.

Brought up in Harwich, where many of the Cape's bogs are located, all of the various aspects of cranberry culture are second nature to Calvin. He was graduated from Bristol County Agricultural School at Segregansett. A general course of four years included work with soils, fruits and horticulture. This study is splendid preparation for his chosen work. An added interest is his ability to speak before the public. Calvin has spoken

at a county contest held at Amherst State College, also at Grange meetings, and before the Lower Cape Cranberry Club at Orleans.

Nineteen years old and through school, his grandfather gave him 10 to 15 acres of producing bog called the "Punkhorn" bog. This is planted to Howes and Matthews, and has full flowage from a mill pond.

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Gov. Dewey

(Continued from Page 11)

Probably the consensus of opinion was that Government should stay out of the farm picture, except for research, crop reporting, and other activities which do not limit the free initiative of farmers.

Following this two-hour conference, Governor Dewey invited the group to visit his farm, a few miles from Pawling Center, in the beautiful hills of rolling Dutchess County. Here, on the lawn, Governor Dewey informally discussed his own farm activities. He said his entire estate, which is at an altitude of 850 feet in the foothills of the Catskills, comprises about 300 acres, of which 250 are worked as an actual farm, this year chiefly rye, wheat and grass for the about 100 head of cows he maintains. He said the farm was constructed strictly as a commercial farm, and he had the same problems of mechanical equipment, labor, costs of fertilizers and other materials to consider as did any other farmer.

He said the house which he occupies on the farm (a most commodious and beautiful dwelling) was approximately 150 years old and was originally built by a "Quaker" farmer. He said he also operates parcels of land on adjoining property, one of these being at "Purgatory Hill", where General Washington spent considerable time during the War of the Revolution. He said this farm was his "home," as it was here he came to "contemplate."

After this informal discussion he personally conducted the group through his cow barns, where his herd was being mechanically milked, and to other points of interest on the farm. The conference broke up at about five o'clock, his guests returning by chartered busses or private cars to New York City, Poughkeepsie or the Dutchess County Airport.

This was said to be the first time the presidential nominee of a major party has seen fit to invite in editors of farm publications to freely express their views on the agricultural situation of the nation before election—that in the event of his being elected he would have this advice as a background upon

agricultural problems, agriculture being necessarily, he said, "the cornerstone of this or any other nation."

Fresh from the Fields

(Continued from Page 5)

guyma Farms where an inspection was made of their irrigation system and the rhododendron work being carried on at their greenhouses. A visit to the Newkirk-

Chabot development proved very interesting to the growers, who were impressed with the labor-saving machinery used in grading and levelling the new ground which they are preparing for planting.

OREGON

By ETHEL M. KRANICK
The Southwestern Oregon Cranberry Club begun its preliminary

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advertising campaign for the fall Cranberry Festival on July 4th at Bandon. A big booth was built at the city park by officers of the Cranberry Club and its members. Ray Bates, president of the Coos Co-op, assisted Jim Olson, president of the Cranberry Club, in working out the details of a Cranberry Pie and Cranberry Ice Cream booth.

Summer Fish made large attractive signs for the booth, built at the juncture of two roads at the city park. Mrs. Jack Windhurst, Mrs. Rose Erickson and Mrs. Jerry Allenger were responsible for the special decorations. Pies were made for the event by wives of the cranberry growers from frozen cranberries and the return from the sale of the pies is to be used to sponsor a candidate for queen of the fall festival. The cranberry ice cream was the work of a local manufacturer.

The day was perfect and large crowds gathered to enjoy the hospitality of Bandon's fish fry. Hundreds were attracted to the cranberry booth and the demand for cranberry pie and ice cream was far beyond the wildest expectations of those who planned the event to advertise the Cranberry festival. Next festival is expected to far surpass the initial event of last year.

Oregon's cranberry crop is three to four weeks later than last year. Rain for June and July was under the normal and growers will have to do more irrigation on their fields. Dry winds have been hard on new plantings. Some growers are letting poverty grass grow to protect their vines from sand blast whipped up by the wind, while others are planting vines thick

and keeping weeds out altogether. More fertilizers are being used on western marshes than ever before. This causes a heavy vine growth and berries of doubtful keeping quality. It will take several years to determine the outcome of this practice on the industry as a whole. Most growers are inclined to believe that cran-

berries, like all fruit crops, need the addition of plant food to keep up high production.

Oregon crop appears to be normal at this time. Bud set was not complete on the 15th of July and many areas are spotty with frost damage. There is some spray damage on a few of the marshes which cuts production. No insect

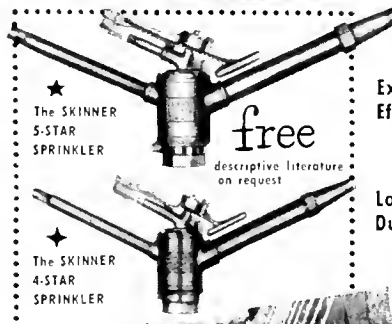
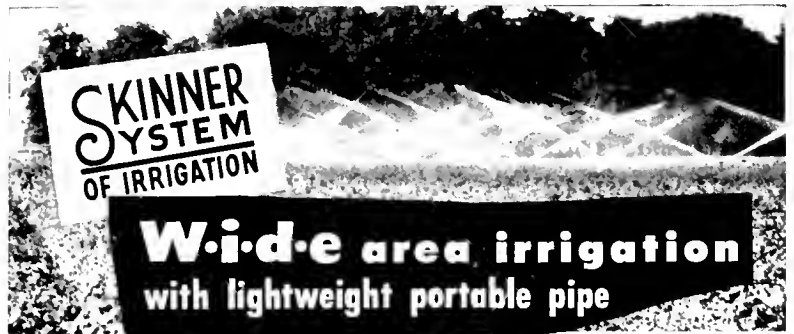
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damage of any consequence has been reported. Bandon area may produce just as many berries as usual, due to many new bogs com-

ing into production on a small scale.

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Mr. and Mrs. H. M. Kranick have purchased the Urann bog south of Bandon. They are giving the bog excellent care and it is beginning to be a beautiful property. The Kranicks expect to get some crop from this property this year. Next year they plan to install sprinkler irrigation and frost protection.



New Wisconsin Group Hires New Salesman

Wisconsin Rapids, Wis.—Charles A. Walmann of Delafield, Wis., has been appointed sales manager of the newly-organized Cranberry Growers, Incorporated, a cranberry sales and marketing organization, it is announced by Bernard C. Brazeau, president of the organization. Walmann will be in charge of sales and merchandising of all cranberries and cranberry products produced by the new organization. He is now in Wisconsin Rapids, where his headquarters and residence will be, and has assumed the duties of this position.

Just prior to his association with Cranberry Growers, Incorporated, Walmann was Northwest district manager for the Hills Brothers company, a large food processing

packing firm, with headquarters in New York, which packs under the Dromedary brand. Included in the Hills line are cranberry products and Walmann is experienced in sales merchandising of not only cranberries but a wide variety of foods, which qualifies him for his new assignment.

Before his association with Hills Brothers, Walmann was territory manager for the A. E. Staley company, Decatur, manufacturers of food products, and prior to that he was on the sales staff of Pillsbury Flour Mills company, Minneapolis. Through these associations he has a wide acquaintanceship in the food manufacturing and distributing fields. He is 40 years of age, married, and the father of three children, one daughter, six, and twin sons three years of age. In recent years he has made his residence at Delafield.

In making the announcement of the appointment of Walmann, Brazeau stated: "We are pleased to announce Mr. Walmann's appointment as sales manager of our organization, as he comes to us with a fine background in food sales and merchandising, and we are certain that he will prove to be a real asset in the cranberry industry in general and our company in particular, and will become a valuable citizen to this community."

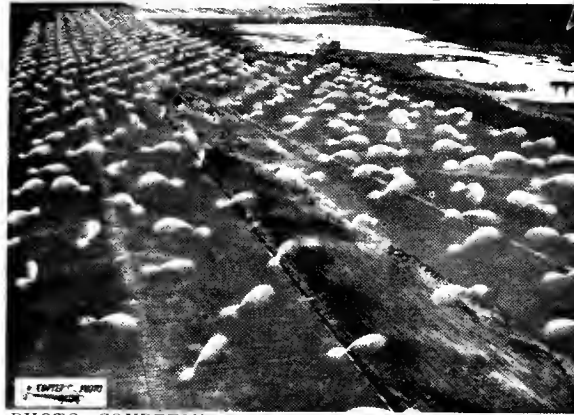
While here, making final arrangements for his connection with Cranberry Growers, Incorporated, Walmann said, "I am highly pleased to be associated with Cranberry Growers, Incorporated and the men who compose it. The progressive merchandising principles of the organization appeal to me, and I shall look forward to a long and happy association in the cran-

berry industry, which is so important to the fine community in which I am privileged to make a home for my family."

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NECSCO Holds Monthly Meeting

The Executive Committee of the New England Cranberry Sales Company held its monthly meeting on Monday, August 2nd, at the clerk's farm in Lakeville.

Following the supper which preceded the meeting, the committee considered and acted upon the various matters as presented.

Report was made that the Aerial Survey of bogs had been completed and that pictures were nearly ready for distribution to members.

Samples of cellophane bags to be used this season were distributed and approved.

Other matters relative to the program and policies of the Company were individually acted upon, and mention was made of the American Institute of Cooperation meeting to be held at Amherst on August 30th.

The clerk reported that several applications for membership had been received during the past month.

Report of these monthly meetings is to be submitted to the Board

of Directors at a meeting to be called the latter part of August.

Searles Cranberry

(Continued from Page 6)

two minimum points on this curve (poorest set, samples 6 and 13) were mentioned as representing readings in water-injured areas.

It is significant that the two maximum points (samples 22, 23) likewise represented areas that were severely damaged by water (see table 2); the remarkably high set in these vines was attributed largely to honeybee activity (2). The third highest percentage set (sample 24) occurred in heavier

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bloom on one of the same sections the following year, where honeybees were again extremely active. Except for the five extreme cases just mentioned, the flower set varied rather uniformly between 25% and 50%. Only two of the 10 samples having 150 or more berries per square foot had sets lower than 40%.

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The inference appears inescapable that the size of crop, as measured by numbers of berries set, was strongly influenced by the numbers of uprights blooming, which in turn depended on autumn "fruit-bud set". Exceptions were almost invariably associated with injuries that affected dormant fruit buds or fruiting uprights before bloom, detectable as soon as they occurred, or with unusually poor set of the bloom which as a rule occurred in conjunction with water injury. Occasional fruit buds that had been killed before coming to bloom were encountered, but the numbers were negligible except where directly traceable to water or frost injury.

Determination of losses of berries after setting was not attempted. From general observation, however, it may be safely stated that total losses from insects and diseases were on definitely lower planes than those caused by water injury (the first three years) and frost injury (chiefly in 1947).

A word may be added regarding the density of stand of uprights.

While the general trend was for yields to increase with increasing numbers of blooming uprights, no samples were taken in areas having "excessive" vine growth. Vines in this condition characteristically bloom heavily, but set poorly. The "high population" samples cited in the tables verged on the excessive-growth state, but probably because of exceptionally favorable pollination relations, chanced to set well. These selected samples probably cannot be safely interpreted in terms of optimum numbers of uprights per unit area under normal pollination conditions.

Summary: Records made under a wide variety of field conditions indicated that the Searles cranberry in Wisconsin infrequently produces flowers on more than 50% of the uprights, but that under favorable conditions at least 35% may be expected to bloom. On good soil reasonably free from weed growth, upwards of 400 uprights are produced on a square foot; in most seasons 140 or more are likely to set fruit buds in the autumn, and to bloom the follow-

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A STATEMENT

The New England Cranberry Sales Company has consistently recognized the importance of allocation of the cranberry crops.

Its members were among the first to cooperate in Canning Contracts and Purchase of Stock in the Canning Cooperative and during the past ten years have made several changes in their methods and policies to encourage the processing of cranberries.

When National allocation of the cranberry crop was first discussed the Board of Directors requested its Canning Committee to make a recommendation with reference to this question.

Three meetings of the Committee were held and a report was made to the Board of Directors on June 29, 1945, and a Special Meeting of the Members of the Sales Company was held in Carver Town Hall on August 17, 1945 to discuss this report which read as follows:

"The Canning Committee of the New England Cranberry Sales Company recommends that for the season of 1945 some allocation of the cranberry crop marketed by the Cooperative interests be made as between supplies for the fresh market and supplies for processing purposes.

After reviewing all available statistics of the Cranberry crops for the past five years and other figures relative to the disposition of the crops of those years it is further recommended by this committee that for the season of 1945 the crop to be marketed by the Cooperative interests be allocated on the basis of 40% for processing purposes and 60% for sales on the fresh market.

To arrive at the basis of such allocation it is recommended that a tabulation be made of the estimated crops for the season of 1945 on or before August 1st, such tabulation to embrace the crops of all members of the American Cranberry Exchange (through the State Companies); the crops of the United Cape Cod Cranberry Company and its associated interests; all of the Makepeace Company's interests; all other members of Cranberry Cannery, Inc., including the Pacific Coast Division, and an estimate of prospective purchases of all interested parties; such tabulation to be reported through the offices of the American Cranberry Exchange and Cranberry Cannery, Inc.

It is further recommended that monthly reports of deliveries be tabulated and distributed to participating parties and on or about December 1st a review of the disposition of the crop be made and necessary adjustments in percentages be consummated, under the direction of the Committee of Eight."

Approval of the report was made by a unanimous vote.

A copy of the report was sent to the Secretary and to all members of the Cranberry Industry Committee, so called, whose members were then considering the question.

The offer was apparently rejected, as the Sales Company was not favored with an acknowledgement.

New England Cranberry Sales Company

9 Station Street

Middleboro, Mass.

ing year if not killed in the mean-
time. Blossoming uprights usual-
ly have 3 or 4 flowers if individual
flower buds are not injured after
being laid down in the autumn,
and an average of between one

and 1½ berries when pollination
conditions are favorable. In the
counts recorded here, the sequence
of favorable relations necessary to
consummate the indicated set of
150-plus berries per square foot

occurred only occasionally. The
counts were helpful in pointing to
the causes of losses.

References:

(1).—Bain, Henry F. Blooming and
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(2).—Ditto. Wisconsin's 1945 and
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vol. 12, no. 4:8-11. Aug. 1947; vol. 12,
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(3).—Farrar, C. L., and Henry F.
Bain: Honeybees as pollinators of the
cranberry. CRANBERRIES, vol. 11, no.
9:6-7, 22-23. Jan. 1947.

Figure 1.—Curves plotted from data
in tables 1 and 2, arranged in order of
increasing number of berries set per
square foot (yields).

Table 1.—Fruit Set per Square Foot
in Searles Cranberry Vines, 1944 and
1945.

Table 2.—Fruit Set per Square Foot
in Searles Cranberry Vines, 1946 and
1947.

Cranberry Growers . . .

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obligation, prepare a survey of your property and
needs.

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Drought and Quality Berries

The following is a report of the
"Committee on Keeping Quality",
of the New England Cranberry
Sales Company as it appeared on
the monthly calendar issued by
that co-op. The committee con-
sists of Russell A. Trufant, chair-
man, George E. Short and Joseph
L. Kelley.

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New England Representative

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"The next thing will be August Drought. This is an overheating and over-drying of the fruit. It weakens the berry so that it becomes the prey of minor ills and infections which would not affect a sound berry. This was the cause of most of our quality trouble last Fall. The remedy is, of course, water—in the right place, in the right way, at the right time.

"Under heat and drought conditions, it takes an enormous quantity of water to keep the vines from drying up. This water has to be where the roots can get it. In a bog underlain with sand or gravel, with a minimum of peat, holding the ditches high will usually get the water to the roots. As the depth of peat increases, it is more difficult. Many of our bogs have a heavy, deep peat bottom which water passes through very, very slowly. Some experiments show that the effect of high ditch water reaches only very few feet away from the ditch.

"Here and there there may be a bog so level that the sand can be flash-flooded at night just enough to wet all the sand without drowning any berries. On the majority of bogs, you would lose as many berries by drowning as you save from drought. So between early bloom and the coloring of the berries, this is very dangerous. And that is just the period we are interested in.

"The ideal answer to August Drought seems to be controlled sprinkling. Unless you can keep your ditches filled in a dry time with assurance that the high ditch-water will reach the middle of the sections, it is the best remedy. It does not necessarily require a complete permanent sprinkling system to cover the whole bog at one time. A single run of pipe with a few spray heads can be shifted about to get full coverage. Charge the berries you walk on against the saving over a permanent in-

stallation. Dr. Chandler is now doing some work with tensiometers, devices for indicating the moisture conditions in the soil. We hope that in a season or two he can tell us that when the device shows a figure of so-and-so, it is time to start the sprinklers. Meanwhile, if the sand is dry over half an inch down, it is probably time to do something about it.

Dr. Franklin reports that moist sand, in addition to furnishing the needed moisture for the vines, actually lowers the temperature in the vine zone by several degrees, through evaporation. So proper moisture control is a defense against both heat and drought. This is the next step in securing quality in the berries we ship."

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WITH so much publicity as regards cut prices on the 1947 crop pack of canned sauce, even though we feel that it is not necessary to assure our growers, nevertheless we make public announcement that Minot Food Packers, Inc. have not reduced prices, nor did they offer any promises when quoting their prices on Minot brand and Conway's brand of Cranberry Sauce packed from 1947 crop berries or 1946 crop berries.

OUR policy, at all times, is that the growers should receive a "just price" for their cranberries and we, in turn, offer the canned product at a "just price" to the distributors.

*It will pay you **DIVIDENDS** to deal with*

MIN-OT FOOD PACKERS, INC.

BRIDGETON

NEW JERSEY

Represented by

BEATON'S DISTRIBUTING AGENCY

WAREHAM, MASS.

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Then here are FOUR valuable hints.

1. **Watch keeping quality**
2. **Be sure to order boxes in plenty of time.**
3. **Sort, grade and pack with care**
4. **Ship through the American Cranberry Exchange**

Good quality berries, well sorted, packed and shipped to the right place at the right time—that is what buyers expect of the American Cranberry Exchange. Why not join in with us and ship to the markets we have built up and expanded over 51 years?

The name EATMOR on your berries this year, as last year, should mean premium returns for you. Outlets for hundreds of cars can't be built up overnight. So join the cranberry growers cooperative—for profit, as well as for the ever-increasing service offered by our State companies.

The American Cranberry Exchange, Inc.

The Cranberry Growers' Cooperative

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Marketers of

The logo for Eatmor Cranberries features the brand name in a bold, serif font. "Eatmor" is positioned above "Cranberries", and both words are contained within a solid black rectangular background. The text is white, creating a high-contrast, visually striking effect.

**Eatmor
Cranberries**

Chicago

New York

Cranberries



CAPE COD
NEW JERSEY
WISCONSIN
OREGON
WASHINGTON



A YOUNG GI SMILES CONFIDENTLY.
(Story Page 19)

(CRANBERRIES Photo)

What's in store for you, *Success or Failure?*

In most cases your destiny is in your own hands. You either make or break yourself.

There is a way to overcome it and that is to become a member of this excellent Cooperative and relieve yourself of all the worries of marketing your berries, just as the great majority of New Jersey growers are doing.

We suggest paying us a visit and permit us to explain our plan of operation. However, if you can't come in, use the mails, or better still, phone us. It will pay you to do so.

Growers Cranberry Company, Inc.

Oldest Cooperative in the Cranberry industry
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The Wisconsin Cranberry Sales Company is celebrating its 42nd year of leadership, progress, and prosperity in the cranberry industry.

Wisconsin Cranberry Sales Company

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Cranberries

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Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE
Extension Cranberry Specialist



Probably the less said about the disastrous August heat wave the better. However, just for the record, if pre-cooked cranberries have any commercial value, Massachusetts growers are in the market. The extent of damage will not be known for some time, but, as of September 3, the loss from sun scald is placed at approximately 10%. Temperatures reached 107° on the upland near the bog at the Cranberry Station, Friday afternoon, August 27, which is the highest ever recorded, according to Dr. Franklin.

Now for a few suggestions for the early fall season. No doubt most growers received the announcement of the fall radio frost service sent out by County Agent "Joe" Brown. It was merely coincidental that it reached growers at the height of the heat wave. The radio schedule is the same as for last spring; namely, frost warnings will be broadcasted over Station WEEI, Boston, 590K., at 2:29 p. m. and at 8:59 p. m., whenever frosts are expected. The telephone frost warning service offered by the Cape Cod Cranberry Growers' Association will function as usual. If there are growers who wish to subscribe to this service, they should contact Miss Thelma Laukka, Assistant Treasurer of the Cape Cod Cranberry Growers' Association, here at the Cranberry Station.

Dr. Franklin strongly urges growers to flood their bogs immediately after harvest for approximately one week. This should be done if water is available, whether or not the floats are picked. We might refer to this as a **fall clean-up flood**. The purpose is to rid the bog of as much of the harmful trash as possible, which otherwise collects on the bogs, causing the

vines to smother and die. Apparently, the airplane-propeller-type float boat is the most suitable for this type of work, according to Dr. Franklin.

If the cranberry girdler is a problem, growers are reminded that the fall flood to control this pest is a highly recommended practice. It generally isn't necessary to flood for the girdler oftener than every other year. However, if girdlers are abundant and growers have a good crop of Howes that haven't been picked, Dr. Franklin suggests flooding the bog for a week, beginning approximately September 15 through the 26th, as recommended on the chart.

Another fall task is checking the bogs for the fungous disease known as **Fairy Ring**. Control measures for this particular disease are not outlined on the Insect and Disease Chart. The disease is recognized as those unsightly circular areas of dead or dying vines that may range from a few feet to several rods in diameter. Dr. H. F. Bergman recommends the copper sulphate treatment, using 10 lbs. of copper sulphate crystals dissolved in 100 gals. of water, applying 1 gal. to a square foot of bog. Be sure to treat approximately 3 ft. outside the infested area and 2 ft. inside the circle.

The subject of fall fertilization is worthy of the growers' consideration. There is considerable research work necessary before definite practices can be recommended, according to Dr. F. B. Chandler. However, growers in the meantime might try the following suggested fall fertilizer practices. Dr. Chandler believes that a high phosphorus fertilizer applied in late October or early November when growth has practically terminated is good practice. The 1-2-1 ratio, which

represents one part of nitrogen, two parts phosphoric acid, and one part potash, is the formula recommended. This would be equivalent to a 5-8-7 or a 4-8-7 complete fertilizer. The amounts would vary between 200 lbs. to 500 lbs. per acre, depending upon the condition of the bog. One of the chief advantages of fall fertilizer applications over those made in the spring or summer is reduction of the weed problem. If growers are interested in doing some of this work, it is suggested that they contact Dr. Chandler for further information.

The harvest period is here. We know that competition will be keen for our share of Mrs. Consumer's dollar. Let us be sure that we as growers furnish our marketing representatives, both fresh and processed, with finest cranberries at our command.

SCOOPS and SCREENINGS

Our most sincere if belated congratulations to Russell Makepeace of Wareham, so widely known throughout the industry, upon his election to the Board of Directors of the New York, New Haven & Hartford Railroad. If "Rus" puts as much energy into his work on the board when required (and we are sure he will) as he does into his cranberry activities, the New Haven will have gained a most valuable man.

J. Richard Beattie, Massachusetts Cranberry Specialist, broadcast over radio stations, WHDH on August 23 and over WBZ August 28. His subject, of course, was Cranberries.

It is pleasing to note that Mrs. Miriam Parrish of Long Beach, Washington, took a trip through Alaska and talked cranberries to about everybody she came in contact with.

Here's a personal: It was indeed a pleasure to have met so many old friends at the annual meeting of the Cape Cod Cranberry Growers Association, August 17th. (C.J.H.)

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of September, 1948—Vol. 13, No. 5

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Rainfall for the month of August as reported at the Cranberry Experiment Station, East Wareham, was but .75 of an inch, one of the scantiest on record.

The hottest day as recorded at the bog was August 27, when the temperature in the shelter was 100. Temperature on the bog was 107. At Carlisle in Middlesex County at the bog of the Lowell Cranberry Company it was 112.

The extreme dryness and intense heat has injured most crops, including cranberries. Dr. H. J. Franklin has estimated the Massachusetts crop will be cut by at least 10 per cent (as of Sept. 6.) Other estimates range higher.

The extreme dryness continued into September, and of September 6th there was no change. Dr. Franklin has said that berries will be of smaller size because of the dryness.

The crop is late, but some picking was expected to start the week beginning September 6th.

WISCONSIN

Prospects at the end of August, according to "Del" Hammond, general manager of Wisconsin Cranberry Sales Company, were that 175,000 barrels might be high. This would depend upon the weather for the next four weeks—whether there was any rain or if frost occurred.

The state has been very dry and the water situation critical. There were two serious forest fires, one in the Mather-Warrens area. This started August 21 and four days later was still burning. The marshes endangered in that area included

those of Melvin Moe, Alex Grimshaw, Mrs. F. J. Hoffman and Harold (Happy) DeLong. In the Cranmoor area the fire danger included the Oncour marsh, Elm Lake Cranberry Company, and the marsh of Gerald Brockman.

Hammond put the keeping quality as "average or better", but the fruitworm damage is severe in many sections.

This is the first year in four years the harvesting time appears normal, and picking was expected to start September 12th to the 15th.

The Wisconsin Cranberry Sales Company sponsored the only cranberry exhibit held at the 100th anniversary at Milwaukee August 7th to 29th. A million and a half people visited the fair and 200,000 visited the cranberry exhibit and showed great interest in it. The display included model marshes in the building stage, after a year of growth, and in the harvesting stage. There was also a display of fresh fruit. Recipe books were distributed and proved very popular.

NEW JERSEY

Temperature. August was a very cool month in New Jersey in spite of the extremely hot spell during the last week of the month. From the 1st to the 24th the average daily mean temperature was three degrees below normal. This deficit was made up partially during the five days beginning on the 25th when the maximum readings were all 90° or higher. Shelter temperatures of 97° were recorded on both the 26th and 27th, but bog temperatures were a good deal

higher than that. At the month's end the average daily mean temperature at Pemberton was 73.4°, which is almost exactly 1° below normal for the month. During these five days, many cranberries were severely burned or "scalded" by the intense sunshine. Some growers estimate that 25 per cent of the berries were injured in this way.

Rainfall. Rainfall during the first three weeks of August was more than sufficient for any needs. How to get rid of the water fast enough was the main problem on many bogs. Some bogs which have new diversion canals, such as the Clayberger bogs, were in a distinctly better condition than they have been in recent wet summers. When the rainfall was all added up, it totalled 7.14 inches or 2.36 inches more than the normal August rainfall of 2.36 inches.

WASHINGTON

August was a rainy month, the season being the wettest since 1893. Crop prospects were improving (as of August 25th) even though the season was late.

The Grayland Field Tour was held on August 21 with an attendance of about 250. The group visited bogs which had things of interest to be seen. The tour was arranged by Nolan Servoss, Pacific County Agricultural Agent. Dr. T. A. Merrill of the State College of Pullman and D. J. Crowley, superintendent of the Cranberry Station at Long Beach, gave explanatory talks at the bogs where stops were made. Prior to the trip the group met at Grayland com-

(Continued on Page 17)

Annual Meeting of Cape Cod Growers Is One of Most Interesting in Years

Attendance Hears Fine Talks and Crop Forecast More than 200 Present.

At the annual meeting of the Cape Cod Cranberry Growers' Association, East Wareham, Tuesday, August 17, the 1948 cranberry crop forecast was given by C. D. Stevens, U. S. Dept. of Agriculture, Bureau of Agricultural Economics, Boston, as 874,000 barrels for the country, the second largest crop on record, exceeded only slightly by that "bumper" of 1937.

It was divided as follows: Massachusetts, 550,000; New Jersey, 84,000; Wisconsin, 175,000, a record crop for that state; Washington, 50,000, also a record; Oregon, 15,600.

This time, Mr. Stevens said it was easier to make a report for Massachusetts because a third more growers sent in their estimates than ever before. The Blacks were down and the Howes up from the average for that state, he said. He added it was his pleasure to have given this report to Massachusetts growers for 21 years.

Meeting Attended by More Than 200

The meeting was attended by more than 200. It was ably presided over by Russell Makepeace, A. D. Makepeace Company, Wareham, who for the second time was conducting a meeting of this group.

The following slate of officers was elected (mostly re-elections): President Makepeace, first vice president Melville C. Beaton, Wareham, second vice president, Edward Bartholmew, Wareham, secretary, Gilbert Beaton, Wareham; treasurer, "Harry" Hornblower, of Boston; assistant treasurer, R. Thelma Laukka, West Wareham; directors, Dr. Henry J. Franklin, director Cranberry Experiment Station, East Wareham; Harrison F. Goddard, Plymouth; George E. Short, Plymouth; Orrin G. Colley, Plymouth; Emil C. St. Jacques, Wareham; Robert S. Handy, Cataumet; Frederick A. Eldridge, Dennis; John Harriott, Hanson; honorary, Chester A. Vose, Marion.

The first part of the business meeting was given over to the readings of the reports of the secretary and treasurer, whose records were accepted. Then, J. Richard Beattie, state cranberry specialist spoke upon the frost warning service. He said the service reached 214 growers, whose holdings covered 9,000 acres. He continued 40 warnings in all were given out by eight distributors, and considering the small number performing this service he asked the growers to be at home when the warnings were apt to be given out.

Report On Publicity

William H. Wyeth, Wareham, chairman of the public relations committee of the association, addressed the meeting. He spoke of the success of the 100,000 little "Cranberry Quizzes" prepared by Miss Ellen Stillman of NCA and Clarence J. Hall of CRANBERRIES. He asked for additional committee members to be appointed to act to make decisions should an emergency arise. He asked this committee be composed of men not associated with any marketing agency. This committee is to be appointed later.

Then the president introduced Dr. Franklin who spoke upon an educational program for youths interested in cranberry growing. He discussed the desirability of helping these young men. President Makepeace read a letter from Dr. Ray Van Meter, president of the University of Massachusetts at Amherst, which said the college was ready to cooperate in this proposal.

Talk on Gypsies

Harry L. Ramsey of the insect department of the State Department of Conservation gave a history of the gypsy moth control from 1890 to the present time. He described the use of DDT and warned very plainly it should only be used as directed by the manufacturers. He said it has been proven harmless to most individuals, birds, animals and bees.

He said it had proven completely effective in three heavily-infested

areas upon Cape Cod when applied by air. He emphatically stated that if the towns of Southeastern Massachusetts appropriated funds, the State of Massachusetts would help financially.

National Cranberry Week

"Burt" Nevins of New York, who has been engaged by NCA to promote the "National Cranberry Week," October 18 to 23, gave a report of the plans for publicity and what had already been accomplished. Cranberries, he said without any trade name or from any particular area are to be stressed, preceding and during this week so that the entire industry will be promoted. The plans include trade papers, women's magazines, posters, radio, the featuring of cranberry dishes in hotels. The New York, New Haven & Hartford Railroad will have a special cranberry display in Grand Central Station at New York City. There will be receipt contests. A National Cranberry Queen will be chosen. Cranberry hats and scarves (for women) will be introduced. Sammy Kaye of radio fame will introduce a cranberry song on his coast to coast program. Arthur Murray, the famous dancing teacher will invent and teach the "Cranberry Hop." Nevins played two of the records which have already been made, one of these being called "Down Cranberry Lane."

Dr. H. J. Franklin spoke from prepared notes, mentioning that the fall cranberry army worm would attack, first having mentioned this in his 1938 bulletin. It has now attacked Massachusetts bogs. He then introduced Fred Hepburn of New England Cranberry Sales Company and Ferris C. Waite of National Cranberry Association, who both spoke upon insecticides.

Among the guests who spoke briefly were Congressman Donald W. Nicholson of Wareham and State Senator Edward C. Stone of Osterville.

State Commissioner of Agriculture John Chandler told the growers he was interested in their problems and would help them to obtain their objectives.

stock-room, the kitchen was the shipping room, and the dining room was used by a bookkeeper. The company has expanded from year to year and now is in a modern building with 10,000 square feet of floor space, with everything up to date.

In Mr. Sawyer's early days there were two companies manufacturing insecticides. Now, of course, there are many. He recalls that in those early days two or three sprays on an apple tree would produce splendid fruit. Now he says it takes from ten to fifteen, and even then results are not always as desired. So many new insecticides and fungicides are being tried and sold, he says, that he often wonders what it is all about.

Used Horse and Sleigh

Mr. Sawyer says that his sales trips were varied and most interesting. On many trips into Maine he would use a horse and sleigh and it would take him two weeks or more to cover a territory which is now done in two or three days. The territory he travelled took in not only New England, but elsewhere, including Michigan, New York state, and other areas too numerous to mention.

He mentions that his good friend "Bill" Wyeth (CRANBERRIES, June 1948), now a resident of Wareham and operator of bogs at Greene, Rhode Island, and Marshfield, Mass., came into the insecticide business after him, and, like himself, came up the "hard way". "Bill", he says, was very successful, as he could not have been otherwise because of his honest dealings and the general respect for his ability and judgment.

Mr. Sawyer has occupied about every position his company has to offer. As well as general manager, he is treasurer. He is also treasurer of the Arlington Storage Warehouse which is a part of the Frost company. He is secretary and director of the Southland Fruit Company, which has large citrus holdings at Orlando, Florida.

In conclusion, Mr. Sawyer wants to mention that the Frost Insecticide has, in part, been successful because of the splendid cooperation of its employees.



John F. Sawyer, Frost Insecticide Company, Arlington, Mass., Is "Dean" Of Insecticide People in N. E.

This is the story of John F. Sawyer, general manager of the Frost Insecticide Company of Arlington, Massachusetts. Mr. Sawyer is now the "dean" of insecticide people in New England.

In the spring of 1903 he had to make a decision which shaped his future. He was living in Reading, Massachusetts, and going to Boston on the train one morning he met Prof. A. H. Kirkland, who was an entomologist with the Bowker Insecticide Company. He was asked to take a position with that company, as Prof. Kirkland said the future in the insecticide business was excellent, which Mr. Sawyer says he later found to be correct.

It took a lot of courage, he said, to go into practically a new kind of business, as he had previously

been in hardware. He was with the Bowker company from March, 1903 to March 1908, when Mr. Frost asked him to take charge of the sales department with his company, which was incorporated in 1906. Harold L. Frost, who was widely known at the time, was in the forestry business, which he knew from every angle. Many wanted to buy equipment, which was the reason the Frost Insecticide Company came into being.

Mr. Sawyer says there are many problems in his business and these are increasing each year, "so a fellow's mind is occupied."

Frost Company Began Small

At the time he came with the Frost company it owned an apartment house on Court street in Arlington. The pantry was the

COMMUNICATION

Mr. M. L. Urann,
President, National Cranberry Association,
Hanson, Mass.

Dear Mr. Urann:

This is to bring to your attention the "World Charter Service", an agency for the shipment of Cranberries by Airfreight in large cargo planes.

As the result of an intense survey of about 1 year, there has been placed at my disposal all the available equipment of the exact type and kind which now makes bulk shipments both practical and economical.

As this is the first time in history that it is possible to market an entire crop with direct shipments to all inland markets in a matter of hours, we therefore term this new development in marketing and transportation, "Operation Cranberry".

Our shipping points are Plymouth, Hyannis, New Bedford, and Providence airports. You or Mr. Mann (sales manager) can call me any time, day or night, specify the time, and the plane will be at the airport to pick up your load. All shipments are F. O. B., therefore shippers are obliged to load the plane.

Anticipating the abandonment of other forms of transportation, the old for the new method, this service was created for the benefit of

the cranberry industry. Heretofore, berries shipped in railroad cars took many days to reach their destination and not infrequently were found upon arrival to be in poor condition.

Airfreight means Airfresh and Harvest-fresh, which will arrive in better condition and result in better keeping quality; with a better consumer condition there will be a better consumer acceptance at a higher price and a better return to you. You can now take advantage of sales strategy in a quick, safe, and profitable manner. Con-

sider the profit in an increased turnover in capital investment, reduction of inventory, loss from spoilage or shrinkage, and a lower handling cost. With direct shipments to inland markets you can avoid price fluctuations and supply a market in time when holiday buying is high and needs little stimulation.

Of course, larger shipments means less cost; however, here is a small example: Plymouth to New York or Newark, 7,200 lbs. @ 3½¢ a lb. or \$250.00.

(Continued on Page 19)

VERNON GOLDSWORTHY

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PUSH CRANBERRIES ALWAYS

THERE are two main events coming up in October, and they are quite closely related. We are referring to the disposal of the 1948 cranberry crop and National Cranberry Week. Of course there is a third, which is the harvesting of the crop, but that is always accomplished in one way or another.

It would seem to be the duty of all of us interested in the cranberry industry to push this cranberry week with its widespread publicity in every possible way and at every possible opportunity.

OLD MAN WEATHER

ONCE again, Old Man Weather has played a joke upon cranberry growers. He has been uncertain in about every area. In Massachusetts, not enough rain. In others, too much. Then he has taken a scald of berries in some areas. And frosts are coming up presumably. As we have said before, the only certainty about cranberry growing is uncertainty.

YOUNG MEN

ONE thing encouraging about the industry is that so many young men, many first, second, third, and even more generation growers, are still determined to stay in the industry. We might call special attention to our cover this month, of the young GI who is going to make the cultivation of cranberries his career. With such spirit the industry will not die.

A MODERN KITCHEN

WE saw a movie the other night which disclosed the marvels of a truly modern kitchen. There were all kinds of gadgets for serving food, either fresh or processed. The young housewife, as portrayed, opened kitchen cabinets at a touch of a finger. Ice cubes slipped out as she sprayed them with a new type of "gun". She apparently had at her disposal, in her kitchen, enough things to operate a modern battleship. In fact, she had about everything which made for more convenience. All this should lead to better eating habits. In this arrangement meals were prepared and served in more appetizing

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CHARLES A. DOEHLERT,
New Jersey Cranberry and Blueberry Station
Pemberton, New Jersey

form. Cranberries well may benefit by such improvements in the kitchen of the housewife, young or old.

TO THE OLDER GROWERS

WE have said a lot about young cranberry growers recently. A thought should be given to the older ones, too. They have plenty at stake. Many have been in the cranberry game, and "busy as Cranberry Merchants", to quote an old saying, most of their lives. They have weathered the years—fought battles with frosts, insects, market conditions, and have seen many, many changes in insecticides, methods of bog making, means of shipping cranberries. We take our hats off to the old-timers who are still hanging on.



A view of the attendance at the Cape Cod Cranberry Growers' Association Meeting, August 17th. Frank Crandon, Acushnet, sits at left with folded arms. In the immediate foreground, from left to right, are Lester Haines, American Cranberry Exchange, and Lester Haines, American Cranberry Exchange.



A news Photog snaps a group on the State Bog. At left Mrs. Tweedy of Attleboro looks at the camera. At extreme right Dr. Franklin points to the berries. (CRANBERRIES Photo)

Cranberry Fireworm And Blossom Worm

WM. E. TOMLINSON, JR.
N. J. Agricultural Experiment
Station

Reprinted from the Proceedings of the
78th Annual Meeting, American Cran-
berry Growers' Association, January 31,
1948.

During the past few years, due to a combination of causes both biological and cultural, fireworms have been more troublesome than usual. This is particularly true of the dry-bog species which have responded quickly to our recently revised ideas of proper winter flooding practices. Winter flooding has generally been shallower and has been removed earlier in the spring. One or both of these conditions favors the increase of three of our four species of fireworm, namely, the yellow-headed, the spotted, and the red-striped fireworm.

I will not go into the pros and cons of different flooding practices, but I want to point out, however, that these changes may introduce factors that may be harmful to you unless you are aware of the facts and are prepared to take the necessary measures when they do occur.

Fireworm injury is marked by a conspicuous webbing together of uprights. The common name, fireworm, arose from the fact that bogs or areas severely attacked had the appearance of having been burned, but the spotted fireworm never browns a bog even in heavy infestations.

A brief life history of the above insects in relation to control practices and a means of their identification are a necessity, since control measures are aimed at hitting the insects at the most opportune time, which may vary considerably with the species. Also the misidentification of the species involved may be the cause of unnecessary apprehension or control practices. A simple and safe rule to follow is that those species found feeding between May 15 and 25 are the species causing the most concern. The spotted and red-striped fireworms do not feed dur-

ing that period, and their injury is usually insufficient to justify the time and expense involved in making special applications for their control.

Yellow-headed Fireworm

Our most destructive fireworm and the one causing the most trouble recently is the yellow-headed species. This species spends the winter as a moth and can often be seen flying during the winter on or near the bogs on warm days. The eggs are laid during April. If the bogs are submerged then, the moths are forced to lay their eggs on wild vegetation. As a rule, later generations do not work back into the bog to any great extent, so holding the winter flood until early May is a simple and effective control. To be effective, however, the submergence must be complete.

The yellow-headed fireworm has three broods, worms being present on the bog in May, in late June and early July, and in August and early September. When unchecked, the yellow-headed worm is the most injurious of the fireworms, as they destroy more and work later in the season. The vines may be so weakened by the August brood that they are unable to survive the winter flood.

The larvae have a light head and pale yellowish body which, when mature, are about $\frac{1}{2}$ inch long. They pupate in the webbed uprights and the pupa is easily distinguished from that of other fireworms by a prominent knob on the head end. Summer moths are clear orange yellow, while the winter moths are reddish gray at first, becoming slate gray as they age.

Control may be gained by holding the winter flood until early May or by spraying and dusting. In any case it is most important to control the first brood. Either lead arsenate or DDT may be used. If lead arsenate is used, the addition of a quart of nicotine and two quarts of Penetrol to 100 gallons of spray improves the insecticidal action. DDT as a spray should be used at the rate of 2 lbs. of 50% wettable powder to 100 gallons of water, or as a 5% dust at 50 lbs. per acre. These sprays should be applied at the rate of 250 gal. per

acre when the worms are $\frac{1}{2}$ inch long.

Black-headed Fireworm

The black-headed fireworm runs a very close second to the yellow-headed species in destructiveness in New Jersey. The winter is passed in the egg stage and hatching starts early in May on early drawn bogs and soon after the water is drawn off on bogs flooded till May 10-20.

The worm is greenish or pale yellow, with a shining black head and neck. When full grown it is only about $\frac{5}{16}$ of an inch long. First brood worms are mature by about the end of May, while the second brood worms work during July, maturing toward the end of that month. Pupation occurs in the trash and leaves on the floor of the bog, which fact distinguishes this insect from all other fireworms except the red-striped species. Control is complicated by the fact that hatching on different parts of uneven bogs may vary by as much as a week. If control measures are not accurately timed, it may be ineffective because the hatch is not complete, or if delayed too long some may already have pupated. Very careful watch of development is especially important with reflows and the lead-arsenate-nicotine spray for that reason. DDT with its long-lasting residual toxicity, may overcome some of this difficulty.

A 48-hour reflow when the largest worms are $\frac{1}{4}$ inch long gives excellent control.

Where spraying is used, it is usually better to make two applications rather than trying to get all of the worms with one application. Smaller worms are more easily killed by insecticides than large ones, so the first application should not be delayed until the largest worms are $\frac{1}{4}$ inch long. A second spray a week after the first will take care of any hatch subsequent to the first spray.

Spray with same materials as with the yellow-headed fireworms.

The spotted fireworm rarely, if ever, causes enough damage to justify control practices for it alone. It is largest of our fireworms and makes the largest web but it is evidently held down pret-

ty well by natural enemies. The worms are about $\frac{3}{4}$ of an inch long when full grown, with a light brown head, black neck, and a dark green body conspicuously marked with white spots. Though they spend the winter as partially grown larvae on the bog, feeding doesn't start until about the first of June. This is another species that pupates in the web. It is a single-brooded species, all other fireworms having at least two broods a year.

The regular DDT applications for blunt-nosed leafhopper control this species very nicely.

Red-striped Fireworm

In general this is not a serious pest, though occasionally it may cause trouble late in the season. It often works along with the yellow-headed fireworm later in the season. This species spends the winter as full-grown worms on dry parts of bogs. The moths begin to fly about mid-May and egg-laying extends over a long period. Eggs of the first generation start to hatch about mid-June and those of the second during the latter half of July and early August.

The worm is pale greenish-yellow with a brown head. As it grows, the head becomes light tan, and indistinct dark reddish lines appear running lengthwise on the body. The mature worm is about the same size as the black-headed larva, but it is easily distinguished by the lighter head color.

Control with nicotine sulfate and map the first week in August has been found satisfactory under Massachusetts conditions. Possibly some control will be gained by the DDT leafhopper applications in June, though as yet we have no information on this point.

(Continued next month)

During the last two years of World War II, farmers produced 20 per cent more than in 1917-18 and about 1,500,000 fewer workers. Today, they produce 20 per cent more than prewar.

Save This
Magazine for
Future Reference

September Almanac

(EDITOR'S NOTE):—The following is from the Almanac of the New England Cranberry Sales Company)

PICKING AND PACKING FOR QUALITY

This year there will be growers shipping to the fresh market who have never done so before. Very few Sales Company members will fall into this class. Most of us are well steeped in the lore of fresh fruit quality, though the boiling markets of the last few years may have lulled us into the belief that most anything goes. This year will be different, tho'. Next year should not be so bad, as the canners will doubtless compensate for their sins of mission and commission in '46 and '47, at the expense of the '48 fresh market.

Let us all review on the subject of quality marketing; refresh our memories and plan our work accordingly. Remember, a fresh

Research at the Southern Regional Research Laboratory of the U. S. Department of Agriculture at New Orleans indicates peanuts may be used in clothing and fabrics, paper in books and magazines, and even in paint on the wall in a few years.

berry must be sound all the way to the stove of the housewife.

Picking—When

BLACKS—Early picking does not mean early shipment and early payment. Berries picked too light will take longer to color up to specifications in the screenhouse than they would on the bog. Do not pick green, white or black. Pick the most of them at a light to medium red, a good Skipper color, but not quite Mayflowers. Do not purposely pick light Skippers unless yours are really early, fermented or free from rot or history of rot, and you are sure the Company wants them as Skippers.

If you have a quantity (a half carload or more) of light good quality Skippers they can be held in your storage to make Capitol Brand which is in good demand at the end of the Early Blacks season.

Picking—How

Scoping for best quality, Mathewson Machine next, snaps third. Pick dry. Get the berries into the shade as soon as possible. Protect from rain. Avoid all unnecessary handling, bouncing, pouring from box to box, or anything which might bruise a berry. If you must pick under-berries, do it before they are crawled over. Keep entirely separate any berries which

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might differ in quality from the main run. Do not mix snapped berries with scooped berries. Do not mix frost-flowed ditch berries with the unflowed berries. Set aside any such doubtful berries for special shipment only.

Storage

Ventilate, not just for the sake of ventilation, but to cool. Open everything on cool nights, close the place up to keep out the heat of the day. Avoid a see-saw temperature. If you can get and keep a temperature in the low forties, just fine. Store two days or more before

Screening and Packing

Here, too, avoid rough treatment, needless bouncing. Arrange your facilities so the berries are in the heated screening room as short a time as possible. Set aside the "second box" for Plain Heads. One trip through the separators is bad enough. Avoid slack pack (a sure cause for complaint). Do not bruise by over-filling. On a well-shaken and smoothed box, the cover should stand up about its own thickness before nailing. Nail

well. Ask and get the advice of the inspector about anything and everything. Give him the full facts about every lot. His aim is quality, too.

In General

Do not screen until authorized. Avoid muggy-day work if you can. Do not try to ship doubtful berries until directed. Shipping quick just because the berries begin to show spoiling is a mean trick on the buyer, the Exchange, and yourself. If the berries have to take a re-milling at destination, or an allowance, you will suffer more than if you had let a few rot before screening. Make sure that the Eatmor label means top quality this year of all years.

Sure, fresh market berries are worth more than canning berries. They cost you more, every step of the way.

Yours for an excellent quality crop,

COMMITTEE ON KEEPING QUALITY,

Russell A. Trufant, Chairman
George E. Short
Joseph L. Kelley

Program for News, Magazine, Radio People, Oct. 2nd.

This Event, Which is to be Held at Hanson, Massachusetts, and Atwood's "Edaville", Will Usher in "National Cranberry Week", October 18-23.

A reception committee will meet several hundred invited guests, including State, County and Town officials and representatives of magazines, newspapers, radio stations, syndicate writers and news-reel companies, at Ellis Atwood's "Edaville", South Carver, on October 2nd. The function of the committee, which will consist of about 50, is to provide these special guests with a wealth of cranberry material for their listeners and readers.

The program for the tour of these specially-invited guests is to be as follows:

10.30 a. m., a tour of the Ocean

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pray Canning Plant at Hanson to witness cranberry canning.

11.30, leave Hanson for "Edaville".

12.15, tour of "Edaville" cranberry bogs, via the "Edaville" railroad, to witness cranberry harvesting.

Tour of Atwood packing house to witness screening and fresh-cranberry packing.

1.15, old-fashioned New England lambake.

Ferris C. Waite is chairman of the reception committee.

This event will usher in "National Cranberry Week", October 18 to 23.

Hodgkins Rejoins NCA Sales Staff, Eastern Territory

Thomas W. Hodgkins has rejoined National Cranberry Association sales force to cover the eastern territory. He has been absent from Ocean Spray for six years.

This is a major shift in Ocean Spray's sales department to permit more intensive coverage of brokers and buyers from NCA's headquarters.

Mr. Hodgkins will take over the territory recently handled by William Drury, who has moved to the North Chicago office to handle sales in the mid-west and central states. M. S. "Andy" Anderson will be more free to handle rapidly-expanding West Coast business. Mr. Anderson will now make his headquarters in Los Angeles, California.

Mr. Hodgkins was associated with NCA from 1936 to 1942, and during that time became thoroughly familiar with Ocean Spray sales policies and became well known to NCA brokers. When the second world war broke out, he returned to his home in Farmington, Maine, where he served as sales manager for a firm making wooden specialties.

Mr. Hodgkins is married and has a son in college and a married daughter.

SMALLER TURKEY CROP

The turkey crop for the United States this fall is reported as 7,710,000 birds, which is 10 per

cent fewer than last year, according to a preliminary estimate of the U. S. Bureau of Agricultural Economics.

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CAPE COD

FORESTDALE, MASS.

E. Sumner Fish, ✓ Cranberry Harvester

E. Sumner Fish, a cranberry grower of Bandon, Oregon, advises that the cranberry harvester which he invented last year, and which was used by him with great success in the picking of his bog is being patented by him. This picker is especially adapted for water harvesting and is easily operated by one person, and materially reduces cranberry harvesting costs. Mr. Fish is now in the process of building several of these machines for growers who placed their orders with him. These machines are to be completed in time for this year's cranberry harvesting. Mr. Fish proposes to go into quantity production of these machines as they have proven so very successful.

American Cranberry Growers' Asso. Meets

In Spite of Record Heat on Day of Meeting, August 26, 121 Attend to Hear Interesting Talks.

The summer meeting of the American Cranberry Growers' Association was held on Thursday, August 26, at the sorting house of the Double Trouble Cranberry Company, Toms River, N. J. In spite of the record heat, there was an attendance of 121 to hear the talks and discussions. President Daniel "Mac" Crabbe first introduced his father, who welcomed the growers to the Double Trouble Company.

Charles A. Doehlert gave a revealing talk on the production averages of sixty typical New Jersey growers. This paper was prepared jointly with D. O. Boster in charge of the New Jersey Crop Reporting Service.

Boster next gave the latest crop prospects for New Jersey and for the United States. With a near-record crop in prospect, the New Jersey estimate was still 2000 barrels below the 10-year average. This estimate, of course, was made prior to the heat wave and will probably have to be reduced somewhat.

A memorial to Joseph W. Darlington was given by Isaac Harrison. A period of silence in Joe's memory followed the reading. Many, many growers feel keenly the loss of this young man who had become a popular leader among the growers.

Dr. H. F. Bergman talked on 1948 oxygen deficiency injury in New Jersey in relation to winter flooding practices. He had just spent four busy days in the Jersey bogs studying conditions and taking samples of fruiting uprights. He discussed his general impressions, including his views on the probable value of giving the bogs

more soil aeration and more closely regulated soil moisture. The samples which he had collected and to which he added more during the day after the meeting, will require considerable attention and study on his return to Massachusetts. It is arranged that his general remarks will be published in the forthcoming Proceedings of the Association. Then in the January issue a second report will present his more detailed findings. New Jersey growers appreciate his willingness to devote part of his time to their problem.

William S. Haines, spokesman for the Association's Cranberry Industry Committee, made very clear the desirability of new research concerning the physiology of the cranberry plant and its soil requirements, all directed toward finding out just what makes it grow productively. Voicing the Industry Committee's recommendation, Mr. Haines urged that a full-time man be added to the Cranberry Laboratory staff to conduct this research, the salary and expenses to be financed by gifts and by a small per-barrel assessment on the crops of members of the Association and any other interested growers. The membership present voted unanimously in

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MASS.

favor of a resolution presented by Vinton N. Thompson. The resolution stated the general need for this research and the desire of the Association to sponsor and aid the financing thereof. It further stipulated that information so obtained should be made available to all cranberry growers.

Several members and Mr. Doehkert, representing the Cranberry Laboratory, spoke strongly in support of the plan.

A delicious lunch was served in the sorting house basement by the ladies of the W. S. C. S. of the Toms River Methodist church.

Fresh from the Fields

(Continued from Page 5)

munity hall where several talks were given by growers and by the specialists in attendance. "Al" Sundberg, president of the Long Beach Cranberry club, gave a most interesting talk upon water scooping as compared to other methods of harvesting. Mr. Crowley spoke upon the subject of fertilizers, stressing the danger of using too much nitrogen.

Personals

Mr. and Mrs. J. Rogers Brick and daughter Jeanne of Medford, New Jersey, attended the Grayland tour with the Western growers. Mr. Brick gave a very interesting talk at the conclusion of the luncheon preceding the tour. This luncheon was served by the ladies of the Grayland Cranberry Association.

Growers attending the tour from Ilwaco were Mr. and Mrs. Guido Funke and son Albert, Mrs. Sund-

berg and son, Roy, as well as Mr. Sundberg, Mr. and Mrs. Robert Ostgard and Mr. and Mrs. Carl Brateng. Robert A. Wearne attended from the Long Beach Station, and also Mrs. Wearne.

OREGON

by Ethel M. Kranick

Crop estimates in southern Oregon were being lifted a little higher as harvest time grew near. Nine tenths of an inch of rain fell in August which favored sizing. Growers are reporting that the berries are larger this season than last even though the growing season will be shorter. Harvest will begin the last part of September, about two weeks later than 1947 season.

A few growers lost berries in the frost of April 26th, but others have a very normal crop due to overhead irrigation during the frost interval.

Latest government agricultural reports for Oregon show that Oregon has increased its cranberry production from 3800 barrels in 1937 to an estimated 15,000 for 1948. Jim Olson, President of the Southwest Oregon Cranberry Club predicts that the 1948 estimates will be doubled in the next three years.

Field Day for Southern Oregon was held at Bandon on September 3rd under the direction of the Southwest Oregon Cranberry Club, and Jack Hansell, the Assistant County Agent.

Plans for the day included a trip to the Bangor bogs near North

Bend, Oregon, a luncheon at noon sponsored by the ladies of the club. Round table discussions were conducted at the Masonic Hall where the luncheon was served. A meeting was held at 8 o'clock. There was a full roster of authoritative speakers for the program.

The Coos Cranberry Co-operative held a picnic at the Mason bogs twelve miles south of Ban-



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CRANBERRY
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don on Sunday, August 15th. A good attendance and a wonderful basket dinner gave importance to the day.

The Cranberry Festival for 1948 is to be bigger and better than the initial event of 1947. On August 13th, committees met at the Bandon City Hall and outlined the plans and launched the advertising campaign. Events tentatively planned included a parade, store exhibits, various contests. Special emphasis is to be placed on cranberry exhibits of all kinds, including cranberry equipment. There

will be dances and games and speeches included in the entertainment program.


A queen is to be chosen from the Junior and Senior classes of the High Schools. Organizations will sponsor the candidates which may come from Riverton, Oregon, on the Coquille River, to the town of Langlois which is thirteen miles south of Bandon. The Cranberry Festival Association membership tickets will sell for one dollar. This money is to be used to finance and advertise the event.

The festival will be held on November 5th and 6th at Bandon.

The Executive Committee of the Southern Oregon Cranberry Club met at the home of Ray Bates on August 18th to make plans for participation in the Cranberry Festival. The Cranberry Club will sponsor a candidate this year for the first time. It will assist the festival association in any way most needed.

On September 2, at the Portland Hotel, Oregon, a State wide Agricultural Committee convened to survey the agricultural research needs of the State of Oregon.

This committee was called by the research branch of the Extension department of the Oregon State College to determine the essential needs and to present the problems of each division of Oregon agriculture. It was made up of a representative from each crop association. The cranberry industry of Oregon was represented at this meeting by Mrs Ethel Kranick who, with her husband, is one of the pioneer growers of the state. She was chosen by the Southern Oregon Cranberry Club to represent members o

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Through cooperation between the Wisconsin Cranberry Sales Co., the Growers Cranberry Co. and the New England Cranberry Sales Co., the American Cranberry Exchange has for more than forty years been an important factor in bringing stability to the cranberry industry, and every new member added to this Company will help to put the cranberry business on a firmer foundation.



New England Cranberry Sales Company

9 Station Street

Middleboro, Mass.

both the National Cranberry Association and the American Cranberry Association.

The National Cranberry Association at Coquille is now ready to begin to care for the 1948 crop. The new freezer is complete and will hold the maximum crop estimate with room for next year's expansion. Car lines are set up and ready to go. A new dryer is finished and will be used to dry berries for the fresh market.

NCA will have a booth at the County Fair. Cranberry products of all kinds will be on display. This will be the first time NCA has had a complete exhibit at the County Fair.

COMMUNICATION

(Continued from Page 8)

I shall be pleased to see or hear from both Mr. Mann or yourself at any time and give you all the assistance possible. Rate schedules are now being prepared and will be furnished as soon as possible, and should you desire additional copies for your brokers and customers, please advise. For the moment, however, I can furnish you any rate upon request.

We shall also be pleased to furnish you rates from the nearest airport adjacent to all your other plants, viz., New Jersey, etc.

Your Friend,

George L. Pass,
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COVER DESIGN—This month's picture shows John Bodfish Bourne of Buzzards Bay, Mass., a young 7. 1., ready to harvest his crop. Bourne is a graduate of the University of Massachusetts at Amherst. His father, John Knowles Bourne, was a grower before turning the property over to his son. J. B. Bourne is the great-grandson of Parker N. Bodfish, who many years ago developed bogs in the Wareham and Carver areas. The present property operated by J. B. Bourne is one of approximately 150 acres.

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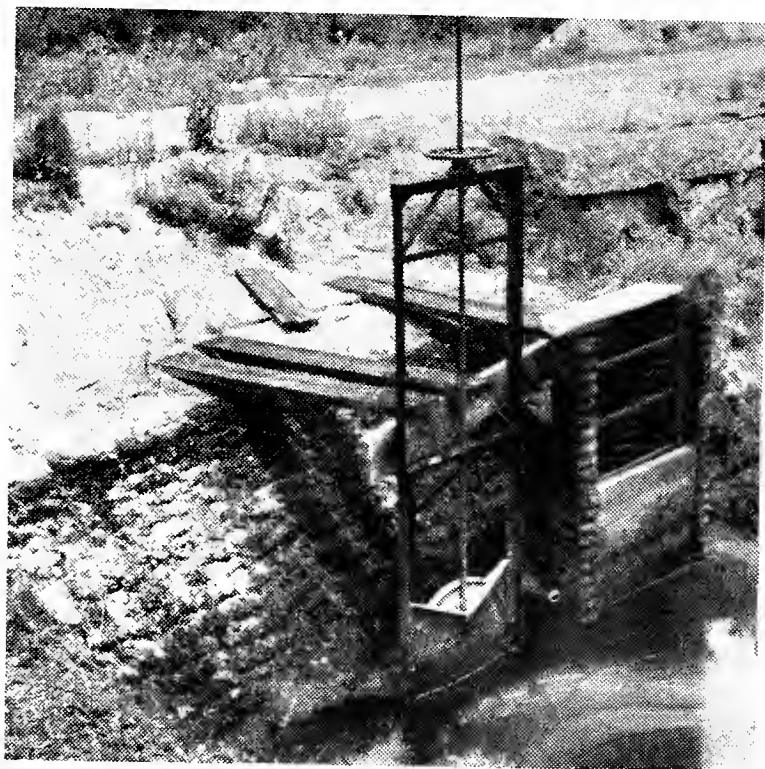
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**EATMOR HAS BOOTH
AT OCEAN COUNTY FAIR**

The Growers' Cranberry Company had a pictorial booth at the

Ocean County Fair, Lakewood, New Jersey, September 11. The time was from 10 a. m. to 10 p. m. Visitors were asked to look for the "Eatmor" sign.

NESCO Holds Fall Meeting September 4th, Carver, Mass.

More than 140 Attend, Making it the Largest Session of this Co-op Ever Held—Program for Advertising Is Told to Members—ACE Planning Big Promotion.

The fall meeting of the New England Cranberry Sales Company at Carver town hall, September 4th, with President George A. Cowen presiding, was the largest ever in attendance in the history of the co-op. More than 140 people were there.

"Del" Hammond, general manager of Wisconsin Cranberry Sales Company, speaking briefly, said he was indeed glad to be present at the meeting.

E. C. McGrew, assistant general manager of ACE, read clippings from various periodicals which said the farmer is going to receive less of the housewife's dollar in the future than in the past. He re

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ported, however, the cranberry trade is not pessimistic about cranberry sales, provided the quality is good. He cautioned growers not to get more consumer resentment by shipping inferior fresh fruit.

Lester Haines of the New York office of ACE spoke upon car loadings.

Regarding the damage done to the Massachusetts crop by the August heat wave, an estimate was given that the prospects had been diminished by at least 10 percent, although it might run much higher. This would reduce the Massachusetts crop by approximately 50,000 barrels, and took into consideration of potential frost losses. Fruitworm injury, it was said, is less than normal. Getting back to the heat, Earle Boardway of Carver said that during the intense heat he placed a thermometer upon his lawn and it registered 130 degrees. He said a thermometer suspended from the side of his house showed lesser degrees, but this proved to his mind that the ground temperature was intense.

Miss MacNalley of the ACE spoke at length upon the promo-

tion program for the sale of cranberries the Exchange has planned for this year. She showed various proofs which will appear in black and white in daily newspapers and of color ads which will appear in various magazines. There will also be rotogravure pictures of cranberries and recipe books. One of

the new recipes being featured, she said, is cranberry-apple pie, as both fruits are in the market at the same time. She said ACE is working closely with Pillsbury Flour in a promotion program to move fresh fruit, although no name of fresh fruit is being mentioned in the ads which Pillsbury will

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sponsor.

An assessment not exceeding \$1 per barrel was voted by members of NESCO.

At noon the usual delicious luncheon was served to the attendance and the meeting continued into the afternoon.

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Ground-Water Resources of Cape Cod

by HENRY N. HALBERG

EDITOR'S NOTE:

The article "Ground-Water Resources of Cape Cod, Massachusetts" was presented before the Cape Cranberry Club in Harwich last March. The author, Henry H. Halberg, is engineer in charge U. S. Geological Survey, Boston, Mass. Lack of space has prevented this article appearing in an earlier issue.

(Continued from last month)

As explained previously, there are two chief types of glacial material on Cape Cod, namely, the till and the outwash deposits. The till will furnish only relatively small amounts of water because of its low permeability. Water does not pass freely through this type of material. However, wells tap-

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ping git can usually supply plenty of water for household, drinking, and sanitary needs. In the moraines mentioned, the one on the east shore of Buzzards Bay, and the one on the north side of the Cape, till deposits predominate. Hence shallow ground-water supplies should be less plentiful there than in other parts of the region. In parts of these areas glacial outwash sediments may be interbedded with or may underlie the morainic material, and may furnish appreciable quantities of water. It would require test drilling to determine if such is the case. Also, the Cretaceous sands and gravels underlying the morainic deposits at considerable depth may give copious supplies if it is found necessary to tap them.

The outwash sands and gravels deposited by melt water issuing from the glacial ice are the best sources of water in this area. These sands and gravels were well sorted and deposited in layers by the flowing waters. Good location for ground-water supplies, therefore, should be found in what has been



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lled the Mashpee Pitted Plain, at area of the Cape east of the edge of hills along the east side Buzzards Bay and south of the hills on the north side of the Cape and extending as far east as Orleans, and also in the area between this second set of hills and Cape Cod Bay.

The forearm of the Cape from the vicinity of Orleans northward to Pilgrim Lake in Provincetown is also composed of this type of wash sand and gravel and would therefore be an excellent source of ground water.

Another area of this nature is that north of the Cape Cod Canal, the area between Great Herring Pond and Long Pond, and is therefore a good potential source of ground-water supply.

Quality of Water

In those of your cranberry bogs that are located close to salt water, to a thousand feet or more from the water there may be trouble with salt-water infiltration into the well. If the bottom of the well could be kept above sea level this would not happen but generally along the

coast the water-bearing beds do not extend far enough above sea level to permit this, so that the wells must extend below sea level. This does not mean that the water table or water level is below sea level. Fresh water, being lighter than sea water, forms a lens floating on salt water in the ground, and mixes only in a narrow zone where the two are in contact. For every foot the water table is above sea level the fresh water extends downward roughly 40 feet, below which is salt water.

If a well is put down into this fresh water and pumped, the salt water rises. When the salt water rises to the bottom of the well, the water will be contaminated. By calculating from the depth of the well and the height of the water table above sea level, one can figure about how far the water level can be lowered when pumping and still avoid salt-water contamination. Obviously, in order to avoid this condition, the well should be as shallow as possible to obtain the needed quantity of water.

An example of salt-water contamination is furnished by the Provincetown public supply in North Truro, composed of a group of driven 2½-inch wells located near tide water. The water became brackish after the wells were put in use and it was necessary to abandon the wells nearest the ocean and drive new ones farther inland.

Irrigation for cranberries requires fairly large quantities of water, but sufficient water should be available in many areas of the Cape. For example, flooding 1 acre of land 6 inches deep required about 22,000 cubic feet of water, or 163,000 gallons. This means that at 300 gallons per minute you would need 545 minutes or 9 hours to flood 1 acre this deep, making no allowance for infiltration of the water into the ground. One well pumping 300 gallons per minute would produce this amount, six wells at 50 gallons per minute, or ten wells at 30 gallons per minute. Such a supply could be obtained in many places from a group of driven wells or well points. If

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the water is to be used to irrigate or to spray and ice the vines for frost protection by means of rotary-head sprinklers, probably a minimum of about 70 gallons per minute per acre would be needed. This probably could be obtained from two to four driven wells. The estimate of 70 gallons per minute is based on using nine sprinklers per acre, each using 7.5 gallons per minute.

Installing driven wells probably is one of the most satisfactory methods for small cranberry-growing operations. These wells are easy and inexpensive to install. They do not last as long as drilled wells, but undoubtedly will last long enough for any use contemplated, as their life is many years.

Drilled wells can also be used to advantage. They are more expensive to install than driven wells but have a longer life. Screens of different lengths can be placed in them to take advantage of the full thickness of the water-bearing formation.

The gravel-packed well is more expensive and perhaps could not be utilized extensively for small irrigation projects. Its use would be warranted where there is a pumpage of several hundred thousand gallons a day. It is one of the more popular types of well used for relatively large supplies on the Cape. Several public supplies have been installed using this type of well.

The depth of the well to be used will depend to a great extent on the location of the water-bearing strata and the depth to the water table or artesian bed. If the area is not far above sea level the water table will be close to the surface, but in the upper levels of the Mashpee Pitted Plain or a similar location the water level may be deep enough to require deep-well pumps that do not depend on suction. In all cases test wells are advisable to determine whether

the desired quantity of water is available.

In general, ground-water supplies on the Cape are quite abundant. Prospects for finding water are good in most localities. Your local well drillers can be of much assistance because of their knowledge of conditions in the area, and of the costs and types of wells

which have proved most successful. Publications of the Geological Survey, the Department of Agriculture, and other agencies contain information that will be of much value to you. The Geological Survey will be glad to furnish any available information to you. The office is in Room 927 in the Post Office Building in Boston.

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The "National" Cranberry Harvest Queen receives her crown at South Carver, Massachusetts. (CRANBERRIES Photo)

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October, 1948

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Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE
Extension Cranberry Specialist



After a late start, the cranberry harvest began about September 14 in Massachusetts. The delay in picking was due primarily to the lack of proper color and size of the berries in early September when harvesting usually begins. The prolonged drouth and heat of August and the first part of September was responsible for this situation. In fact, many bogs were so dry that growers hesitated to begin picking operations even in mid-September because of possible damage to the vines. The delay in picking posed a real frost problem since water supplies were very low. However, we have been reasonably fortunate as of October 1 as far as frosts are concerned. We did have a rather severe frost September 16, when temperatures as low as 20° were recorded, resulting in a 1% damage to the crop according to Dr. Franklin.

Speaking of frosts, the telephone distributors would appreciate knowing when the growers are through picking. It will save them considerable time and the Cape Cod Cranberry Growers' Association unnecessary telephone bills. The telephone distributors are performing a real service for very little return. They have to be on duty both afternoon and evening during the entire frost season. Some distributors have over forty growers to contact. It certainly is a thankless job, and a little cooperation on our part would be greatly appreciated.

On September 22, a demonstration of the Western Cranberry Picker was held at the State Bog under the supervision of R. J. Hillstrom, manager of the Western Pickers, Inc. This mechanical picker has been demonstrated on several bogs in Massachusetts this year. Judging from the results of the demonstration here at the

State Bog, it appears that further developments of this particular picker may be worth watching.

A few suggestions on late fall management are offered for the grower's consideration. Dr. Franklin reminds us again of the importance of the fall Clean-up Flood. Wherever possible, this flooding should be done as soon as the bog is picked whether the floats are salvaged or not. Such a flood rids the bog of much of the harmful trash that accumulates yearly. The airplane—propeller-type float boat is well adapted for this type of work.

This is the time of year to check the spread of the fungous disease known as **Fairy Ring**. Those unsightly circular areas of dead or dying vines on the bog should be treated now. If you are not sure of its identification, why not contact your county agricultural agent or the Cranberry Experiment Station. Dr. H. F. Bergman has worked out the control measures. They are not outlined in the Insect and Disease Control Chart but were given in last month's issue of "CRANBERRIES". Briefly, the recommendation is the copper sulphate treatment, using 10 lbs. of copper sulphate crystals dissolved in 100 gals. of water, applying 1 gal. to a sq. ft. of bog. Dr. Bergman points out that this treatment should include an area of approximately 3 ft. outside the infested area and 2 ft. inside the circle.

Fall fertilization comes in for its share of attention. While there is considerable research necessary before we have definite information in this field, according to Dr. Chandler, the fall is one of the periods to fertilize bogs that need it. A high phosphorus fertilizer is worthy of consideration, such as the 1-2-1 ratio. Amounts would vary

between 200 to 500 lbs. per acre, depending on the condition of the bog. It might be well to discuss your fertilizer problem with Dr. Chandler prior to making applications.

Pruning and raking on dry bogs should definitely be postponed until next spring. This suggestion is particularly in order on the Cape where there are many dry bogs. Dr. Franklin and Joe Kelley have observed that there is considerable increase in damage from winter-killing where dry bogs are pruned and raked in the fall. In fact, after harvest all operations on a dry bog should be postponed to the spring. Apparently the mechanical injury to vines from tramping over them makes them more subject to winterkilling. A word to the wise should be sufficient.

Now for a few suggestions from Dr. Cross on fall weed control. Dr. Cross urges growers to stake off those areas on their bogs where **loosestrife**, **poison ivy**, and **small brambles** have been troublesome. This will enable the growers to confine their treatments for these particular weeds to the staked areas and enable them to treat early before the weeds have made excessive growth. Dr. Cross reminds us again that the time to kill weeds is when they are small, which applies when using chemicals as well as when weeding by hand. PDB can be used under sand as late as November 10th with satisfactory control of **poison ivy** and **wild bean**. This is the season to pull out the woody plants such as **hardhack**, **meadow-sweet**, and **red maple**, making sure that you get the roots. **Asters** and **beggar-ticks** should be weeded out before going to seed. Dr. Cross recommends mowing off the tops of **saw brier** and **bull brier** this fall as it helps to retard these troublesome weeds. The tops of **loosestrife** should be pulled or mowed off to prevent further spread. Finally, Dr. Cross's experiment with a new selective weed killer looks very promising, particularly for the grasses, sedges, rushes, and brambles. It is known under the trade names of **Sovasol**, No. 5 **Varsol**, No. 2 or **Mineral Spirits**. To simplify the matter of trade names, this particular weed

(Continued on Page 17)

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of October, 1948—Vol. 13, No. 6

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

A severe electrical storm ripped over most of Southern New England in the early evening of September 18. Beginning about 5 o'clock and continuing until about 8 at Wareham, sheet and chain lightning played over the skies in blinding flashes. The wind blew fiercely and the rain came down heavily, .41 inches being recorded at the Cranberry Experiment Station. The storm was described in newspapers the next day as "cyclonic" or "near hurricane" in the Boston papers, the next morning. It took at least two lives in New England. There was apparently no hail in the cranberry area. The rainfall doubtless helped somewhat, but it was not enough to do the bogs much good.

On September 20th there was a slashing rainfall, but the total as recorded at the State Bog was but .45 inches.

Frost occurred on the morning of September 22. Low degrees were reported. Some of these were: State Bog, 32; Pierceville (West Wareham), 27; Tihonet (Wareham) 28½; Lowell Cranberry Company, Carlisle, Middlesex County, 25.

The Massachusetts crop now apparently looks something like the original estimate of 550,000 barrels. That is, according to some sources, but others report differently. "Mel" Beaton of the Beaton interests says his own crop is cut 10 per cent, this being due to the berries not sizing. The September report of the New England Crop Reporting Service as of September 1st, issued on September 15th, gave out 530,000 bar-

rels, a decline of 4 percent from the August estimate. It looks like anybody's "guess," as this issue goes to press.

Rainfall for the month of September totaled 1.13, much of this being due to a good, soaking rain on the final day of the month when .69 inches fell. The hottest day was on the 11th, when 86 was reported at the State Bog. The coldest was 35 on the 17th. Dr. Franklin sets the fall frost loss to October 1st as 1 percent.

First damaging frost of the fall occurred on the morning of September 16. Temperatures at the State Bog, East Wareham, reached a low of 36°. The forecast of Dr. Franklin was 27 for inland bogs. The degree reached at the bog of the Lowell Cranberry Company at Carlisle in Middlesex County was 24. Some berries were "nipped" there and at other inland bogs. There was little, if any damage at bogs nearer the coast.

On the morning of the 17th there was even heavier frost. The lowest report for the Wareham area was 24, which was at the bogs managed by C. E. Whitlock. These are at East Wareham. There were many reports of 26 and 27. The low reached at Carlisle was 20. Dr. Franklin estimated damage as light, as most bogs could have been protected.

WISCONSIN

The crop, as of September 28 was reported by "Del" Hammond, manager, Wisconsin Cranberry Sales Company, as "looking bigger every day." He said the prospect appeared for between 200-225,000 barrels. There was very little frost damage,

and ideal growing weather increased the size of the berries. He further says the keeping quality should be good, one reason being that some growers raked dry because of the water shortage. There were about 15 frosts during September, and on the night of the 26th there were reports of 19 and 22, but no damage.

Harvesting started in earnest about the 18th and 20th. Most of the growers are expected to be through by the middle of October.

The water situation does not look good for the winter flood. There was no rain to build up reservoir supply. A sudden cold spell that would freeze the ground to any appreciable depth, and then a drying wind would bring winter kill. Growers are hoping for heavy rains between now and the middle of November.

OREGON

by Ethel M. Kranick

On September 7th temperatures went to 93 degrees. Most of the growers ran overhead irrigation to cool the air. No immediate damage was reported, however, a recent sampling of the Cape Blanco bog formerly owned by Mr. Urann, indicated about 13% damage although overhead irrigation was run for six hours. This is a new marsh only three years old and the vines were thin in spots. There was rain on September 14, 15 and 16, also on September 20, 21, 22 and 23, which cut down on the need for irrigation.

Southern Oregon harvest began on September 27 with handpicked berries.

(Continued on Page 17)

Cranberry Festival for Editors, Photographers and Others

This Was at "Edaville" South Carver, Massachusetts, Oct. 2d. Planned as a Preliminary Event to National Cranberry Week, October 18-23. It Was Highly Successful.

A cranberry festival was held at "Edaville", South Carver, Massachusetts, for representatives of the press, including newspapers, magazines and radio. This was a highly successful affair, as hundreds attended.

The affair opened with a tour of the main plant of NCA at Hanson, then extended to "Edaville". The first scheduled event at "Edaville" was a ride on the famous narrow-gauge railroad, with 414 riding on the first train. During the progress of the ride scooping was witnessed for the first time by many, also the Western Picker in operation, with "Rudy" J. Hillstrom of Oregon in charge, also the NCA floatboat, propelled by air-plane motor and propeller, was viewed.

Old-Fashioned Clambake

Upon the return to the "Edaville" station, the group assembled for an "old-fashioned" New England clambake. This included everything from steamed clams, through sausages, frankforts, lobsters, white and sweet potatoes, onions, to coffee. A colorfully uniformed band played during the eating of the bake.

Following the bake the program opened with reading of the "Proclamation of Cranberry Week", October 18-23, by Senator Edward Stone of Osterville. This had been written by Massachusetts' Governor Robert F. Bradford, who sent his apologies for not being present.

The master of ceremonies for this part of the program was Ken Dalton, Brockton Enterprise commentator on station WBET. Dalton introduced Marcus L. Urann, president of NCA, and announced that the day was his birthday and that Mr. Urann's happiest birthday present was seeing so many folks present and happy. Mr. Urann said: "3,000 growers would be happy to welcome you here. People have been so co-operative that

you are justified in belonging to the cranberry family."

Youngest Grower

The youngest cranberry grower in the United States was introduced. He was Walter Edgar, who has a bog in Lakeville. He owns this bog with his brother, who was not present because he was playing football.

Oldest Worker-Grower

George Cowen, president of New England Cranberry Sales Company, introduced Henry Appling of Carver, who was announced as the oldest cranberry worker in the United States, having worked on bogs 66 years. E. L. Bartholomew presented W. F. Harlow, 92, of Co-tuit, as the oldest cranberry grower. Both were presented with plaques.

Harvest Queen

Then Harrison F. Goddard, chairman of the committee of judges for the selection of the "Cranberry Harvest Queen", presented and crowned Miss Marcia Williams of Carver as the selection. He said: "I crown you as Harvest Queen. May you bring harmony and prosperity to the industry." He gave her a sceptre, a silver cup, and a bouquet of flowers. She was dressed in a dazzlingly white gown, and had a flowing mantle of royal purple trimmed with ermine over her shoulders.

John C. Makepeace of Warcham, an outstanding grower, spoke a few words and introduced Dr. H. J. Franklin, director of Massachusetts Cranberry Experiment Station. In recognition of his 40 years of service to the industry, in his perseverance and outstanding efforts for the advancement of cranberry culture. Mr. Makepeace presented him with a silver tray.

"Cranberry Bounce"

From here on the program took a lighter turn. A trio of young ladies sang the song hit, written by Sammy Kaye, entitled "Cranberry Bounce". The new dance step to this same turn was given by two dancers who were flown up from New York. The dancers were "Terry" Wilson and Charles

Rhyner. This dance was created by Arthur Murray and the dancers are star teachers of his school.

Mock Wedding

The mock "wedding" of the little white hen and little red cranberry wound up the program. Attorney John Quarles of Boston acted as the clergyman. The hen was Elizabeth Torrey of Hanson, who was dressed in a fluffy, white-feathered costume. The cranberry was a gigantic replica of a can of cranberry sauce. Andrew Cristie of Kingston, New Hampshire, acted as the bride's father. He is one of the largest poultrymen of the nation.

Hundreds of Cameras

There were hundreds of cameras in operation most of the day. Most of the operators of these were professional, some amateur. "Barrels" of flashbulbs were shot off. The amount of film used must have equaled the mileage of the "Edaville" R. R., which is 5¼ miles. The host and hostess, of course, were Mr. and Mrs. Ellis D. Atwood, and the attendance were indeed grateful for their hospitality.

The reception committee invited consisted of the following:

Representing Massachusetts — Marcus L. Urann, president National Cranberry Association; John C. Makepeace, secretary-treasurer National Cranberry Ass'n; Russell Makepeace, vice president in charge of fresh cranberry sales, National Cranberry Ass'n; Mrs. Russell Makepeace; Ellis D. Atwood, director National Cranberry Ass'n; Mrs. Ellis D. Atwood; Harrison F. Goddard, director National Cranberry Ass'n; Robert S. Handy, director National Cranberry Ass'n; Kenneth G. Garside, director National Cranberry Ass'n; Frank Crandon, director National Cranberry Ass'n; Kenneth J. Atwell, Fresh Cranberry Sales, National Cranberry Ass'n; H. Gordon Mann, vice president in charge of Canned Cranberry Sales, National Cranberry Ass'n; Melville Beaton, president John J. Beaton Company, Inc.; Mrs. Edith L. Beaton; A. D. Benson, treasurer and manager New England Cranberry Sales

Company; Miss Sue A. Pitman, assistant treasurer New England Cranberry Sales Company; Orrin G. Colley, president Colley Cranberry Company; C. J. Hall, editor CRANBERRIES Magazine; Mrs. C. J. Hall; Dr. Henry J. Franklin, Massachusetts Cranberry Station; Dr. H. F. Bergman, Massachusetts Cranberry Experiment Station; Dr. Chester E. Cross, Massachusetts Cranberry Experiment Station; Dr. F. B. Chandler, Massachusetts Cranberry Experiment Station; J. Richard Beattie, Massachusetts Cranberry Experiment Station; Joseph T. Brown, County Agricultural Agent, Barnstable County; John F. Harriott, assistant treasurer National Cranberry Association; Sherman L. Whipple, III, Grower Relations, National Cranberry Ass'n; Nathaniel Ryder, treasurer National Cranberry Credit Corp.; Olin Sinclair, National Cranberry Ass'n; Carl B. Urann, president United Cape Cod Cranberry Company; Marcus M. Urann, director United Cape Cod Cranberry Company; Mrs. Marcus M. Urann; Garland G. Brooks, United Cape Cod Cranberry Company; Mrs. Garland G. Brooks; Janet E. Crawford, Director of Home Economics, National Cranberry Ass'n; Ellen Stillman, Director of Advertising, National Cranberry Ass'n; Lois Day, Publicity Editor, National Cranberry Ass'n.

Representing New Jersey—Theodore H. Budd, president American Cranberry Exchange; Isaac Harri-

son, director National Cranberry Ass'n; Enoch F. Bills, director National Cranberry Ass'n; Edward V. Lipman, Grower Relations, National Cranberry Ass'n.

Representing Wisconsin—Charles L. Lewis, director National Cranberry Ass'n; Henry F. Duckart, president Midwest Cranberry Cooperative; Leo A. Sorensen, manager Midwest Cranberry Cooperative; Miss Jean Nash, president Wisconsin Cranberry Growers Company; C. M. Chaney, manager American Cranberry Exchange; Clyde McGrew, secretary and treasurer American Cranberry Exchange; Lester Haines, American Cranberry Exchange.

A New Name In The Industry

Robert St. Jacques, son of E. C. St. Jacques, is now associated with his father in the Hayden Separator Co. in Wareham, Massachusetts.

"Bob", who has worked with the company during summer vacations, was graduated this past June from Cornell University, Ithaca, N. Y., with a degree in Mechanical Engineering.

He attended Wareham High School, where he was very active in athletics and other school functions, and graduated in 1942 as president of his class. The following fall he entered Cornell, and through use of the accelerated program was able to finish the



equivalent of two years' study before entering the U. S. army. He served in Italy, first in the Ordnance Department, then with the Allied Commission, where he was in charge of routing civilian relief supplies from the United States to the final distribution points in Italy. After 30 months service, he was discharged and re-entered Cornell in the fall of '46. While at Cornell, "Bob" was a member of Sigma Chi Fraternity, Kappa Tau Chi, an honorary engineering society, and participated in several other activities.

At the Hayden Separator Co., "Bob" is now becoming familiar with the various phases of the me-

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chanical work and of the cranberry industry in general, and is already putting many of his ideas into use in the business. He is now beginning to relieve slightly the strain which has been on his overworked father for so long and hopes to improve this situation steadily.

Then, with the pressure relieved, and the added facilities to be found in the new shop which Hayden proposes to build in the near future, the cranberry growers may expect to see valuable improvement in the Hayden machinery line and the assurance of the continuity of service in general for many years to come.

SCOOPS and SCREENINGS

Miss Elizabeth C. White of Whitesbog, New Jersey, and Miss June Vaile of New Jersey were visitors in the Massachusetts cranberry area toward the end of September. One point of call was the Cranberry Experiment Station at East Wareham, where it was the extreme pleasure of yours truly (CJH) to have renewed old acquaintance with Miss White.

Jesse F. Buffum, WEEL, Boston, we understand made a broadcast upon the fact that John F. Sawyer of Frost Insecticide Company, Arlington, Massachusetts, is the dean of insecticide people in New England. This was based upon last month's story about Mr. Sawyer in CRANBERRIES. We didn't hear it ourselves, as we are seldom up as early as "Buff" broadcasts, this time being before 6.45 a. m. But at any rate he is a good friend of the cranberry industry and is giving it some good publicity. Incidentally, "Buff" was at the Cranberry Festival at Carver on Oct. 2nd, and although we missed this again, we do not doubt he gave the industry another good boost.

Mrs. Guy C. Meyers, whose husband owns Cranguyma, largest cranberry property on the West Coast, accompanied by Mr. and Mrs. Frank Glen of Long Beach, Washington, attended the Cranberry Festival, Oct. 2nd, at "Edaville", South Carver, Massachusetts.



Richard Thacher is Giving the NECSCO Members Excellent Service

He Is the Agent of That Co-
op in Barnstable County,
Massachusetts

A young man who has given good service to the members of New England Cranberry Sales Co. in Barnstable County (Cape Cod proper) for about two years is Ralph Thacher. Ralph was born in Belmont, Mass., in 1917. His father is Eben Thacher of Brewer & Lord Insurance Company, 56 Battery March Street, Boston.

It was through Ralph's experience as a fire protection engineer, going around inspecting cranberry screen-houses for the risk involved that he first became interested in cranberries.

Ralph is rather a modest sort of individual and it was a bit difficult to get much information from him

of his service career in World War II. Most of the time of the interview his head was stuck into jammed separator at the West Barnstable screenhouse of NECSCO. He was busy.

But it was finally learned that he has a rather remarkable war record. He entered the U. S. Army as a private. He was discharged with the rating of Lt.-Col. He saw four years and 28 days in the Pacific theatre of war. This included service in Japan. He was active mostly as port commander in New Caledonia, the Solomon Islands and various other points. He says the war was "no fun" and there were many times when he was under attack from the air when he doubted very much if he would ever come back alive. He would

(Continued from Page 16)

CRANBERRY FESTIVAL

WE attended the Cranberry Festival for the representatives of the radio, daily, weekly, press and magazines at South Carver on October 2nd. In fact, we were honored to have been on the reception committee, as was our spouse, also.

This certainly was quite an affair. We don't remember when we have put in such a busy day. The ride on the Edaville R. R. must have been a thrilling experience to the representatives. In fact, we enjoyed it ourselves, even though we have been over the route many times. Not only the representatives, but the many growers and others present seemed to greatly enjoy the entire program, from this first ride, through the clambake, and the official program which is reported in full elsewhere in this issue.

Much favorable publicity to the industry should result from the well-planned day, this of course being the purpose of the entire event.

CONGRATULATIONS

OUR congratulations in the selection of Miss Marcia Williams as "Cranberry Harvest Queen." Also our congratulations in bringing to the front the youngest cranberry growers, the oldest cranberry worker and the oldest grower. Also, of course, to the well-deserved tribute to Dr. Henry J. Franklin and the presentation of the silver tray and the autographed book. Finally to Mr. M. L. Uurann, upon the planning of the event and upon his good health on another birthday.

"QUIZZES" PAY OFF

RECENTLY we were down on the Cape and stopped in a better-class restaurant. The "Cranberry Quizzes" were on ade-

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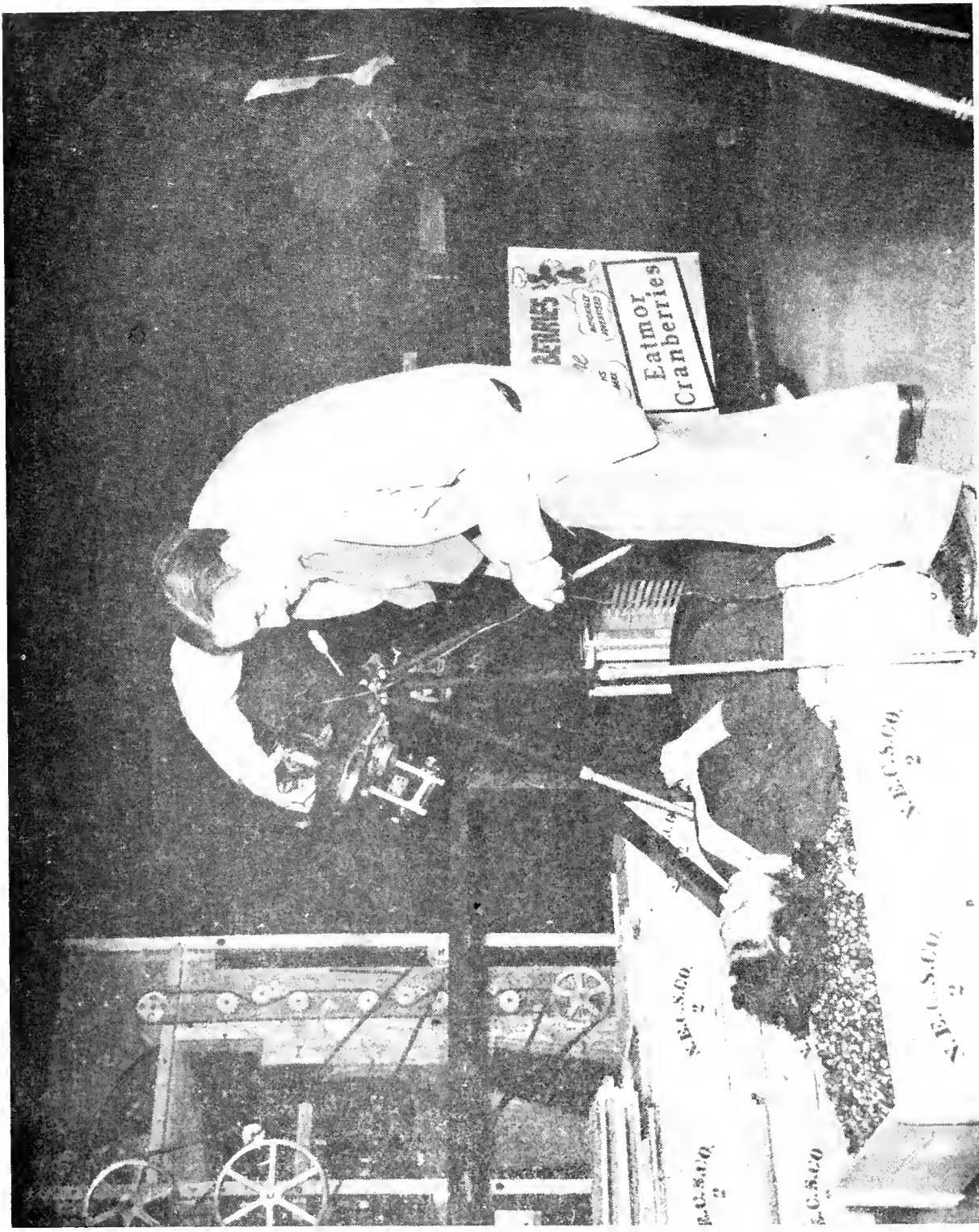
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East Wareham, Mass.

BERTRAM TOMLINSON
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New Jersey

CHARLES A. DOEHLERT,
New Jersey Cranberry and Blueberry Station
Pemberton, New Jersey

quate display in a little cranberry scoop. A party of four tourists spotted them. They read the Quiz through with interest and chuckles. (We were eavesdropping). Then they ordered four cranberry cocktails, since they had just learned they were in the cranberry country. This was well after Labor Day, so it would appear these "Quizzes" are very definitely paying dividends to the cranberry growers, and the Cape Cod Cranberry Growers' Association is definitely to receive a word of praise in thinking of the idea.



Press cameraman shoots Doris Eilson at opening of American Cranberry Exchange exhibit at Grand Central Station, New York. Doris, a New Haven resident, is seen here with miniature cranberry

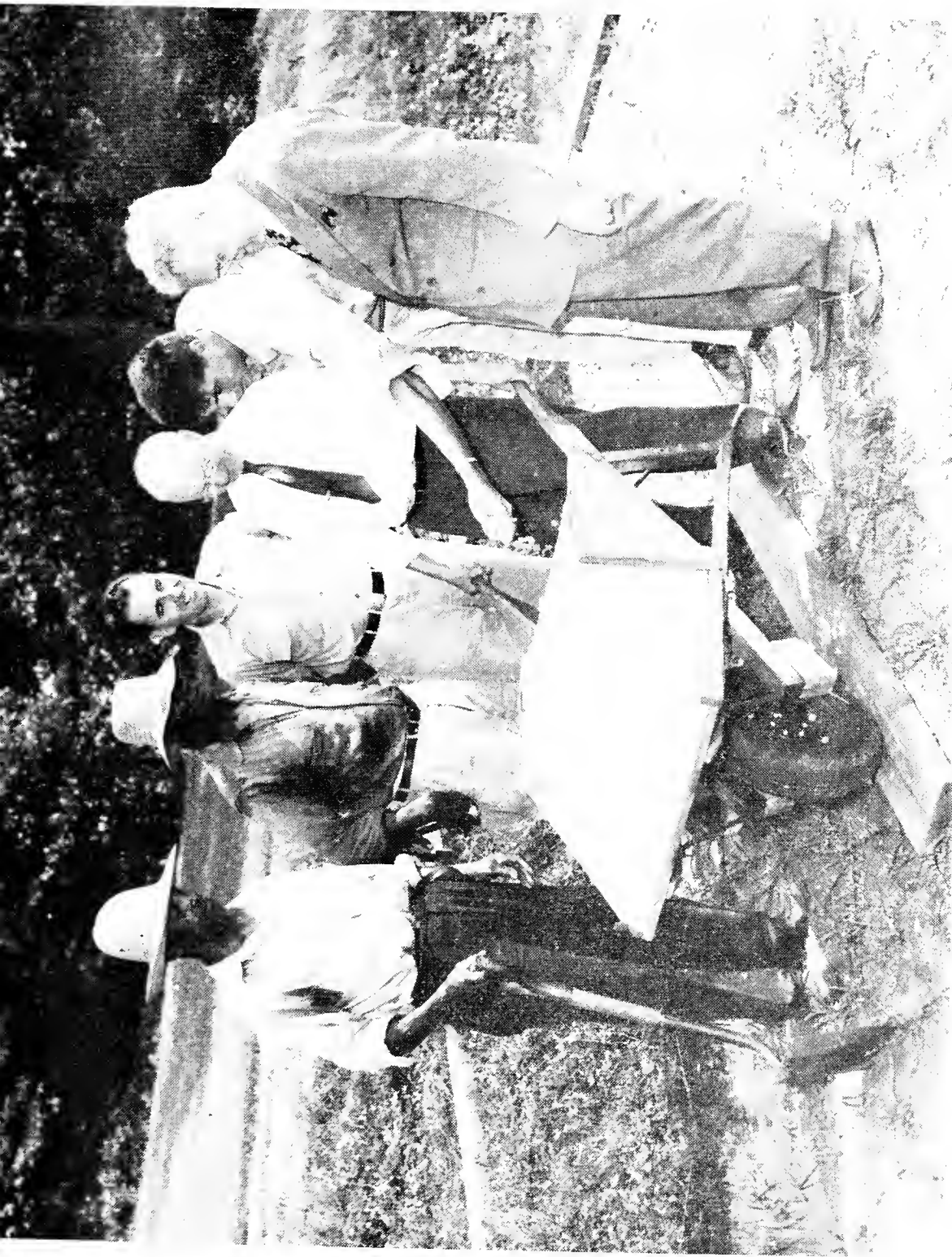


Photo shows a group at the Cranberry Experiment Station, August 25th. At left are two bog workers, Cranberry Specialist "Dick" Beattie, Lt.-Governor of Massachusetts, Arthur W. Coolidge, a GI, John Clapp, and Massachusetts' State Senator Edward G. Stone. Photo Fay Foto Service, 43-45 West Canton street, Boston

“And I Put By My Chart and Glass . . .”

Captain Alvin Cahoon, with his crocus bag filled with wild vines picked from the Dennis cranberry grounds had started from the Bay Side of that town toward his native Pleasant Lake, in the neighboring town of Harwich. When he became inspired to grow cranberries after seeing the Henry Hall vines, Captain Cahoon became a vital link in carrying cranberry culture from its first home. His act directly set in motion a progress of cranberry growing at Pleasant Lake, which provided a tremendous impetus to the industry, so much so that Harwich has often been credited with having been the true starting point of the cranberry industry.

Captain Cahoon, who was one of the better known coasting skippers of that period when these staunch little schooners were building Cape prosperity, symbolized that large group of Cape Cod seafarers who gave up salt water to grow cranberries. As expressed by Captain Bill in the poem “Attune”:

“There’s nothing to me in fore’gen lands like the stu’ that grows in Cape Cod sands; there’s nothing in sailing of fore’gen seas equal to getting down on your knees and pulling the piren ivy out. I guess I knew what I was about when I put by my chart and glass, and took to growing cranberry sass.”

Captain Cahoon carried cranberry culture to Harwich which was to become then for long years the recognized center of cranberry growing. And just as Dennis had provided the vines he carried, so had Dennis provided the first settler of Harwich; Gershom Hall, son of John Hall, immigrant ancestor of Henry Hall. Gershom Hall was born in Barnstable in 1648 and bought land in Harwich before 1688. He was a farmer, millwright and lay preacher, dying Oct. 31, 1732. He probably gathered wild cranberries but never cultivated them, but his great-great-grandson, another Gershom did, in about 1864, and this bog is still producing berries for his son, Charles D. Hall.

Captain Alvin was born, March 25 1812, early took to the sea as did many Cape Cod youths of “spunk” then, and had been mak-



The above photo shows “Joe” Franklin of Wareham, Massachusetts, scooping cranberries at the State Bog at East Wareham. “Joe” is 87 and has scooped cranberries for many years. He has also had a long experience as a fisherman, and in the 1870’s was a member of whaling crews of ships out of New Bedford, Massachusetts. His voyages included those on the bark “John P. West.”

(CRANBERRIES Photo)

ing many of his voyages out of Dennis. Finally when he was about thirty-four, and had observed the highly successful affinity of the vines near the Dennis sea shore and the Dennis beach sand on his many trips on foot back and forth that in the spring of 1864 he set out eight rods in back of his home at the margin of Seymour’s Pond. He not only had been bringing home Dennis vines, but had occasionally been met by his wagon at the end of a voyage and had cart-

ed back the white beach sand from Dennis, even though there was equally white sand in plenty around the many Pleasant Lake ponds.

The vines were planted under water and occupied a patch of about twelve square rods. Half an acre was completed the following spring, the turf being cleared and removed, so that the mud beneath could surround the ends of the vines. Nearly an acre more was planted in 1848 and during the winters of that year and 1849 near-

ly four acres were cleaned up, but were not set to vines as the water level was too high. In 1850 vines were planted in this area, but did not grow well. There was too much water in Seymour's along the beach where the swamp was situated.

This too-high water level gave Captain Alvin the idea of digging a canal from Seymour's pond to Hinckley's pond less than a quarter mile away. Seymour's had no outlet, but Hinckley's did, to the ocean through the so-called Herring River at West Harwich. He had noticed considerable seepage from Seymour's to Hinckley, as the latter was about two feet lower. He thought a ditch five feet wide would do the trick, but it was necessary to dig through rises nearly thirty feet high. It was rather a staggering undertaking for a century ago, although a modern steam shovel would have cut through it almost no time.

With wheelbarrows, the aid of two hired men and his small sons he started in to do so in the fall of 1852. His neighbors naturally

scoffed at the idea and would volunteer no help. But all that winter he and his small crew shoveled the bogs after school and it was completed on April first of the following year. Possibly he considered that date a good day upon which to confound his doubters with completion of the project.

It was made the occasion for a celebration, and neighbors of Pleasant Lake and from nearby villages were present, and it is told there was the ringing of bells and the blowing of horns. With the realization that the canal had been done, some of his neighbors who would benefit by the general lowering of the water-level. The water table settled rapidly and in three weeks Seymour's pond was two feet lower. After this date other bogs were built at Pleasant Lake, which has since then been one of the greatest of small areas of cranberry production.

POEM

Sez Ebenezer Whiffletree
To Joshua, his son,
"We ought to get some cranberries
Afore the season's done."

Sez Joshua, as gloomily
He gazed upon the sod,
"We ought to get a-plenty, Pa,
We've worked hard on this bog."

Old Ebenezer's eyes were shrewd,
The while they twinkled, too.
"Ye sound discouraged, Son", sez he
"As like yer sorta blue."
Joshua paused and drew a breath,
Then, "Look here, Pop", sez he,
"Why can't we do some other work,
The kind appeals to me?"

Old Ebenezer looked at him
And slowly shook his head,
"I ain't a-holdin' of ye, Son",
The old man gently said;
"If yer a-hank-ring for to go
And learn some other work.
But, Son, I like my job right well
And I ain't a-gonna shirk."

"The hum o' motors may call you,
P'raps the written word,
The movies and the radio,
The actors that you've heard;
And I ain't saying that yer wrong
Exceptin' just one way—
In thinkin' this be thankless work,
Our laborin' each day."

'Cause when I reap my harvest,
An' get my berries' Son,
I get a feeling rich and big
Of knowing work well done.
And when I see the berries that
Have come up just from sod,
I feel as if somehow I've had
A sorta glimpse of God."



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"Little Drops of Water, Little Grains of Sand"

by Clarence J. Hall

Had it been possible to hover over Cape Cod in the decade beginning 1840, an all-comprehensive eye would have seen that narrow, twisting, sandy peninsula in the blue Atlantic a stirring scene of activity. Little packets were putting out from, and returning to village ports. Coasters, laden with cargo of every description, were plying the waters. Cod and mackerel fisheries were good. From various harbors, Provincetown to Falmouth whalers were going to sea. Wherever on the globe rolled the deep oceans Cape captains and men were at the peak in their trade.

In This Era, Cranberry Growing Began

Vessels were sliding down the ways, and all business with a stake in the maritime business was booming. Salt manufacture was passing its zenith. Up in Sandwich the glass worked were blowing and pressing the Sandwich glass, later to be so prized. All over Massachusetts since the War of 1812 there had been industrial development.

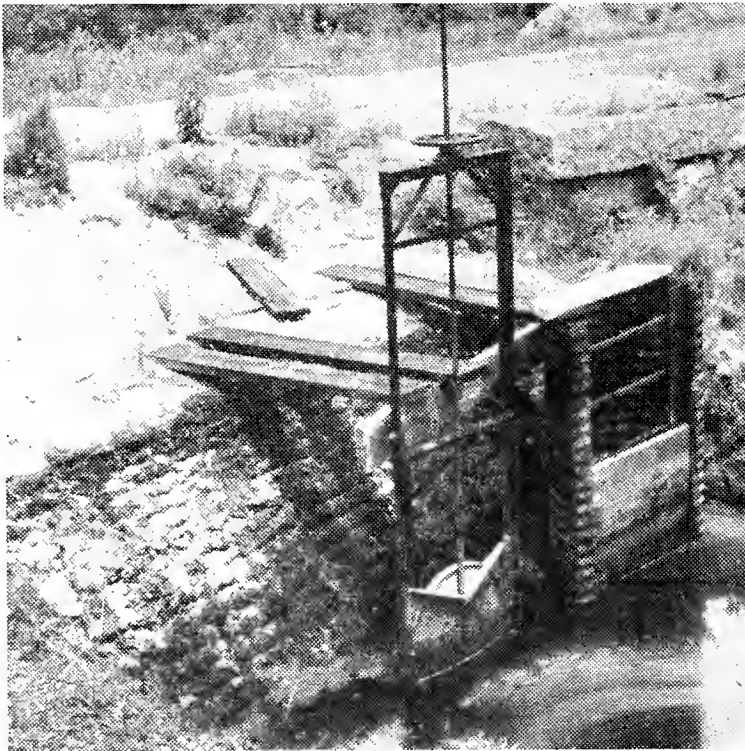
In this era the morning sun of cranberry growing was fortunate enough to be rising. Stirred by the stimulus of the times, men started to make cranberry bogs. With little drops of water and tiny grains of sand they began a new industry, an American one.

This was the time of which Thomas Hall (early grower) wrote: "cranberries are bringing a very high price." It was the time of which Amos Otis write: "All the cultivators of Dennis are now cultivating their beds by preading sand." The time of which Mr. Eastwood was to write fifteen years later: ". . . the minds of many were awake to this subject (cranberry culture.)"

Early Growers Bespattered

These first growers were largely bespattered with unpleasant remarks and told that it would be a useless attempt. Yet the all-comprehending eye would have seen

(Continued on Page 16)



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CAPE COD

FORESTDALE, MASS.

Western Pickers Now Offered For Outright Sale

The Western Picker has now completed two years of experimentation and demonstration in the State of Massachusetts. During the 1948 season demonstrations were given to all growers who requested one. These tests were so uniformly successful that many pickers were loaned to growers this year who placed orders for the new 1949 model.

The Western Picker is now going to be sold outright. Until proven it was considered best to pick only on a royalty basis, as such a basis went hand in hand with development.

The obstacles that were not all overcome this year were many and dramatic.

All bruising of berries was eliminated. Vine damage was reduced to a minimum. The necessity of raking a bog at all was overcome.

90% of all bogs picked in Massachusetts with Western Pickers show 10% to 200% increase in yield this year.

At the Mass. State Bog it was demonstrated on Oct. 6 that the Western Picker is an efficient and practical Water Picker also, doing no damage to berries, vines or bog and putting the harvest berries in the collecting box ready to land on shore.

Extensive tests over many varied bogs showed the covering capacity of the Western Picker to range from 8 to 10 hours per acre, regardless of the number of barrels per acre.

The actual cost per bbl. harvest ranged from 40c per bbl. for 100 bbl. per acre to \$3.00 per bbl. on bogs having 10 bbl. per acre.

Since each Western Picker will cover 10-15 acres per season, the economies of it are self-evident. Savings will range from \$300.00 to \$600.00 or more per season.

The price of the 1949 Western Picker will be \$1,200.00, with \$500 Picker will be \$1,200.00, with \$500.00 down with the order. Since production this year will be limited to less than 100 pickers it will be necessary to place orders now to assure use of a picker next year. Reference, 1st National Bank, Portland, Ore., C. B. Branch. Inquire through your bank.

The order address is

WESTERN PICKERS INC.
COOS BAY, OREGON

(Advt)

(Continued from Page 14)

men everywhere, clearing, turving, draining, diking and sanding little irregular patches of ground.

They knew cranberry vines grew on the margins of ponds, by the sides of streams in the peat swamps and they had found it near the beaches. Those who owned what they believed to be suitable patches of swampy land turned their attention to trying to grow cranberries in these places. They transplanted vines. A surprisingly large number of the Cape growers began on the firm foundation of laboriously clearing up thoroughly and turving their selected sites. Most were astutely aware almost at once of the value of the grains of sand. Many at first were illusioned with the theory that the cranberry requires more water than it really does.

As close to the sea shore as was possible without having the salt water flood the vines was the spot chosen by many.

By coincidence, and with no essential bearing upon the story of cranberry culture, this is the year in which a barrel of cranberries was washed ashore, presumably from some ship on the island of Tershelling off the coast of Holland. This barrel was taken to the home of the Dutch finder and later its contents were thrown away. Vines became established and some years later another Hollander found about sixty acres thickly overgrown with American cranberries. These vines, still some years later, led to a small European cultivation.

The Cape pioneers and those of other communities of a century ago were crossing the threshold of a new industry, crossing with uncertain step. These men, some of them, left in the pages of Dr. Eastwood's book and elsewhere first-hand accounts of their early groupings. It is but natural that some, in fact many of their theories seem odd to cranberry growers of today.

NICE RADIO SEND-OFF

Walter F. Piper, broadcasting the "New England Almanac," WEEI, Boston, October 14, gave National Cranberry Week, October 18 to 25 a nice send off. He said that a lot will be heard of the

"Cranberry Bounce" and then told how this song got its name (from the separator.) He ended by saying the week is an invitation to cranberry lovers everywhere to participate in the pleasure of cranberry eating throughout the year.

Bulletin

Just as this issue closes the October first outlook, released on October 15 by New England Crop Reporting declared that for the United States the prospects appeared to be 899,000 barrels. This is the largest production on record, exceeding the previous record high of 877,300 grown in 1937. Massachusetts was estimated at 540,000, a big increase in Wisconsin to a probable 225,000 and a record for Washington of 52,000, near record for Oregon, 15,000. Only state not increasing production was New Jersey, accorded 67,000 barrels.

Notice

"Cranberry Growing in Massachusetts" by Dr. Henry J. Franklin, has been issued by the Massachusetts Agricultural Station. This is bulletin No. 447. Dr. Franklin has asked us to point out printer's error on page 3. This is in regard to a table of the production of

cranberries from 1900 to 1947. The heading reads the figures are in bushels. They really are in barrels.

Richard Thacher

(Continued from Page 8)

several trips back to the States on confidential missions. He won't like this, but he appears to have been quite "heavy brass," at least towards the end of hostilities.

Today besides being active at the West Barnstable greenhouse of NECSCO he also works at one at

CUT TALL GRASS... WEEDS... BRUSH
Faster and Easier

Mows fast and clean around buildings, fields, under trees, fences, along roadsides, and in light corners.



Cuts 4 to 6 acres in 8 hrs. Easy to handle on rough ground or steep slopes. Cuts 1/2" from ground. Rugged. Economical. Dependable.



For Farm, Orchard or Truck Garden. Easily and quickly mounted on any irrigation pipe. Heavy duty brass and bronze construction for long service. Sand and dirt proof. Water lubricated bearings—no oil or grease required. No fast moving parts to rapidly wear out. Maximum coverage—even distribution.

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BUCKNER SPRINKLERS

THE Clapper CO.

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COMFORT
KOOL-TOP
TRACTOR SUNSHADE
WHEN THE GOING GETS HOT



for FULL PROTECTION from RAIN and SUN

- Full six feet across
- Offset attachment
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- Adjusts to any position

The Comfort KOOL-TOP attaches to most popular tractor and implements models. EXTRA big—gives three full feet of protection on all sides. Does not interfere with tractor operation—you may stand or sit while working. Canvas cover is water-proof, mildew-resistant folds like umbrella when not in use. Keep cool and dry with the KOOL-TOP.

Orleans. He supervised the picking of about 140 acres of bog in his county this fall with a crew of 30 which was transported from bog to bog. He has added new members to the Sales Co. and directs management of several properties.

He is a cranberry grower, himself, now, owning 7 acres of bog at Flax pond in Harwich. This was old bog but in excellent shape when purchased. He hopes to own more cranberry property, eventually.

He lives at Hyannis, with his wife, Helen, and daughter, Joan, 2½ years. His hobby, when he has any spare time, like so many other cranberry growers, is hunting and fishing.

Cranberry Station and Field Notes

(Continued from Page 4)

killer will be referred to as Stoddard Solvent in the future. We will hear more about this material at a later date.

The highlight of the month will be the featuring of National Cranberry Week, October 18-23, by all

cranberry growers and their respective organizations. This is a promotional program for the good of the entire industry. Let's give it the support it deserves. After all, it is the growers who benefit from such an undertaking.

Fresh from the Fields

(Continued from page 5)

Neils I. Neilson, the government statistician from Portland called on

growers in Southern Oregon Friday, September 7th.

* * * * *

The State-Wide Agricultural Research Committee which met in Portland on September 2nd became a permanent organization called The Oregon Agricultural Research Council. The purpose of this organization is to study the need for research in the various fields of agriculture and to make recom-

B. H. COLE & CO., INC.

North Carver, Massachusetts

This year Massachusetts will observe its first "Cranberry Week". . . . a week which it is hoped will become as much a tradition in New England as our boxes are a tradition in the cranberry industry. We've been making boxes since 1707 and that adds up not only to a lot of boxes, but also a lot of experience—and in our business it's experience that counts.

FRANK H. COLE, Pres.
Established 1707

Stokely's Finest

CRANBERRY SAUCE

NONE FINER

STOKELY FOODS, INC.

90 Riverside Ave.

NEW BEDFORD, MASS.

mendations to the state legislature for necessary means to carry out the approved program. The cranberry industry was invited to have a representative on this council. At the present time Oregon has no research work in the cranberry industry but representation on this council gives the growers of the state hope for future work along this line.

Increased taxes and other costs in the face of a 44% decrease in the price of cranberries has given growers some grave concern. At a meeting recently called to discuss

ways and means of cutting costs it was agreed to reduce the price paid to labor. The price of 50 cents a measure for picking, 80 cents an hour for sorting, and \$1.25 per hour for other labor was decided upon as a fair cut.

The National Cranberry Association cannery at Coquille is complete and ready to take care of Oregon berries. The new freezer will hold 5,000 barrels of berries. The can lines are all complete and two new graders have been installed to grade berries for the fresh market. Since the bulk of the berries will be water scooped

a new dryer has been installed to dry the berries that will be sold fresh from this method of harvesting.

The Queen contest for the Bandon Cranberry Festival will begin on October 1st. Plans to make the 1948 Festival bigger and better than 1947 are underway. Committees are meeting and outlining the basic plan for each event.

Heavy rains in September have caused delay in sanding operations on several new bogs.

NEW JERSEY

The average daily mean temperature for September has been 3.8 below normal, giving a daily mean temperature of 64.4°. This cool weather has been favorable for cranberry coloring. Several frosts occurred on the bogs during the latter half of September, but minimum temperatures were not low enough on any night to cause injury.

Perfect cranberry harvesting weather prevailed throughout September when only 1.40 inches of

CRANBERRY REAL ESTATE APPRAISING	BOG MANAGEMENT
17 Court St. Plymouth, Mass.	Tels: Plymouth 1622 Kingston 319

**Orrin Colley
AND
Associates**

If you are buying or selling Cranberry Property it will pay you to see us.

A number of properties available, more wanted.

New England Cranberry Sales Company

PACKERS AND DISTRIBUTORS
OF

Eatmor Cranberries

THE CRANBERRY COOPERATIVE
ORGANIZED IN 1907

9 Station Street

Middleboro, Mass.

rain fell. Because of a minimum of time lost from rainy days and frost flows, most of the early berries were harvested by the end of the month.

Cranberry growers were just as well pleased that rain was scanty, but blueberry growers were hoping for a good soaking so that they could get started on their fall planting. In addition, blueberries on high, sandy land were showing the effects of the drought.

The picking of Early Blacks was well completed by the end of September. It is possible that the general loss from hot water injury during the last week in August will amount to about 15% of the August estimate. The dry weather of late September was not destructive up to September 29, but it has shown an effect on the weight of the berries. The quality of floaters appears to be considerably better than usual.

Someone Tried A Pigment

Paris green, first of the arsenical insecticides, was adapted to farm use less than 80 years ago and became the first standard stomach poison for crop destroying insects. That yardstick helps measure the youth of agricultural insecticides and fungicides.

David Ansbacher, one of the pioneers of this industry, contributes much of the story. At an age he will divulge only as "somewhere past 70", he has been retired for more than 15 years, living quietly in New York, known only to a few intimates as an anonymous supporter of charities.

His father, A. P. Ansbacher, had been making dry colors since 1852, including Paris green as the pigment for a brilliant hue known as Emerald green, French green, or Vienna green. So far as he knew, that would continue to be the ordained use for Paris green. But in the new State of Wisconsin, in the 1860s, a farmer tried sifting Paris green and flour over his plants to kill potato beetles.

It worked. The farmer, George Liddle, Sr., of Fairplay, wrote about it to the Galena Gazette. Others tried it. Official approval, according to one historical text, came along in 1869.

A. P. Ansbacher and one or two other early Paris green makers were surprised to find a new market and an unexpected new demand for their new product. The Colorado potato beetle was rampant. The green arsenical flowed out in increasing volume through commercial channels. More and more farmers tried it and wanted it. Before long the Cotton South began calling for Paris green for cotton worms and army worms. Vegetable growers joined the demand.

In 1888 David Ansbacher, as the young son, came into the business. His father's factory in Brooklyn

still was making only dry colors and Paris green, but the latter now was running 3,000 pounds a day through the fall and winter production season. As he grew up in the business he saw the Paris green production climb past 5,000 pounds a day. One peak season at this one plant totaled 1,400,000 pounds, before the Ansbacher production curve leveled off and began to decline.

David Ansbacher offers a number of reasons, as he saw them, for

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SAND—GRAVEL

CONCRETE BLOCKS

ROAD BUILDING

EXCAVATING

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3 MODERN PLANTS

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STORES

MAIN OFFICE

FALMOUTH 1800

Wareham 1180 Hyannis 1900

DECAS BROTHERS

Growers Of

Cape Cod Cranberries

Phone 147

WAREHAM, MASS.

**MATHEWS
CONVEYOR
and
TRACK**

Frost Insecticide Co.

Box 36

ARLINGTON, 74

MASS.

that eventual Paris green decline.

Lead arsenate came along, for example. It was cheaper, containing less arsenic and no copper. Farmers preferred it primarily because it caused less foliage damage. Also the gypsy moth was

becoming a menace, and according to one historical text the gypsy moth caterpillar was pretty much immune to Paris green.

William H. Rose, another pioneer now retired and living in Jersey City, fills in the story from that

point on. He was with the Interstate Chemical Co., one of the early producers which went out of existence with the 1929 crash. He also was in on the early conferences which worked out the Federal Insecticide Act of 1910.

British-made London purple, as he remembers it, was pushed for while in place of Paris green, but met with objection for several reasons. Some experimenters were working on double-decomposition methods for making paste lead arsenate; by about 1900 it began to take hold as an insecticide.

Like others, the Interstate company tried selling a combination lead arsenate-Bordeaux mixture product. And, like others, it ran into government trouble. "The Federal men", Mr. Rose remembers, "said that under certain conditions there wasn't enough copper in the combination to control blight. We showed them it wasn't true in 95 per cent of cases. But they insisted on including more copper. The result was a low proportion of lead arsenate, reducing the killing power against insects. The growers didn't like it.

Save Priceless Water

**BUY
PORTABLE OVERHEAD SYSTEMS
for
IRRIGATION AND FROST CONTROL**

**STEEL or ALUMINUM PIPE
Equipped with
McDOWELL STEEL COUPLINGS**

**There is no other similar or equal equipment
NO LATCHES NO HOOKS**

Write or phone. Our local representative will call.

No charge for Design and Blueprints to suit your particular bog.

LUNDQUIST CO., Inc.

TEL. PUTNAM (CONN.) 1917

WEST WOODSTOCK, CONN.

Colley Cranberry Company

**SHIPPERS OF CAPE COD
CRANBERRIES**

"SUITSUS" Brand

Plymouth, Mass.

Office
17 Court Street

Telephone
Plymouth 1622

Troubles Were Many

"We were shipping five-pound pails of Bordeaux, fully approved and bearing approved labels. But we found many of the labels were destroyed in transit. So we put the pails in wooden boxes and marked the boxes. We were fined because the outside of the package did not state the amount of active and inert ingredients, though these were fully stated on the pails. I fought against that sort of ruling for years".

Another of the confusions in those days was a wide variation in lead arsenates. "Before the 1910 Act" (Federal Insecticide Act), Mr. Rose recalls, "these varied from 2 to 14 per cent arsenic oxide content and were sold at whatever price could be obtained. I happened to be in Washington in conference with Dr. L. O. Howard, then chief of the Bureau of Entomology and Plant Quarantine, and pointed out to him that the proposed Act fixed 50 per cent water as the basis, rather than the arsenical content. He recognized this and immediately phoned the Capitol—to be informed that the Act had passed just one hour ago."

Still another early trouble was enormous distrust among manufacturers. There was no such thing as an honest price; competition was all cutthroat. The growers layed upon this, misrepresenting prices to get concessions. My company had a contract with the New York State Fruit Growers Association; they established prices; the growers would use that price for a bargaining basis and others would shade it."

One of the factors that helped assumption catch up to the industry's production, which by government urging had been doubled during the first World War, was the ample set by West Coast fruit growers. "They found that with spraying they could produce perfect fruit. They shipped in such beautiful graded fruits that it practically forced the enactment of the New York State Grade Law and use of equipment for grading".

One other recollection of the early industry deals with the sales problems. Mr. Rose remembers a fight to break into the export mar-

ket to Cuba. "None of us could get in there, no matter what kind of promotion we tried. We found the answer was that one company had a distinctive skull and crossbones design on its arsenical packages. While the Cuban growers might not be able to read the label, they remembered that picture. Nothing else would do.

"And there was the smart company that got out the slogan, 'Let Us Spray'.

"The reaction was very, very bad. Farmers thought it was a play on a religious phrase!"

Cranberry Prices Are Slashed

American Cranberry Exchange on September 15 made an opening price of \$3.75 a quarter-barrel box or \$15.00 a barrel for Skipper and Mayflower grades of Early Black cranberries. This price is the same as National Cranberry Association announced. NCA cellophane pack was announced as \$4.00 a quarter for fresh. NCA's price on canned sauce was \$1.70 a case.

Both co-ops asked their membership to be sure of berries suitable

RAIN BIRD

Protects Cranguyma!

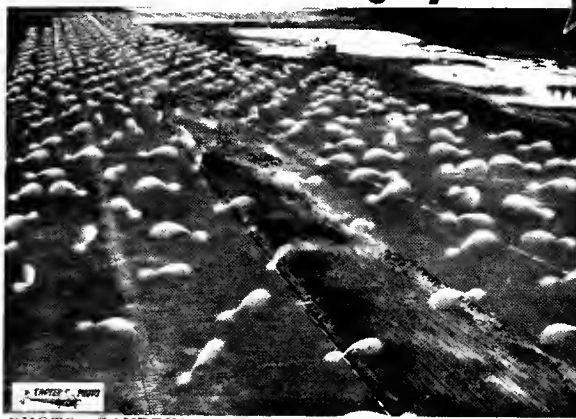


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1000
RAIN BIRD
SPRINKLERS
LIKE THIS

Provide
Protection from
Frost and Drought
of Cranguyma Farms,
Long Beach, Wash.

SPREADING out in an impressive acreage in the great Northwest, Cranguyma Farms at Long Beach, Washington, represents an important part of our nation's cranberry production. Standing as dependable guardians against frost and drought 1000 Rainbird sprinklers provide the correct and necessary rainfall whenever it is needed. This outstanding installation is indicative of the dependability of Rainbird Sprinklers. The distributor or dealer listed below will be pleased to furnish additional information upon request.

PACIFIC COAST DISTRIBUTORS

R. M. WADE and CO. ARMCO DRAINAGE & STOUT IRRIGATION INC.
Portland, Oregon METAL PRODUCTS CO. Portland, Oregon

EAST & MIDWEST DISTRIBUTORS

L. R. NELSON MFG. CO.
Peoria, Illinois

MASSACHUSETTS DEALERS

JOSEPH BRECK & SONS IRRIGATION DIVISION VEGACRE FARM
85 State St., Boston, Mass. Forestdale (Cape Cod), Mass.

RAIN BIRD SPRINKLER MFG. CORP.

GLENDORA

CALIFORNIA

for a quality pack this fall, whether fresh or processed.

Coming at a time when general food costs have reached an all-time high, the low cranberry prices should be welcome to housewives, and this reflects the attempt of the cranberry industry to "wrestle" with the high cost of living. The new prices make cranberries one of the few fruits or foods in the market which are less expensive this year than last.

Mass. Car Loadings Above Last Year As Of Sept. 29

Car loading through Middleboro as of September 29 were 209 as compared to 146 last year. This is the report of the New England Cranberry Sales Company.

FISH FOR CROPS

On June 20, 300 years ago, farmers in the Plymouth Colony were forbidden to use bass and cod for fertilizing their soil. However, they could use bony fish like

shad, herring and porgies for manuring their land.

Then, in 1639, fish were used extensively, being applied to a field every third year. The farmers came back in 1644 with a rule they sponsored in the town of Ipswich, Mass. That year it was ordered that all dogs should have one leg tied up so that they could not scratch out the fish.

Cranberry Fireworm And Blossom Worm

WM. E. TOMLINSON, JR.
N. J. Agricultural Experiment
Station

(Continued from Sept. Issue)

Sparganthis Fruit Worm

Sparganthis fruit worm, which has been called the false yellow-headed fireworm, does not belong among the fireworms. We have named it Sparganthis fruit worm because the webbing is so slight that it is easily overlooked, and the main damage caused by it is from feeding of the larvae inside the fruit.

The fertilizing with fish was one of the first types of soil enrichment for better crops and is vastly different to the millions of pounds of commercial and organic fertilizers used today. One of the reasons that the use of fish was stopped was that they became too scarce—which was probably when the fishermen and sportsmen had their inning.—Esso Farm News.

If you find worms feeding in the fruit and they are not greenish or tinged with red on the back, and the berries are not filled with castings, it is a safe assumption that you have Sparganthis fruit worm and not cranberry fruit worm.

Insecticidal control is uncertain. It is not affected by the regular winter flowage. Holding the winter flood until July kills it in bogs.

Blossom Worm

This is not a fireworm, but a cutworm. As far as I know, its abundance is in no way related to winter flooding practices. There may be some relation between its abundance and the wetness of the bog, as it apparently prefers bogs that are on the wet side. This is prob-

P_{eter} A. L_e S_{age}

“KEEP SMILING”

PLYMOUTH

Tel. 740

Peter A. LeSage

Distributor of Cape Cod Cranberries

YARMOUTH

Tel. Barnstable 107

ably related to the egg-laying habits of the moths, which in common with other cutworms prefer to lay their eggs in low, moist places.

Blossom worm works on leatherleaf in large numbers, which provides a ready source of reinfestation for most New Jersey bogs. For this reason, control one season on a string of bogs is no insurance against trouble the following season.

Control of blossom worms is not difficult. A 12-hour reflow about the last week in May controls it very satisfactorily on bogs drawn from April until the first week in May.

Waiting until the end of May allows time for almost all of the eggs to hatch and thus makes the flooding most effective. However, on early drawn bogs, satisfactory control can be expected with a reflow between May 15 and 20 and this will reduce the danger to early developing flower buds.

In general, growers do not realize how much damage blossom worms are doing and are not sufficiently on the watch for them. It

is good insurance to check all bogs for the presence of blossom worms by means of evening sweep-net collections during all of the second half of May.

Spraying with lead arsenate or

DDT when the worms are about $\frac{3}{4}$ inch long is also a very effective control. Lead arsenate is used at the rate of 6 pounds per 100 gallons and DDT at the rate of 2 lbs. of 50% wettable powder per 100

Cranberry Growers...

You value the sound, proven recommendations of the East Wareham Cranberry Experiment Station in growing your crops successfully.

Equally invaluable to you is sound, properly written Insurance fitted specially to the needs of Cranberry Growers.

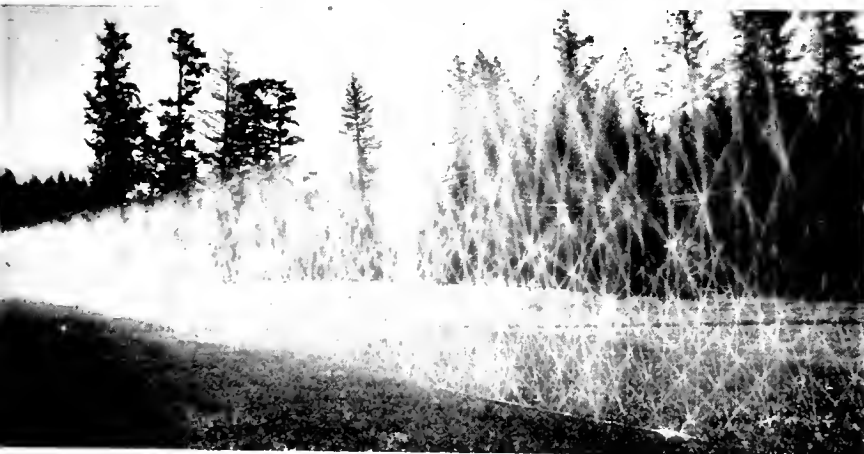
E. A. Thacher of this firm will be happy to discuss your requirements, and without charge or obligation, prepare a survey of your property and needs.

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West Coast Growers

... have
"discovered"

Perf-O-Rain

But its Low-Cost Sprinkling and Pure Efficiency are helpful everywhere.

Conserve water! Simplify handling! Irrigate with gentle rain whenever you please. Quick and easy to handle. No complicated circular patterns of application. Absolutely even coverage over a **rectangular** area.

Low Pressure! Less horsepower and no grief from high-pressure, high-speed pumping. Every drop the same size, falling gently like rain.

Send for Illustrated Folder and Free Layout Chart 1-E.

Perf-O-Rain

W. R. AMES COMPANY

150 Hooper Street, San Francisco, Calif.,
or 3905 E. Broadway, Tampa 5, Florida

gallons. Both should be used at the rate of 200 gallons per acre.

Indications are that a 5% DDT dust at the rate of 50 lbs. per acre is also an effective control for this pest.

Large or nearly full-grown worms are much more difficult to kill. Also, they greatly increase their destructiveness at this time. Therefore, it is important to apply the treatments by the time the largest worms are about half-grown.

*Paper of the Journal Series, New Jersey Agricultural Experiment Station, Rutgers University, Department of Horticulture.

CORRECTION

It was inadvertently mentioned in our story of the New England Cranberry Sales Company meeting on page 21 of the September issue that no name of fresh fruit is being mentioned in the ads which Pillsbury Flour will carry in national publications. The arrangement is that American Cranberry Exchange will mention Pillsbury Pie Mix by name, and Pillsbury ads will mention "Eatmor" cranberries by name. The store display material which will be put up by Pillsbury salesmen in stores selling "Eatmor" will also mention Pillsbury Pie Mix by name and "Eatmor." ACE color ads will appear in 12 rotogravure sections on October 24 and in the November issues of "Family Circle" and "Woman's Day."

Correction: The name of Franklin E. Smith was left out by error as his being elected a director of Cape Cod Cranberry Growers' Association meeting on August 17th.

Statement of the Ownership, Management, Circulation, etc., required by the Act of Congress of August 24, 1912, as amended by the Acts of March 3, 1933, and July 2, 1946

Of CRANBERRIES, published monthly at Wareham, Massachusetts, for October 1948.

State of Massachusetts,
County of Plymouth, ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Clarence J. Hall, who, hav-

ing been duly sworn according to law, deposes and says that he is the owner of CRANBERRIES, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management of the aforesaid publication for the date of the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher—Clarence J. Hall, Wareham, Mass. Editor—Clarence J. Hall, Ware-

ham, Mass. Managing Editor—Clarence J. Hall, Wareham, Mass. Business Manager—Clarence J. Hall, Wareham, Mass.

2. That the owner is:

Clarence J. Hall, Wareham, Mass.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are:

None.

CLARENCE J. HALL.
Sworn to and subscribed before me, this 16th day of September, 1948.

(Seal) BARTLETT E. CUSHING.
(My commission expires April 15, 1949)

MORE USES FOR ELECTRICITY

EVERY YEAR

BOTH ON THE BOG AND IN THE HOME

Plymouth County Electric Co.

WAREHAM - - PLYMOUTH

Tel. 200

Tel. 1300

Beaton's Distributing Agency

NATIONAL DISTRIBUTORS

of

Cape Cod Cranberries

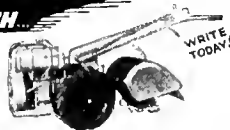
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MIN-OT

FOOD PACKERS, Inc.

BRIDGETON, NEW JERSEY

Packers of

MIN-OT *Strained Cranberry Sauce*

and

Conway's *Whole Cranberry Sauce*

Represented by

BEATON'S DISTRIBUTING AGENCY

WAREHAM, MASS.

FRESH CRANBERRY SEASON OFF TO A GOOD START!

Orders have come in to the American Cranberry Exchange from all sections of the country. This is ideal distribution—the sort which the Exchange was designed 42 years ago to obtain for growers.

The selling push is now on in a big way. The advertising—our most intensive ever on Eatmor Cranberries is just getting under way.

This is a real, old-fashioned fresh cranberry year. . . plenty of berries and plenty of customers. It is hoped the season will have a real old-fashioned happy ending.



The American Cranberry Exchange, Inc.

The Cranberry Growers' Cooperative

Marketers of

**Eatmor
Cranberries**

Chicago

New York

IRVING A \$20,000,000 A YEAR INDUSTRY

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Cranberry Week

THE NATIONAL CRANBERRY WEEK



MAPE COD
NEW JERSEY
WISCONSIN
OREGON
WASHINGTON

CURVACEOUS NATIONAL CRANBERRY WEEK QUEEN

(Photo Press Headquarters, National Cranberry Week, 152 West 42nd St., N. Y.)

30 Cents

November, 1948

Continuity of Service

For 54 years we have given uninterrupted service to the cranberry growers of New Jersey. The second, third, and fourth generations of our members have found that there is no substitute for it.

It has been time tested and proven to be the best service under all circumstances.

Growers Cranberry Company, Inc.

Oldest Cooperative in the Cranberry industry
Oldest agricultural Cooperative in New Jersey

PEMBERTON, NEW JERSEY

THANKSGIVING

Wisconsin growers can be thankful for the fact this state has bigger crops each year.

We are achieving a record of which we are proud.

Wisconsin Cranberry Sales Company

(A Cooperative)

WISCONSIN RAPIDS

WISCONSIN

FOLLOW-THROUGH



From Cranberry Festival to retail store, NCA carries the chicken-and-cranberry story right through to the people who count—women shoppers who buy cranberry sauce to go with their chicken dinners as well as the traditional turkey.

The Wedding of the Little White Hen and the little Red Cranberry was a publicity stunt, and grocers everywhere are capitalizing on it to increase their cranberry sauce sales—not only during the Holiday season, but all year 'round.



Join with NCA to build a bigger market for bigger crops.

NATIONAL CRANBERRY ASSOCIATION

The Growers' Cooperative

Branches at:

Hanson, Massachusetts
Onset, Massachusetts
Plymouth, Massachusetts

North Harwich, Massachusetts
Bordentown, New Jersey
North Chicago, Illinois

Coquille, Oregon
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DIRECTORY FOR CRANBERRY GROWERS

MASSACHUSETTS

Call
WAREHAM 162

S. C. M. Packard & Co.

Hardware—Locksmiths
For Maintenance Supplies

*Let Us Handle
Your Power Needs
for Bog Pumps*

International Harvester
and
Continental Red Seal
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SALES and SERVICE

J. M. HACKETT

Tel. Rockland 1864
NO. HANOVER MASS.

Extensive Experience in
ELECTRICAL WORK

At Greenhouses, Bogs and
Pumps Means Satisfaction

ALFRED PAPPI

WAREHAM, MASS. Tel. 030

USE DYNAMITE

The modern way to remove stumps, excavate rocks, DIG CORES FOR DIKES, and other blasting work in cranberry growing. Speeds up work—reduces costs. CONSULT WITH US ON ANY WORK YOU ARE PLANNING.

Trained by Hercules Powder Co.

ALTON J. SMITH

High St., Hanson, Mass.
Tel. Bryantville 297

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is *your* message

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Disston One or Two Man
CHAIN SAW

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NO. HANOVER MASS.

Edwin K. Greer Co.

WAREHAM, MASS.

Est. 1891 Tel. Wareham 108

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CATERING To The CRANBERRY
INDUSTRY

LUMBER DRAIN PIPE
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Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE
Extension Cranberry Specialist



Extension Cranberry Specialist

In spite of a late start, the Massachusetts cranberry harvest was nearly completed October 28, which is only about a week later than in normal years. Weather conditions have been unusually favorable for the fall harvest with the exception of the week of October 18 when we encountered several nights of low temperatures followed by a real old-time nor'easter. Apparently the crop is about as large as first expected, even after discounting the damage from sun scald and drought. Just for the record, the State Bog (12½ acres, in East Wareham produced a pretty fair crop under Dr. Franklin's supervision. The final figures in terms of screened berries aren't available as yet, but a total of 3,736 boxes were picked in spite of fairly heavy sun scald damage. The New England Crop Reporting Service has placed the Massachusetts crop at 540,000 bbls. as of October 13, based on reports sent in by growers. Incidentally, Mr. C. D. Stevens, in charge of the Crop Reporting Service, appreciates the time and effort the growers have given to filling their crop estimates. It would be very helpful if more reports were sent in to his office in Boston. The information compiled is of vital importance to the industry, and the more reports there are filed, the more accurate the crop estimate.

As far as frost damage was concerned, we were having about a normal season until the week of October 18, as mentioned above. From then on, frost warnings have been going out rather frequently. The lowest reported temperature to date (October 29) was an 8° reading in Carlisle, Mass., on the night of October 21. Both the radio and telephone frost warning

services have functioned very smoothly, judging from all reports.

Just another reminder that Dr. Franklin's revision of the bulletin on "Cranberry Growing in Massachusetts", which is bulletin No. 447, is now available for distribution. It is very well done and worthy of the grower's consideration. Those who wish to have a copy can secure one by contacting their county agricultural agent.

During the month, Prof. Herbert Stapleton, head of the Department of Agricultural Engineering from the University of Massachusetts, and Prof. Earle Cox, of the Research Staff, began some preliminary studies at the State Bog on a new cleaning and screening technique for our cranberries. There certainly is room for improvement over our present system. As one grower observed recently, "We treat cranberries as though they were steel ball bearings and still expect they will stand up well in shipment." They are also conducting some storage and ventilation studies in screenhouses. It will be interesting to watch the development of these experiments.

Among the visitors at the Station in October was a delegation from the Board of Trustees of the University of Massachusetts. Trustees included Mr. Alden C. Brett, chairman of the committee of Experiment Stations, Mrs. Elizabeth L. McNamara, and Mr. John M. Deely. An informal meeting was held with Dr. H. J. Franklin and his staff when the work carried on at the Station was outlined. In addition to the Cranberry Experiment Station staff, Professors Herbert Stapleton and William Colby of the University were present. The trustees had an opportunity to inspect the Station and its facilities and also visit a few of the

nearby bogs and observe harvesting operations. Prof. Fred J. Sievers, Director of the Experiment Station, was chairman of the meeting.

Mr. R. B. Wilcox from New Jersey spent a few days here in October going over the seedling experiments with Doctors Bergman and Chandler. He brought with him samples of berries picked from what we term "the 40 selections." The size, quality and color of the berries taken from some of these seedlings is rather amazing. We will hear more about this work later on.

Growers will remember that they were represented as a cranberry industry for the first time at the Production and Outlook Conference held in Amherst last December. A similar conference has been arranged for this year and will be held December 1 and 2 in Amherst. It is hoped that a good delegation of cranberry growers will attend this session again this year. This is a real opportunity for growers to meet and discuss their production problems and also view the agricultural picture for the state. We will have an opportunity to discuss our marketing problems at a special Marketing Conference which will be held at a later date.

Speaking of December, Dr. Franklin recommends that the winter flowage should be put on usually about December 1 or a soon as the sand surface remains frozen all day. To quote from Dr. Franklin's recent bulletin, "The water should be held just deep enough to cover the vines. It is often best to let the highest point stick out a little where the bog is much out of level." The above information applies to bearing bogs. New Bogs, according to Dr. Franklin, should be flooded for the winter as soon as the ground begins to freeze because frost in the soil will cause heaving of the newly set vines. "The surplus water must be let off at times of thaw or heavy rains in winter or early spring. If this is neglected with vines frozen into the ice, the raising of the ice will pull them out of the ground. The first three years the water should be let off about May 5. Earlier removal ex-

(Continued on Page 22)

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of November, 1948—Vol. 13, No. 7

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

October was marked by an exceedingly heavy rainfall. From October 23rd until October 26th, 5.31 inches fell. The total for the month of October was 7.04. This replenished water supplies for the winter considerably.

Frost Loss

Most of the frost losses in this state occurred early in September. There was not much in October.

Car Loadings

Through Middleboro, which would make care of most of the cranberry cars from Plymouth and Barnstable counties on November 2nd exceeded last year. On November 2nd there were 505 cars shipped as against 273 last year on the corresponding date. This, of course, makes no account of the shipment by truck or by airplane.

WISCONSIN

Harvesting was finished by October 20th. There was very little frost damage, although temperatures reached 8 and 10 above. There were several nights in the teens.

The most serious situation facing the Wisconsin growers is a critical water shortage. It seems that one-fourth of the acreage in Wisconsin at the end of October did not have an available winter flow. There has been very little rain, and the season is approaching when little rain can be expected. According to Del Hammond, general manager Wisconsin Cranberry Sales Company, one can walk over thousands of acres of reservoir and not even get the bottom of his shoes damp. The little rain which has fallen has been soaked up immediately by the

dry ground. If adequate rain does not fall for winter flooding the crop could be effected tremendously for next season, that is unless Fortune should smile and provide an adequate snow coverage.

The Frost Warning Service was highly successful. The service that J. W. Milligan conducted was most opportune, due to the fact that growers were so short of water, and his careful watch on the weather throughout critical nights helped tremendously. The service was discontinued on October 15th, and about 90 per cent of the growers have expressed their desire to have this service continued next year. The Wisconsin Cranberry Sales Company is now working on a new program which might be even more effective and less expensive. It also hopes for better coverage of the growers than was provided last year.

NEW JERSEY

October through the 25th was a cool, dry month in New Jersey, with an average daily mean temperature of 54 degrees, which is 2 degrees below normal. Rainfall through the 25th was only 1.79 inches or 1.67 inches below normal for the month. Frosts occurred on the nights of the 3rd, 12th, 14th, 15th, 18th, 19th, 20th, and 21st. The coldest night was the 18th, when temperatures on the uplands went down to 25 degrees and minimum readings as low as 8 and 10 degrees were recorded on the bogs. Loss from frost has been low because generally ideal harvesting weather prevailed in both September and October so that most of the crop was off the bogs before severe frost occurred. Flooding of

the few unharvested acres was not a problem, in spite of low water supplies on some properties.

New Varieties

A number of cranberry growers met at the sorting house of Theodore Budd on October 18 to see the crop harvested from the forty U. S. D. A. selections growing at the Budd property. In general, the whole collection made a very good showing. There were a number of seedlings that impressed the growers as likely candidates for new varieties. This breeding project is especially promising to New Jersey cranberry growers because a number of these seedlings have high ratings for resistance to false blossom. Mr. Budd is one of the four New Jersey growers who are packaging cranberries in one-pound cellophane bags.

Fruit Rot. Several growers this year are pleased with the results they have obtained in spraying for control of fruit rot. The superiority of spraying over dusting for the control of fruit rot seems to have been well demonstrated in a practical way this year. The use of a long boom carried by a man at each end has produced particularly good control on the Budd bogs.

OREGON

Oregon has been favored with an "Indian Summer". October weather has been perfect for cranberry harvest. The first rain came October 23, but did not last long. Harvest was expected to wind up by October 30. Many of the smaller growers have already finished.

Open House was held at the Coquille Cranberry Plant in honor

(Continued on Page 22)

J. Arthur Baker, Justice Superior Court, Massachusetts, and Cape Cranberry Grower Goes On A Cranberry "Mission"

With Members of Ancient and Honorable Artillery of Boston He Carries Cranberries to Bermuda, Hoping to Open New Markets—Fruit Introduced to Notables of that British Isle.

A novel promotion of cranberries was made September 29 by J. Arthur Baker, Justice of the Massachusetts Superior Court—and a Cape Cod cranberry grower—in Bermuda. This was an introduction to the "upper crust" of that British isle to the fruit, and could result in opening another market.

Judge Baker, a guest of the Ancient and Honorable Artillery Company of Boston, with other members of that organization, carried, as he said, "a stateroom full" of canned Ocean Spray and Eatmor cellophane-wrapped.

Upon arrival in Bermuda, Judge Baker said: "We were immediately invited to a cocktail party at the Governor-General's home, where Sir Ralph Leatham and Lady Leatham had some 50 or more prominent businessmen and their ladies.

"I immediately started in on the sales effort, and the Governor and several very distinguished businessmen were very much interested.

"I presented Sir Ralph Leatham, the Honorable Stanley Spurling, Sir Howard Trott, the Honorable E. P. Vesel and James R. Williams, Esq., with gift boxes of the processed product and the cellophane packages."

Cranberries, both processed and fresh, were promised to the American Consul, S. Clay Merrill. Judge Baker said Consul Merrill, a native of Arkansas, although unfamiliar with cranberries, appeared enthusiastic about their introduction in Bermuda. The Judge continued that it seems products such as cranberries are handled through one distributing agent, and with great efficiency. It was the opinion of Sir Howard Trott who is a prominent businessman, chairman of the Trade Development Board

and president of the Bermuda Hotel, Inc., that to have the fruit distributed through this agent would be a most efficient method.

Judge Baker left a considerable quantity of cranberry literature. After running out of cranberries, he has requested of the two co-ops that additional fruit be sent to various persons on the island and that a gift box be sent to the Honorable Eugene A. Hudson, who is Captain of the Ancient and Honorables, and also a Justice of the Superior Court. It was Captain Hudson who made the cranberry "expedition" possible.

All in all, Judge Baker continued, he believed the Cape Cod cranberry had received considerable publicity, not only in Bermuda, but among the members of the Ancient and Honorables.

This is borne out by the fact "The Royal Gazette", morning newspaper of Hamilton, Bermuda, made the visit of the Ancient and Honorable Artillery a principal story, devoting about two columns to the event. "The Bermuda Mid-Ocean News", Bermuda's afternoon daily, said in its column "Society in Bermuda" that "One of the group, Judge Baker, brought down a lot of cranberries straight from Cape Cod."

Judge Baker, who is a member of both NESCO and NCA, owns a bog of nine acres, located at Head-of-the-Bay, Bourne, which is on the Cape. This is a bog which was built by his father, Joshua H. Baker, about 1867. This makes Judge Baker's father one of the real pioneer growers of cranberries on the Upper Cape.

Because of this fact, the Judge has been familiar with cranberries all his life. He picked berries, weeded, and did other cranberry jobs, as a boy, to help his father.

He says he can remember when his father and mother worked "like slaves" growing the crop, harvesting and screening, using the old-fashioned hand screen. They often screened until into December and January.

Then, he says, sometimes they consigned the berries to commission merchants in the Middle West. There were often times, he said when they did not receive any check. "Instead, they got a bill saying they owed the commission house money, the price of cranberries being so low. This was heart-breaking to them."

The Judge is very much in favor of cooperatives, which he feels has done so much to stabilize the market and advance prices. However he is vehement in saying he wishes there could be closer cooperation between the two major co-ops. He believes a method could be worked out whereby an agreeable allocation of the crop could be brought about. In the event of failure to agree, he said there could be a solution in the appointment of an arbitrator, with full authority to settle the dispute. This method of arbitration, he pointed out, is used in baseball, the movies, and many other lines of endeavor.

Incidentally the Bermuda trip which was on the S. S. Yarmouth was made between two hurricanes. This brought most unpleasant memories to Judge Baker, since his bog suffered severe damage in both of the New England hurricanes of 1938 and 1944. In the first his bog was flooded with salt water from Buttermilk Bay. He was sitting in Worcester at the time and had no idea such a thing could occur. He was just getting his bog back into condition from its first salt water soaking when the second disaster struck.

He is now just getting to grow cranberries again. The flood cost him an astonishingly high amount of money, but he is not discouraged with growing cranberries. He says he will not do that for anything in the world.

"I'm going to continue", he concluded, "until I make this one of the best little bogs on Cape Cod."

He Fell Into The Cranberry Industry

That Is His Own Statement
And This Important Man
In the Cranberry World
Does Not Regret This.

by CLARENCE J. HALL

George A. Cowen, North Rochester, Massachusetts, president of New England Cranberry Sales Company for three years, and director of ACE for a number of years, says he fell into the cranberry business in the most surprising way. When he was a very small boy, accompanied by his grandfather, he walked down to a flooded cranberry bog, threw a stick in, and promptly fell in after it.

During his boyhood he worked around bogs, picking and weeding. When he was about eighteen he was using a snap machine and was in a group which "headed up" a section of the bog. He lost his job because he was accused of not picking clean.

Built Own Bogs

After this happened, he decided that he and his twin brother, Chester, would build their own bog. They built four or five acres of their own, adjacent to their grandfather, Seth Cowen. This was on "brown brush" swamp.

Later on when the cranberry business was not especially prosperous, Mr. Cowen learned the carpenter's trade under Mr. Harrington of New Bedford. He worked at this for several years and did a good deal of building.

Colburn Wood of Plymouth hired him to construct several buildings on the Cape Cod Cranberry Company.

Eventually Mr. Cowen became its foreman. This was a position he held for 35 years. During this time he was able to continue his own bog construction until the labor situation became difficult.

"When everything was done by hand and everything was fun", said Mr. Cowen. "One dollar to one-hundred-fifty was the pay for nine hours and you could get all the men you wanted. The workers were all willing—they would do anything, to learn how to wheel a



wheelbarrow of sand down a plank. That was the highest point in a bog worker's ambition in those days.

The Cowens' bogs are planted to Early Blacks and Howes, with Randalls and some Centennials. The Randalls originally came from a bog at Snipatuit. All told, the holdings of Mr. Cowen and others come to about 50 acres, quite scattered, almost all in Rochester. These bogs are the Maxim bog, Gifford, Alley. He has about a half of Gilmore and a quarter of the Benson Pond bog, also the Snow Pond bog.

Mr. Cowen married the former Annie Maxim, and they have lived since their marriage in Rochester. Mr. Cowen has always been a resident of Rochester.

Hobbies

His hobby is a good vigorous game of croquet, which he often plays on the lawn of his home un-

til midnight. Sometimes this is by floodlights. His fancy for the ball and wicket have led him to play so late in the season that he had to wear an overcoat.

His home is filled with handsome antiques which are mostly family pieces. Mr. Cowen is not particularly fond of antiques, although Mrs. Cowen is if they have a special meaning of inheritance.

They have no children.

Mr. Cowen is a third generation grower, the first being his grandfather, Seth, the second, his father, Charles E.

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CRANBERRIES
The National
Cranberry Magazine

Growers Company Packs for First Time in Cellophane

Four Packing Units Are Installed, Walt Fort, Manager, Announces—Two in Ocean County, Two in Burlington.

For the first time the Growers Cranberry, Inc., New Jersey branch of the American Cranberry Exchange, this fall packed a portion of its crop in cellophane, one-pound packages. Walt Fort, manager of the Growers Company, reports that four cellophane units were installed in Jersey.

In Burlington County, Theodore H. Budd of Pemberton installed at his packing house at "Retreat"; J. Rogers Brick installed at Medford. In Ocean County units were installed by James D. Holman Company and by the Double Trouble Company (Crabbe).

Cranberries in the one-pound cellophane wrap were a feature of the Growers' Company's pictorial booth at the Ocean County Fair. There was a panorama of pictures showing the growing and harvesting methods used by growers to raise a crop of cranberries, as well as pictures of the marketing and advertising methods used to move the crop.

"The Stuntman", Bert Nevins, Aids Cranberry Promotion

Bert Nevins, publicity relations man for "National Cranberry Week", was born in New York City in 1910.

He attended New York and Columbia universities. He became a feature writer for the new defunct "Evening Graphic", followed by a tour of duty with NEA Syndicate.

He has headed his own publicity firm for the past 16 years, serving a wide variety of accounts.

He is a member of the American Council on Public Relations, the Publicity Club of New York, National Showmen's Association of Amusement Parks, Pools and Beaches. He is Director of the National Donut Week Committee, heads the Bakery News Bureau.



BERT NEVINS

National Cranberry Week

(The following article appeared in the "Oregonian", Portland, Oregon, and the "Western World", Bandon, Oregon.)

The celebration of national cranberry week, October 18 to 23, should remind Oregonians that a growing cranberry industry is now a part of the economic life of the state. This industry began before the turn of the century in Coos county, but soon spread to Tillamook and to Clatsop counties.

By 1925 Coos had but 25 acres, while Clatsop had reached a boom period with 150 acres of berries, which, because of weed and insect problems, lack of experience and scientific information, were sooner or later abandoned, until but 50 or 60 acres are still harvested.

The industry made slight gains before 1942, partly due to limited marketing facilities and lack of publicity. Few knew much about

the possibilities of growing cranberries in Oregon. About 1928, A. T. Morrison of Coquille became interested and planted a three-acre marsh near Bandon.

Through his initiative, the nine growers of Coos county were called together and organized into a club to exchange ideas and work out some scheme of marketing that would be mutually beneficial. This organization later became the Coos Cranberry Co-operative.

Conference Called

In 1936 a county agricultural conference was called to make a survey of the possibilities of agricultural expansion in Coos county. This was the first time cranberries had been given any consideration as an economic possibility, and it became the inspiration for a "cranberry school", conducted by M. C. Buehanan, the Smith-Hughes instructor of the Bandon High school.

(Continued on Page 18)

THANKSGIVING, 1948

THANKSGIVING! Has the cranberry industry anything to be thankful about? We feel it has. For one thing, it has continued to grow, and shows every sign of growing even bigger.

What would the old-timers have said about a crop of 899,300 barrels—if that turns out to be the final figure? They would not have believed that so many cranberries would ever be grown in a single year.

Then again, what would they have thought of our intensive campaign to move this tremendous crop, plus the carry-over? They would have been amazed at such songs as "The Cranberry Bounce", the dance step. The radio, magazine and newspaper publicity designed to move cranberries.

THE ELECTION

THE election is long over. The people have spoken their minds. Whether their decision was right or wrong is now up to the future. Many doubtless were extremely surprised and disappointed in the outcome. Others were happy. How will this result effect the cranberry industry? Who can say? Frankly, we do not know.

But this election proved at least one thing, perhaps two. The first was that the political dopesters were all wet. The second was that this was a free election when people went to the polls and voted as they saw fit. This is still the United States of America, and we can be grateful that we live in such a country.

WHEN IS A QUEEN A QUEEN?

IT'S getting to be a bit farcical—so many "Cranberry Queens." There was the National Cranberry-Harvest Queen, then the National Cranberry Week Queen, New Jersey has its Queen, Southwestern Oregon has chosen its Queen. The Queen of the contest sponsored by the Wareham (Massachusetts Legion is about to be chosen. There is but one good point about this business that we can see. If it does gain publicity for cranberries, which sells more cranberries, we will make no adverse comment.

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THIS is to give a hand to a cranberry grower of the older generation, George A. Cowen (story elsewhere in this issue). He says he "fell into the industry by accident", but his long life has never led him to regret that cranberry growing has chiefly been his occupation.

AUTUMN is a beautiful time of the year, in a melancholy sort of way, as has been said before. In the Northern States the leaves are falling. But the foliage is lovely, with the red and yellows touched off by frosts. In our own back yard, Mexican fire bush is turning red. From my window I can see a couple of cranberry bogs. They are a beautiful, rich purplish red.

Oregon Chooses Its Cranberry Queen, 1948

By ETHEL M. KRANICK

Miss Virginia Corrie, a princess of the 1947 Bandon Cranberry Festival and daughter of Mr. and Mrs. J. Q. Corrie, was selected to represent the Oregon members of the National Cranberry Association in the National Cranberry Queen contest. According to word received by Ed Hughes, manager of the Coquille plant of the National Cranberry Association, Miss Corrie gave the leading contestant a close race.

The Bandon Cranberry Festival is held in November and a Queen is to be chosen by ticket sale and judging of contestants' appearance to reign over the festivities. Since the National contest was held before the finals on the local contest the local queen could not be a contestant in the National contest.

At present there are eight contestants for the Cranberry Festival. The Southwest Oregon Cranberry Club is sponsoring Miss Phyllis Pullen, the daughter of a popular cranberry grower. Miss Betty Loshbaugh, the daughter of Mr. and Mrs. Ennis Loshbaugh who are also cranberry growers,

is being sponsored by the West-most Grange. Other contestants are Miss Lois Blakely, sponsored by the Bandon Active Club, Miss Marie Fasnacht, sponsored by the Rebekah and Odd Fellows Lodge, Miss Florence Moore, sponsored by the American Legion, Miss Nancy Price, sponsored by the Randolph Women's Club, and Miss Diane Burrell, sponsored by the Veterans of Foreign Wars. The eighth candidate comes from a nearby town. Miss LaVera Kinnett of Langlois is sponsored by the Langlois Sportsmen's Club.

The Cranberry Festival committee has decided upon a fair in connection with the festival activities. Prizes will be offered for fresh and canned cranberries and for various ways of preparing delicious concoctions from cranberries.

Entertainment Planned by ACE

Wareham's Queen Has
Radio and Television
Treat in Store.

The committee for the Fourth Annual Cranberry Queen Coronation Festival and Dance Nov. 19 is completing plans for elaborate entertainment for Wareham's queen. The New England Cran-

berry Sales Company and the American Cranberry Exchange are to sponsor a New York trip, also a complete new wardrobe.

The lucky girl will leave for the big city Nov. 22 and will present the mayor of New York with cranberries. She will be interviewed on radio and television programs over National networks and will be given the opportunity of meeting celebrities of the stage, screen, and the air.

Among the queen's presents will be the dress of cranberry red designed by one of New York's most prominent dress designers, Ceil Chapman, also various accessories designed and presented by famous houses in New York.

All details of her trip, wardrobe gifts and entertainment are being managed by Robert K. Kornfeld of the American Cranberry Exchange. All former queens are invited to be guests of the sponsor, Wareham Post No. 220, American Legion and Wareham Unit No. 220, American Legion Auxiliary.

There are eleven contestants to date for the title of queen. Mrs. Clifford W. Collins, contest chairman, has announced that it is not too late to enter and that new contestants are welcome.

Wareham Queen

The New England Cranberry Sales Company and the American Cranberry Exchange are to give the "Wareham" (Mass.) cranberry queen to be selected November 19 a wardrobe and a trip to New York.

The "lucky gal" will have the same sort of time as she did in New York last year, probably some radio experience, television, perhaps movies again, seeing the mayor of the city and other dignitaries, etc. Ceil Chapman, distinguished New York clothes designer, has offered to make her a cranberry red dress.

4th ORIGINAL CRANBERRY QUEEN CORONATION FESTIVAL and DANCE

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CRANBERRY QUEEN
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Big Stage Show and Dancing

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NEW JERSEY NOTES

Anthony DeMarco is doing a good job at Chatsworth. He has brought a number of bogs up into improved condition, by drainage, fertilizing and occasionally holding the winter flood until July. He is also preparing a large tract for planting.

Vinton Thompson at "The Birches" is getting ready to resume his program of sanding now that the harvest is finished.

Benjamin Cavileer of Lower Bank is a successful blueberry grower and a director of the Blueberry Cooperative Association, is entering the cranberry field. He has acquired the Kaser bogs and has begun to replant.

A. J. Fort is doing a careful job of replanting an old bog at Magnolia, near Pemberton.

Earle Hill of Lower Bank is rebuilding a portion of the former DeLong bogs at Bulltown.

Four growers have been busy packing fresh fruit for themselves and their neighbors in cellophane. These are Double Trouble Co., Toms River; Theodore H. Budd, Pemberton; James D. Holman, Lakewood, and J. Rogers Brick, Medford.

Joe Palmer has been improving his bogs each year by the use of pumps for frost flow and irrigation.

The New Jersey Blueberry "Open House" at which the New Jersey

Cranberry and Blueberry Research Laboratory station at Pemberton reports to the entire blueberry industry of the state, will be held at Pemberton, Dec. 11, 10:30 a. m. to 1 p. m. All persons interested in blueberries are invited to attend.

NCA Is Pushing Gift Boxes

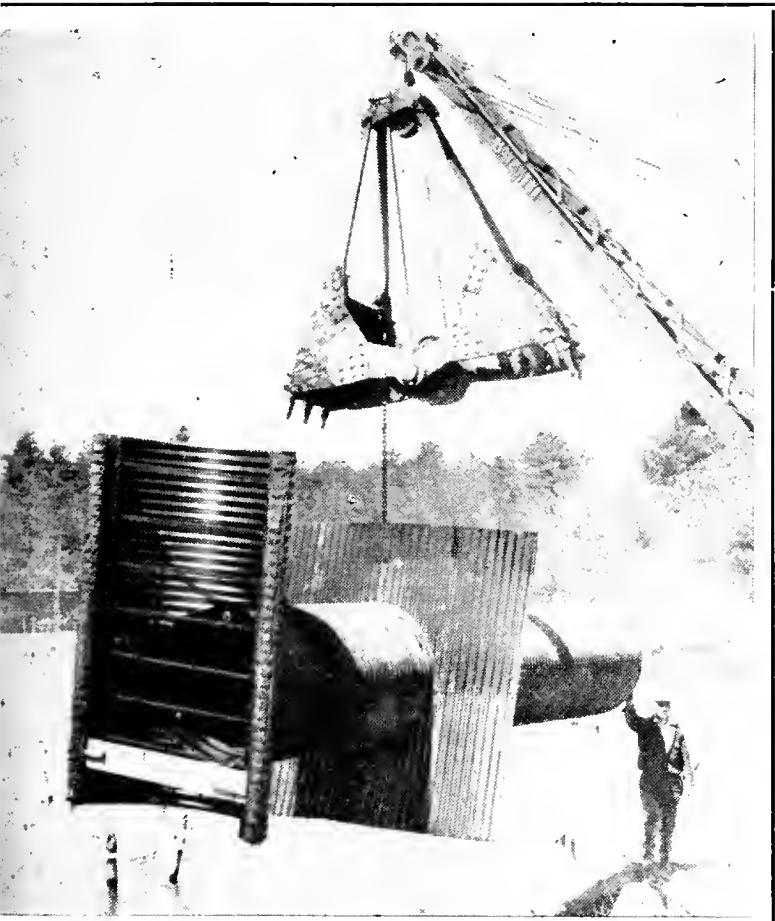
With its eye on the gift-giving public, NCA is pushing its Ocean Spray gift boxes in an extensive (Continued on Page 15)

Mows fast and clean around buildings, fields, under trees, fences, along roadsides, and in tight corners.

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tall
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weeds
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For Farm, Orchard or Truck Garden. Easily and quickly mounted on any irrigation pipe. Heavy duty brass and bronze construction for long service. Sand and dirt proof. Water lubricated bearings—no oil or grease required. No fast moving parts to rapidly wear out. Maximum coverage—even distribution.

BUCKNER MANUFACTURING CO. 1615 Blackstone Ave., Fresno, California

BUCKNER SPRINKLERS

THE *Glapper* CO.

1121 WASHINGTON STREET WEST NEWTON 65, MASS.



Left, Sir John E. P. Vesey, member Bermuda Parliament, Chairman Bermuda Board of Trade, President of E. A. & F. A. Smith Company, one of the largest department stores in Bermuda, is shown accepting a gift box and cellophane cranberries from Judge J. Arthur Baker. (Bermuda News Bureau)



Two young models have their dream come true. Barbizon models Doris Dean and Joan Dunney, for years fans of the great Tommy Dorsey, receive a trombone solo all for themselves in thanks for the Eatmor cranberries they brought the bandleader, the first of this year's harvest in their states, Massachusetts and New Jersey, respectively. Bringing the cranberries to their idol is the greatest thing that has happened to them since they arrived in New York, the girls told him. (Foto Courtesy: The American Cranberry Exchange)



This is the "Cranberry Bounce" as demonstrated at "Edaville", South Carver, Massachusetts, October 2nd by two of the star instructors of the Arthur Murray School of Dancing. (CRANBERRIES Photo)



NEW JERSEY'S QUEEN

This is New Jersey's Cranberry Harvest Queen, Miss Jane Peabody, daughter of George Peabody and granddaughter of Walter H. Bow-

ker, one of the oldest growers in New Jersey. Miss Peabody was crowned by the acting governor on September 20th.

(Photo Courtesy of NCA)

Gift Boxes

(Continued from Page 11)

new campaign aimed at boosting sales of the boxes into hundreds of thousands. Sherman L. Whipple, 3rd, of NCA's Plymouth office is in charge of the gift box operations.

A new box, designed for use with cranberry products from any section of the country, is being prepared, and an attractive order blank has also been printed. Whipple and his staff plan to circularize a list of 300,000 individuals and 10,000 business firms to catch not only the Christmas trade but

also other gift-giving occasions throughout the year. Each person who orders a gift box to be sent to a friend or relative may have his choice of five different gift card enclosures, for Easter, Thanksgiving, Christmas, birthday, and general gift.

The price of the attractively-packaged gift box has been set at \$2.50 delivered anywhere in the United States. Each box contains one can of Jellied Cranberry Sauce, one tin of Whole Cranberry Sauce, two pints of Cranberry Juice Cocktail, one jar of Spiced Cranberry Sauce, and a jar of a fruit-and-cranberry preserve, depending on what is available during the season. Also included is a set of three plastic cutters for cutting slices of Jellied Sauce into fancy shapes, a recipe booklet, and other available literature.

Ads in Gourmet and House Beautiful will promote the Ocean Spray gift boxes throughout the country. By including the Spiced Cranberry Sauce and the fruit-and-cranberry preserve, NCA is appealing to the thousands of shoppers who like to buy through the mail products that are not available in retail stores.

National Cranberry Week Successful

by LOIS DAY

Now that the first annual National Cranberry Week has faded into history, NCA is beginning to measure the Week's results. Saleswise, one interesting fact is that on October 28, five days after National Cranberry Week ended, NCA's Hanson office received, by telephone, orders for 13 carloads of Ocean Spray Cranberry products - an almost unprecedented number for one day, and evidence that grocers who had stocked up with cranberry products in advance of the Week were sold out and had to re-order almost immediately.

National Cranberry Week publicity is still pouring into NCA's Hanson office. Clippings from small-town weekly newspapers and big city dailies in almost every section of the country tell about cranberries and National Cranberry Week. Several coast-to-coast radio programs gave a "plug" to National

COVER DESIGN -- National Cranberry Week Queen is Miss Norma Lane, 28 Alpine Street, Somerville, Massachusetts. She was chosen from over 100 girls by wearing a novel bathing suit made from fresh cranberries at the Hotel Sheraton, New York. Miss Lane as Queen has made a tour of the cranberry areas of Massachusetts, Oregon, Wisconsin, New Jersey, and Washington.

Cranberry Week, and food pages of magazines and newspapers have devoted thousands of lines to featuring cranberry recipes. All this material is being compiled in a mammoth scrapbook which will be available for growers to look over at various meetings throughout the year. From all sides, evidence piles up that the Week has helped to make consumers and grocers cranberry conscious, and this new con-

sciousness means customers for the cranberry industry.

In order to make National Cranberry Week publicity industry-wide, NCA offered its display material to other cranberry sales companies, and those that took advantage of the offer to increase their own sales were the John J. Beaton Company of Wareham and the Colley Cranberry Company of Plymouth.

The trade response to National Cranberry Week was greater than NCA officials first expected. Original orders of posters and display materials had to be doubled, and even then the supply was inadequate to take care of last-minute orders. When the smoke had cleared, NCA found that it had distributed to brokers, buyers, retailers, restaurants, railroads, bakeries, and drug stores some 45,000 large banners calling attention to National Cranberry Week; 25,000 store's "special feature" for National Cranberry Week; 1100 large posters designed to be pasted or tacked to the side of trucks; 50,000 small cards to be clipped to restaurant menus urging the diner to enjoy cranberry delicacies during National Cranberry Week; and 5,000 each of nine quantity recipes for cranberry dishes for use by hotel, restaurant and institution chefs. With all of this printed material flooding the nation, the echoes of National Cranberry Week must surely have penetrated to the far corners of the country.

Working hand in hand with this type of promotional material,

B. H. COLE & CO., INC.

North Carver, Massachusetts

This year Massachusetts will observe its first "Cranberry Week". . . . a week which it is hoped will become as much a tradition in New England as our boxes are a tradition in the cranberry industry. We've been making boxes since 1707 and that adds up not only to a lot of boxes, but also a lot of experience—and in our business it's experience that counts.

FRANK H. COLE, Pres.
Established 1707

Stokely's Finest

CRANBERRY SAUCE

NONE FINER

STOKELY FOODS, INC.

90 Riverside Ave.

NEW BEDFORD, MASS.

wide-spread publicity on National Cranberry Week helped to put the word "cranberries" on everyone's tongue and indirectly build sales. Sammy Kaye's "Cranberry Bounce" song hit and Arthur Murray's new dance step of the same name offer a sure-fire means of spreading the fame of cranberries from coast to coast. Cranberry-red clothes for the lady were modeled in fashion shows by the Tailored Woman in New York and Bullock's in Pasadena, and in advertisements by Jay Thorpe, New York. Westmore's new Cranberry Red lipstick shade is being featured by Woolworth, with

large window displays in 300 of their stores. Baar and Beards, scarf makers, have brought out one of their "Top-Hit" scarves in a Cranberry Red Shade. Maddame Emme, elite New York milliner, has designed a hat decorated with cranberries, and a model wearing this hat was photographed at the cranberry exhibit which was part of the New Haven Railroad's "Main Street - Southern New England" exhibit in Grand Central Station, New York, recently.

Further publicity came through the "Mrs. America" contest held this fall, since one of the require-

ments of the contestants was that they submit a recipe for a chicken-and-cranberry dish. The winner, Mrs. Marie Strohmeier of Philadelphia, offered a recipe for cranberry couplets which was distributed to hundreds of newspapers by the United Press.

The Cranberry Festival held at Edaville on October 2 gave added force to the publicity that was already rolling on National Cranberry Week.

To celebrate National Cranberry Week itself, October 18-23, NCA held Open House every afternoon during the entire week at its two Massachusetts plants, and for several days at its four other plants. Thousands of visitors stopped in to see how the bright red berries are packed and processed. At the Hanson plant alone nearly 3,000 guests peered into cooking kettles, gaped at labels rolling on cans at the rate of 450 a minute, and stared open-mouthed at machines which start with a roll of cellophane and a hopper of berries, and come out with measured, filled, and sealed one-pound bags of fresh cranberries. Guests were greeted first with a refreshing glass of ice-cold Cranberry Juice Cocktail, and at the end of their tour of the plant they stopped for cookies and a Cranberry Sundae, made by spooning Whole Cranberry Sauce over vanilla ice cream. The enthusiasm of the guests and their eager purchases of cranberry products proved once again that an "Open House" program is one of the best public relations ventures any company can attempt.

There is no way, of course, to measure in exact dollars and cents the value of National Cranberry Week to NCA members and the cranberry industry as a whole. Undoubtedly the week's activities have already resulted in some sales gains, but it is impossible to tell what proportion of the total sales can be attributed to National Cranberry Week. Moreover, immediate sales gains are only a part of the picture. The real value of large-scale promotion like this lies on its lasting impression on people who learn to enjoy cranberries not only during National Cranberry Week but all year 'round.

RAIN BIRD

Protects Cranguyma!



**1000
RAIN BIRD
SPRINKLERS
LIKE THIS**

Provide Protection from Frost and Drought at Cranguyma Farms, Long Beach, Wash.

PHOTO COURTESY OF PORTLAND OREGON JOURNAL

SPREADING out in an impressive acreage in the great Northwest, Cranguyma Farms at Long Beach, Washington, represents an important part of our nation's cranberry production. Standing as dependable guardians against frost and drought 1000 Rainbird sprinklers provide the correct and necessary rainfall whenever it is needed. This outstanding installation is indicative of the dependability of Rainbird Sprinklers. The distributor or dealer listed below will be pleased to furnish additional information upon request.

PACIFIC COAST DISTRIBUTORS

R. M. WADE and CO. ARMCO DRAINAGE & STOUT IRRIGATION INC.
Portland, Oregon METAL PRODUCTS CO. Portland, Oregon

EAST & MIDWEST DISTRIBUTORS

L. R. NELSON MFG. CO.
Peoria, Illinois

MASSACHUSETTS DEALERS

JOSEPH BRECK & SONS IRRIGATION DIVISION VEGACRE FARM
85 State St., Boston, Mass. Forestdale (Cape Cod), Mass.

RAIN BIRD SPRINKLER MFG. CORP.

GLENDORA

CALIFORNIA

Penn. Gypsy Moth

The destructive gypsy moth caterpillar is "just about extinct in Pennsylvania, according to Miles Horst, secretary of the state Department of Agriculture.

His announcement followed an intensive spraying program in the Keystone State during April, May and June, culminating a four-year battle. The principal infestation was a 650 square mile area of Luzerne and Lackawanna counties.

During the past spring, nearly 169,000 acres were sprayed, mostly

by air. Mobile power blowers covered some 33,000 acres, while 76 acres had to be attacked by workers carrying knapsack sprayers.

"At the end of four years", Secretary Horst said, "not a single living gypsy moth caterpillar has been found on any part of the 315,000 acres treated with DDT." He added that the rate of application averaged one pound per acre. He also commended the cooperation of Scranton, Wilkes-Barre and Pittstown, the three largest cities in the infested area, for their cooperation.—(AIF NEWS)

SCOOPS and SCREENINGS

Referring to the Judge Bake article in this issue, we are mentioning no names, but we know of another judge who is very much inclined to buy a certain piece of property on the Cape for a summer home. Why was he so set on this particular piece of property? Because on the property was a little piece of cranberry bog.

.....

Emile C. St. Jacques of the Hayden Separator Company, Wareham, Massachusetts, and Dr. Frederic B. Chandler, Associate Director of the Massachusetts Cranberry Experiment Station, East Wareham, were recent visitors at the La Rocque Bog at Drummondville, Ontario.

"Bob" Kornfeld, editor of the "Cranberry World", and Mr. Kornfeld were recent visitors from Massachusetts.

National Cranberry Week

(Continued from Page 8)

At this cranberry school some interesting facts came to light. First, it was learned that there were now 40 bogs of various sizes which brought their owners a gross return of \$58,000. One of the amazing facts brought out was

Cranberry Growers...

You value the sound, proven recommendations of the East Wareham Cranberry Experiment Station in growing your crops successfully.

Equally invaluable to you is sound, properly written Insurance fitted specially to the needs of Cranberry Growers.

E. A. Thacher of this firm will be happy to discuss your requirements, and without charge or obligation, prepare a survey of your property and needs.

Brewer & Lord

INSURANCE

56 Batterymarch Street, Boston

Telephone: Hancock 60830

WINTER Reminders...

WHEELBARROWS - RAKES - PRUNERS

BOG PUMPS—7 in. to 20 in.

AIR-COOLED ENGINES—1½ to 6½ HP.

MINNEAPOLIS — MOLINE ENGINES—26 to 50 HP.

SEPARATORS — ELEVATORS — DUSTERS

WINTER ORDERS AT SPECIAL DISCOUNT

HAYDEN SEPARATOR MANUFACTURING CO.

WAREHAM, MASS.

Tel. 497-W
497-R

IT DID RAIN IN AUGUST

for the Grower
who invested in **SPRINKLER IRRIGATION!**

The .75 in. Rainfall reported in Massachusetts bog area for August.
The extreme heat that damaged berries.
The continued dry spell in September and
The 10% crop cut as a result did not affect his crop.

TELEPHONE US FOR YOUR RAIN—Sprinkle your berries when you want to—complete irrigation systems installed—These installations can pay for themselves in two seasons.

MANUFACTURERS DISTRIBUTOR OF FLEX-O-SEAL LIGHTWEIGHT GALVANIZED STEEL PIPE IN 3"-4"-6"-8" DIAMETERS. FITTINGS—PUMPS—SUCTION AND DISCHARGE ASSEMBLIES—ROTARY SPRINKLER HEADS.

THESE GIANTS WILL WORK FOR YOU — FOR LESS

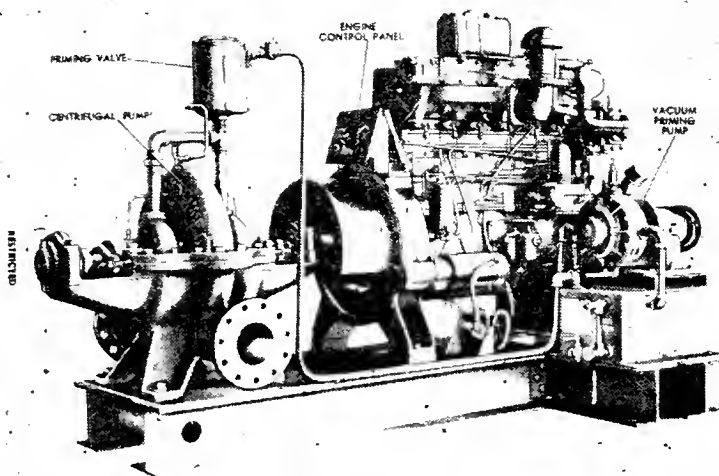


Figure 1—Right Rear View of Buda Fire Pump
Hercules Heat Exchanger

1000-1500 G. P. M. High Pressure Buda—and Hercules Diesel Pumpers unsurpassed for pumping large quantities of water at high pressure—at lowest power costs—Fuel cost approximately 37% of gas engine doing same job. One Pumper will service an entire 15 acre bog with sprinkler equipment.



ALSO AVAILABLE—CHRYSLER 500 G. R. M. to 850 G. P. M. PUMPS
SKID MOUNTED OR ON TRAILER—READY TO OPERATE



Write for Free Literature descriptive of Portable Pipe in Galvanized Steel or Aluminum—Sprinkler Heads in all sizes—and Engine Pumping Units, Gasoline and Diesel.

Estimates at No Obligation.

VEG-ACRE FARMS IRRIGATION DIVISION

FORESTDALE - Cape Cod - MASSACHUSETTS

that Oregon was the smallest in point of production, but that the production per acre was the highest in the nation. (Cranberries are produced commercially in Massachusetts, New Jersey, Wisconsin,

Washington and Oregon). Berries in Oregon, it was revealed, grew to a large size, some measuring $\frac{3}{4}$ to 1 inch in diameter.

Warnings were made at the school to be on the alert for insect

pests and fungus disease and to keep bogs weedfree, all of which had plagued the growers to the north. The result of these warnings may be seen in the present freedom from disease in all growing sections of Oregon.

THOMAS BROTHERS

General Contractors

MIDDLEBORO, MASS.

Tel. Middleboro 772

Concrete Flumes and Pumpwells
Transit Mix Concrete

Complete Line of Construction Equipment
Excavating - Grading - Hauling

Leave the Tough Jobs for Us
Our Experience is Your Guarantee

Industry Reviewed

In 1945 the cranberry industry was reviewed for the first time in the specialty crops issue of the official Oregon state department of agriculture bulletin. Oregon also has been recognized through articles in the national cranberry magazine, CRANBERRIES, published at Wareham, Mass.

The cranberry industry was invited to send a representative to the meeting of the state-wide agricultural research committee which recently met in Portland, indicating that Oregon sees possibilities in the cranberry industry to give work to its increasing population.

16,100 Barrels Produced

The Southwest Oregon Cranberry club was organized three years ago to make a specialty of studying cultural problems and to promote



Specify and be sure you get

CUPROLIGNUM

**to Save Costly Renewals on Flumes
and Headgates**

CUPROLIGNUM SHINGLE STAIN

For new clapboards, old stained or new shingles. Can be painted over if desired.

CUPROLIGNUM COPPER BOTTOM PAINT

with the addition of Cuprolignum gives added resistance to barnacles or teredoes by penetrating the wood cells, depositing toxics which remain after paint film has completely disintegrated.

New England Representative

ROBERT S. CHASE

195 Marlboro Street

Boston 16, Mass.

Manufacturers: RUDD PAINT & VARNISH CO., Seattle, Washington

friendly relationship with Washington growers, as well as seek help from the Washington Cranberry-Blueberry laboratory at Long Beach. To this end "field day" has become an annual affair, not only in Oregon but in Washington. Oregon growers go to Washington to study their bogs.

"Field day" consists of an educational program planned in cooperation with the assistant county agent, Jack Hansell, a potluck luncheon, and a tour of marshes which present interesting problems. At these meetings many facts come to light and receive

publicity. Statistics presented at a recent meeting show that in 1946 Oregon produced 16,100 barrels of berries which were worth nearly \$500,000 and Hansell predicts this figure will be doubled by 1949.

Oregon cranberry growers are progressive and ever ready to try new ways of planting and harvesting. During the war when labor was scarce, Jim Olson of Bandon invented the first wire basket water scoop which saved expense and crops. The Hoyt mechanical picker was the first mechanical picker to be used in Oregon, but many mechanical devices have been

invented since. Overhead sprinkling is used for irrigation, frost control and heat control. (Cranberries grow between the temperatures of 28 to 85 degrees.) New warehouses are equipped to handle water-picked berries, some of which go to the cannery at Coquille or to the fresh market.

The Bandon Cranberry festival

**CRANBERRY REAL ESTATE
APPRAISING**

BOG MANAGEMENT

17 Court St.
Plymouth, Mass.

*Orrin Colley
AND
Associates*

Tels: Plymouth 1622
Kingston 319

If you are buying or selling Cranberry Property it will pay you to see us.

A number of properties available, more wanted.

**FREDERICK V. LAWRENCE
INCORPORATED**

•
READY-MIXED CONCRETE

SAND—GRAVEL

CONCRETE BLOCKS

ROAD BUILDING

EXCAVATING

DRIVEWAY CONSTRUCTION

3 MODERN PLANTS

2 BUILDING MATERIAL
STORES

•
MAIN OFFICE
FALMOUTH 1800

Wareham 1180 Hyannis 1900

Peter **A.** **L**e **S**age

"KEEP SMILING"

PLYMOUTH

Tel. 740

Peter A. LeSage

Distributor of Cape Cod Cranberries

YARMOUTH

Tel. Barnstable 107

originated in the minds of progressive businessmen of Bandon, and the first festival was held last year. It will be held again this November 5 and 6 on a larger scale with a parade, games, dance

and exhibits. A cranberry queen will be chosen, and she may compete for national honors. National cranberry week is sponsored by the National Cranberry association and the American Cranberry Exchange,

through which most of the western berries are marketed.

Fresh from the Fields

(Continued from Page 5)

of National Cranberry Week from October 18-23. The plant is located near highway 101 in Coquille and tourists from many states stopped to inspect the plant. Local people also availed themselves of the opportunity to go on the guided tour of the cannery and partake of the various samples of cranberry products. Each guest was presented with a cranberry cook book and a chicken-shaped cranberry cutter to remind them that chicken and cranberries make a wonderful combination to use the year around.

Cranberry Station and Field Notes

(Continued from Page 4)

poses the plants to possible frost heaving."

There is another suggestion which is worthy of grower attention and closely connected with cranberry enterprise. Cranberry growers in Massachusetts have one

Save Priceless Water

**BUY
PORTABLE OVERHEAD SYSTEMS
for
IRRIGATION AND FROST CONTROL**

**STEEL or ALUMINUM PIPE
Equipped with
McDOWELL STEEL COUPLINGS**

**There is no other similar or equal equipment
NO LATCHES NO HOOKS**

Write or phone. Our local representative will call.

No charge for Design and Blueprints to suit your particular bog.

LUNDQUIST CO., Inc.

TEL. PUTNAM (CONN.) 1917

WEST WOODSTOCK, CONN.

Colley Cranberry Company

**SHIPPERS OF CAPE COD
CRANBERRIES**

"SUITSUS" Brand

Plymouth, Mass.

**Office
17 Court Street**

**Telephone
Plymouth 1622**

the largest forestry holdings in state. However, generally making, very little attention is paid to our forest lands. Dist Forester Charlie Cherry, of

Kingston, Mass., and Extension Forester R. B. Parmenter, of the University, plus other foresters, are keenly interested in better utilization of our native forest

products. There are several opportunities for a better forestry program right here in our own backyard. One of these opportunities will be discussed in "CRANBERRIES" in the near future. It centers around the possibility of wood-preserving facilities for our native lumber. The plan which has been worked out in some detail would mean that we could use our native pine, for example, treated with one of the new wood preservatives and so lengthen its period of usefulness several times.

DECAS BROTHERS

Growers Of

Cape Cod Cranberries

Phone 147

WAREHAM, MASS.

Ace in Extensive Radio Promotion, Issuing Cook Books

American Cranberry Exchange announced in a letter to its members on October 18 that several radio programs were to sponsor cranberry publicity. These included the following:

1) Bob Trout and the News (NBC—56 Stations) every Sunday afternoon during the period October 11th-November 22nd.

2) Galen Drake's daytime afternoon show (ABC—215 stations)

Cooperative Marketing of Cranberries is vital to the success of the Cranberry Industry.

Cranberry Growers *Must* work "together" to protect the "Ship" that brought them orderly distribution and prosperity.

**Eatmor
Cranberries**

New England Cranberry Sales Company

THE CRANBERRY COOPERATIVE

ORGANIZED IN 1907

9 Station Street

Middleboro, Mass.

from November first through November 22nd.

3) The Grand Central Station Program (CBS-129 Stations) from October 18th through October 30th.

4) The New Pillsbury daytime morning show, Kay Kyser's Kollege (ABC-215 Stations) the first and last weeks of this October 11th-November 22nd.

ACE reports it is getting enthusiastic support on the CRANBERRY-APPLE PIE promotion as reported above, the biggest support coming from Pillsbury.

ACE has issued a new recipe booklet, "CRANBERRIES AND HOW TO COOK THEM." ACE expects these books to help sell EATMOR to housewives.

Wareham Legion Queen Selection November 19th

This Annual Contest in the Heart of the Cranberry Industry is the Fourth Annual, and the Oldest with Exception of Former Wisconsin Contests.

The Cranberry Queen of the Wareham American Legion Post 220 and the Legion Auxiliary is to be chosen at Wareham (Mass.) Memorial Town Hall, November 19th. This is the fourth contest and festival to be sponsored by this group and thus is the oldest of any, with the exception of the queen contests which were held in Wisconsin about ten years ago.

A number of contestants have enrolled. These include Miss Ger-

aldine Pipher, Wareham; Miss Nancy Merritt, West Wareham; Miss Alice Ouelette, Freetown; Miss Shirley Chase, Freetown; Miss Theresa Tuttle, a last year's contestant; and Mrs. Gloria Rogers, Monument Beach.

The winning contestant will be chosen and crowned at a gala dance the evening of the 19th. Gifts will be presented.

Alton H. Worrall, chairman of the Wareham Board of Selectmen and recently elected State Representative of the Massachusetts Legislature, is chairman of the committee. Included on the committee are two from the cranberry industry, Henry Hawes, cranberry grower, who is in charge of the program, and William L. Ross, Jr. commander of the Legion Post.

ELECTRICITY

is something to be THANKFUL for
at THANKSGIVING, or anytime.

Plymouth County Electric Co.

WAREHAM - - PLYMOUTH

Tel. 200

Tel. 1300

Beaton's Distributing Agency

NATIONAL DISTRIBUTORS
of

Cape Cod Cranberries

for over a quarter century
in United States and Canada

Wareham, Mass.

Tel. Wareham 130 or 970

CRANBERRY MARSH FOR SALE

Plenty of water—240 acres of land. Caterpillar dozer, etc. Two homes, one modern. Reason for selling, ill health. \$20,000.00. Roussopoulos Bros., Millston, Wis.

ARIENS TILLER THE ONLY TILLER WITH...

- Full horsepower motor
- Standard two speeds—forward and reverse.
- Positive action, multiple disc clutch.
- Full sized $\frac{3}{4}$ " electric alloy steel tines.



ARIENS COMPANY • BRILLIDN, WIS.

MIN-OT

FOOD PACKERS, Inc.

BRIDGETON, NEW JERSEY

Packers of

MIN-OT *Strained Cranberry Sauce*

and

Conway's *Whole Cranberry Sauce*

Represented by

BEATON'S DISTRIBUTING AGENCY

WAREHAM, MASS.

***Two-Fisted* SALES**

This year's election has proven that the American people are unpredictable in what they want—but it is safe to bet that they will want fresh cranberries.

The American Cranberry Exchange's sales force and brokers are in closer touch than ever with every possible customer for cranberries in every section of the nation. It's a big job—and it's being done by experienced men skilled in selling cranberries.

The most-effective-ever advertising campaign authorized by Exchange members is helping sell the biggest crop in the history of our industry.

★ 48 STATES ★

Eatmor cranberries are now selling in 48 states. And our advertising—radio, magazine, newspaper, and retail store displays—is impressing millions of pairs of eyes and ears in the 48 states every day.

This year there is a big, two-fisted sales campaign in progress. Everything possible is being done to sell fresh cranberries.

The American Cranberry Exchange, Inc.

The Cranberry Growers' Cooperative

Marketers of

**Eatmor
Cranberries**

Chicago

New York

CP7

Cranberries

INTERNATIONAL CRANBERRY MARKET



CAPE COD
NEW JERSEY
WISCONSIN
OREGON
WASHINGTON

December, 1948

30 Cents

AN OLD NEW ENGLAND HOMESTEAD AT CHRISTMAS TIME
For further details see page 5 (CRANBERRIES Photo)

For the 54th Time

. . . . it gives us pleasure in extending heartiest good wishes for the Holiday Season. May your Christmas be a Merry one, and the New Year all that you may hope for.

Growers Cranberry Company, Inc.

Oldest Cooperative in the Cranberry industry
Oldest agricultural Cooperative in New Jersey
PEMBERTON, NEW JERSEY

Merry Christmas to All



Wisconsin Cranberry Sales Company

(A Cooperative)

WISCONSIN RAPIDS

WISCONSIN

IDEAS Sell Cranberries

CRANBERRY IDEAS ★ for December ★



String Ocean Spray Fresh Cranberries on the Christmas tree (1 lb. makes 7 to 8 yards.) Wire the evergreen for place card boutonnières. Use them in relishes, sauce, or salad. (Recipes on Ocean Spray bags.)



Snip Ocean Spray Jellied Cranberry Sauce in fancy shapes, and serve with chicken or turkey. Crush leftover bits for breakfast toast.



Serve a bowl of Ocean Spray Whole Cranberry Sauce, the kind Mother used to make, with meat or fish. Fine, too, for pies and fruity salads.

Ocean Spray
CRANBERRIES
FRESH or CANNED are a good buy!
Enjoy them often

Ocean Spray's December advertising is teaching America's homemakers to use more cranberries, in more ways. Cranberry cut-outs to serve with chicken or turkey... bowls of whole cranberry sauce with meat or fish... and strings of bright red cranberries on the Christmas tree... all make the holidays brighter in millions of homes, and widen still further the market for cranberry products.

Join with NCA to build a bigger market for bigger crops.

NATIONAL CRANBERRY ASSOCIATION

The Growers' Cooperative

Branches at:

Hanson, Massachusetts
Onset, Massachusetts
Plymouth, Massachusetts

North Harwich, Massachusetts
Bordentown, New Jersey
North Chicago, Illinois

Coquille, Oregon
Markham, Washington
Long Beach, Washington

DIRECTORY FOR CRANBERRY GROWERS

MASSACHUSETTS

Call
WAREHAM 162

S. C. M. Packard & Co.
Hardware—Locksmiths
For Maintenance Supplies

*Let Us Handle
Your Power Needs
for Bog Pumps*

International Harvester
and
Continental Red Seal
Industrial Engines

SALES and SERVICE

J. M. HACKETT
Tel. Rockland 1864
NO. HANOVER MASS.

Extensive Experience in
ELECTRICAL WORK

At Screenhouses, Bogs and
Pumps Means Satisfaction

ALFRED PAPPI
WAREHAM, MASS. Tel. 626

USE DYNAMITE

The modern way to re-
move stumps, excavate
rocks, DIG CORES FOR
DIKES, and other blasting
work in cranberry growing.
Speeds up work—reduces costs.
CONSULT WITH US ON ANY
WORK YOU ARE PLANNING.

Trained by Hercules Powder Co.

Alton J. Smith

High St., Hanson, Mass.
Tel. Bryantville 297

A Most
Merry Christmas
and
Happy New Year
is extended to all

Disston One or Two Man
CHAIN SAW

WRITE FOR DESCRIPTIVE LITERATURE

J. M. HACKETT

Tel. Rockland 1864

NO. HANOVER MASS.

Edwin K. Greer Co.

WAREHAM, MASS.

Est. 1891 Tel. Wareham 108

PIONEERS RETAILERS OF
BUILDING MATERIALS

CATERING To The CRANBERRY
INDUSTRY

LUMBER DRAIN PIPE
WOOD PRESERVERS BOLTS
TOOLS

"CRANBERRIES"
ADVERTISING
PAYS BIG
DIVIDENDS!

Reasonable Rates
on Request

H. R. Bailey Co.

South Carver
Massachusetts

**WISCONSIN AIR
COOLED MOTORS**

6 and 8 H. P.
in stock

Morris April Bros.

Bridgeton - Tuckahoe
New Jersey

Apples
Cranberries
Peaches

GROWERS AND
SHIPPERS

Wood
County
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Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE
Extension Cranberry Specialist



An excellent delegation of Massachusetts cranberry growers have just returned from the state's agricultural Production and Outlook Conference held at Amherst, December 1 and 2. All the major agricultural commodities were well represented as well as the various farm organizations, machinery and supply concerns, and the various agencies. Following a general session where agricultural outlook information for the coming year was presented by the leading men in their respective fields in the country, each commodity group met to discuss their own production problems. We certainly had a lively discussion in the cranberry session, led by Edward Bartholomew of Wareham, known as "Bart" to many cranberry growers in the state. "Bart" was elected chairman of our meeting and did a fine job in presenting our report to the conference. The writer wishes to express his appreciation to the cranberry growers who made the trip and for their valuable contribution to the conference. It is hoped the industry also appreciates the time, effort, and expense given so freely by these men. Their names are listed at the conclusion of this article.

Report of the Cranberry Committee

The Cranberry Committee has found the Production and Outlook Conference to be most instructive and believes the time and energy required has been well spent. It is a pleasure to present the following report.

Massachusetts still produces approximately two-thirds of the world's crop of cranberries from 15,000 acres of bog, and is the state's largest export crop. This year we have the largest crop ever produced within the state—an estimated 575,000 barrels. The United

State's crop is also recognized as the largest on record.

It is rather difficult in a commodity meeting to divorce the subject of marketing from our discussion of production problems. However, we have confined our discussion to the field of production as suggested, but hope the equally important subject of marketing will be considered at a later date. It was the unanimous opinion of the Cranberry Committee that a Marketing Conference be arranged similar to those held in Cambridge the past few years. We recommend that the Massachusetts Agricultural Program Board reconsider their decision and sponsor such a conference this year.

Future Prospects

According to a recent cranberry survey, 1800 acres of new bog was expected to be built in the three-year period ending December 1949. It was the feeling of the Committee that a rather considerable portion of this estimated acreage was constructed and will come into production in the near future. The high cost of bog construction plus the decline in cranberry prices do not warrant additional building of new bogs at this time. We would like to repeat that the cost of building a bog under present conditions still ranges from \$3000 to \$4000 per acre, as quoted a year ago. There is an additional cost of \$500 to \$1000 per acre for maintenance purposes to the time of the first harvest. We would like to call this to the attention of all cranberry growers and others concerned for their consideration before undertaking expenditures of this type. We feel that there will be a tendency to curtail many bog operations during this coming year in view of reduced prices received for our berries plus the continued

high cost of production. However, it was the unanimous feeling of the Committee that cranberry growers should maintain strict vigilance against insects and diseases on their bogs during these critical times. Certain bog practices may be postponed temporarily without serious damage to the bogs, but loss from insects and disease infestation can be a serious handicap for years to come.

PROBLEMS AND RECOMMENDATIONS Greater Mechanization

Production costs of raising cranberries are steadily increasing. In order to meet the competition which lies ahead, many of the bog operations must be mechanized to a far greater extent than at present. It was the opinion of the committee that the first step towards this problem would be the securing of cost studies for many of our bog operations. Therefore, the committee recommends that the Farm Management Department of the University undertake such studies as soon as possible. It is further recommended that engineering assistance be secured for the Cranberry Experiment Station on a full-time basis to carry on such research work in the field of management and production problems.

Insects

Root Grub is still our No. 1 insect problem. Real progress has been made to reduce losses from this pest during the past few years; however, there are still many bogs to be treated. We recommend that the Extension Service and the Cranberry Experiment Station continue their efforts to acquaint growers with the identification and means of control of this insect.

False Blossom

False Blossom can be considered our most important disease. By controlling the blunt-nosed leaf hopper, the spread of the disease can be checked. At present, false blossom has been increasing yearly, due to war shortage of materials to control the leafhopper on Massachusetts bogs. It is recommended that the Extension Service and the Cranberry Experiment Station continue their efforts, ac

(Continued on Page 8)

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of December, 1948—Vol. 13, No. 8

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Total Rainfall

The total of the rainfall of the month was 5.36 inches, much more than normal. The hottest day, as recorded at the State Experiment Station, East Wareham, was on the 7th, when the temperature was 69. The coldest day was on the 30th of November, when 22 degrees was recorded.

Near Hurricane

On Saturday, November 13, there was a severe storm in which winds reached near-hurricane velocity. There were claps of thunder and lightning. A small quantity of rain fell.

On Saturday, November 20, there was a torrential rain, this coming in gusts. The total for that day was .51 as recorded at the State Bog, East Wareham.

Shipments

Shipments of cars through Middleboro just prior to Thanksgiving were 734 as compared to 497 last year. Also a good deal of trucking of cranberries from the Southeastern Massachusetts cranberry section was done. It was estimated by a reliable source that shipments were probably twice as much as last year at the corresponding date.

NEW JERSEY

Pemberton, N. J., Dec. 2—The seventeenth annual Blueberry Open House was held here Dec. 11 at Wesley Hall on Pemberton St., according to Charles A. Doehlert of the Cranberry and Blueberry Research Laboratory of the State Agricultural Experiment Station.

Doehlert said that the meeting, which is the only one of its kind

held in the United States, was open to anyone interested in blueberries.

The program started promptly at 10.30 a. m. with a discussion by Doehlert on "Rouging for Stunt Control." Two other members of the laboratory staff, Philip E. Marucci and William E. Tomlinson, Jr., spoke on "Blueberry Stunt Disease" and "Seven Important Blueberry Insects", respectively.

R. B. Wilcox, U. S. Department of Agriculture pathologist, told about "Winter Injury, Phomopsis, and Mummy Berry." "Blueberry Certification" was discussed by Wm. M. Boyd, chief of the Bureau of Entomology, N. J. Department of Agriculture.

Franklin A. Gilbert, member of the horticulture staff at the State University, explained "The Cooperative Blueberry Breeding Project," and "Magnesium Deficiency in Blueberries" was described by Doehlert.

A plate lunch was served at the meeting.

WISCONSIN

It is noted with interest that Dr. Philleo Nash, son of the late Guy Nash of Wisconsin and brother of Miss Jean Nash, who operates the Biron Marsh near Wisconsin Rapids, was on the inside track of the Truman victory, if the editorial of "Life", issue of November 15th, is correct. This says that "Philleo Nash, a cranberry grower from Wisconsin, held down the Washington base while Charley Murphy rode the train." The editorial is by Jay Franklin, which is the pen name of John Franklin Carter, a

former New Deal columnist. Jay Franklin went on to say that Dr. Nash had the back-breaking job of helping to prepare the speeches of President Truman, except for the major ones.

All of the foregoing, perhaps, has no significance, except to show that cranberry growers and cranberries achieve mention in such high places as "Life" editorials without benefit of effort.

There was so much rain in Massachusetts in November that cranberry growers (and others) have learned to quack like Donald Duck and are fast developing web feet.

We would like to compliment "Bob" Kornfeld, editor of "Cranberry World", ACE house organ upon his masterly speech at the coronation of the "Wareham Queen." As he and Mrs. Kornfeld went to the Harvard-Yale football game the following day, and Harvard won by a mile and Kornfeld being a Harvard grad himself, it may be thought that Kornfeld had a rather pleasant week-end in Massachusetts.

COVER DESIGN—Photo shows the 1804 Burgess House, Great Neck Road, East Wareham, Massachusetts, in a Christmas-like setting of snow. To the rear of this old New England Homestead, Prince Burgess began one of the first bogs in Wareham. This was but a small piece of bog and has been abandoned since some time in the past century.

"Indians and English Use Them Much"

By CLARENCE J. HALL

(This is beginning a series of articles which it is hoped will give as accurate history of the entire cranberry industry as much research has produced).

To go back from the time when Henry Hall of Dennis, Cape Cod, in about 1812, and others began, is to show the culture of the wild American cranberry was inevitable.

By the sides of brooks and ponds, in the swamps and meadows, amid the very sand dunes of the seashore grew the slender green of the cranberry vine. Its uprights flowered delicately pink and white in June and early July, the little green berries formed, turned white, then pinkish, and ripened into their final cheerful, rich-red fruit. The forests had for ages grown up, decayed and formed the peat swamps, meadows and other deposits, providing the nutrition the cranberry needed for its growth.

The cranberry vine grew naturally, from Maine and northward into the Maritime provinces of Canada, south in a narrow belt along the seaboard to the Carolinas; in certain spots in the Alleghenies from Southern Pennsylvania to the peat swamps of Virginia. They grew in plentiful quantity westward, in Indiana, Michigan, Wisconsin to Minnesota.

Early Explorers

The early explorers of the Atlantic seaboard observed this berry and the earliest settlers picked it when it ripened in the Fall. For untold generations before them, the Indians had gathered and utilized the cranberry. There is no fruit more truly American than the cranberry.

The all-vital Indian corn (maize) the beans, the pumpkins, the squashes, the native nuts, the gooseberries, the grapes, blueberries, beach plums and the cranberries gladdened the hearts of the first comers and provided a welcome supplement to their larders. They did not learn from the Indian how to cultivate the low-lying cranberry as they did the corn and the bean. They were theirs for the picking. That the cranberry was selected for cultivation as early in the history of the nation as it was is a tribute to the fruit. The blueberry was not scientifically cultivated until a relatively few years ago, and the cultivation of the beach plum is even just now beginning.

From the very first the cranberry was observed by the visitors to the New World. The first explorer to note the wild cranberry may have been Captain John Smith, the "Admiral of New England", when he voyaged along the coast in 1614. A reference of his has

been interpreted (1) by some as being to cranberries. However, if Capt. Smith did have reference to cranberries he had no idea of what they were when he wrote:

"The Herbes and Fruits are of many sorts and kinds: as Alkermes, currans, mulberries . . . Of certain red berries, called Kermes, which is worth ten shillings the pound, these have been sold for thirty or forty Shillings the pound, and may be 'yeerly' gathered in a good quantity." (2)

Alkermes or mermes are an insect found on species of oak trees and at one time were used as a red dye before cochineal was discovered. An ancient place name for a section of Plymouth near Gallows Hill is "Alkermus Field." Of this reference of Captain Smith, Lincoln Newton Endicott in "Indian place names in Plymouth, Lakeville and Carver", wrote "John Smith may have mistaken the cranberry or the boxberry for the alkermes, but this is doubtful", and on this doubt as to the matter of whether or not Smith did notice cranberries, the question must of necessity be left.

There cannot, however, obviously be the slightest doubt but that another early Englishman of the 17th century did see wild cranberries, as he wrote about the American cranberry in very observant detail.

This was John Josselyn (3) (Gentleman), who made two voyages to America, the first in 1638

when he arrived at Boston on July 3 and went to Black Point at Scarborough, Maine, to visit his brother, Henry, where he remained for nearly a year. Josselyn made his second voyage to New England in 1663, went almost immediately to visit his brother again and remained there for eight years. Returning to England he wrote: "New England Rarities Discovered", which has proven an early botanical guide and is frequently used as a reference work. He wrote in detail of the animals and plants which he found in the new land and "Fifthly, of Plants", he listed "Cran Berries or Bear Berries" and of their medicinal value he places them under the heading "Bruises and Dry Blowes". He does not seem to have been familiar with the cranberry of Europe *Vaccinium Oxycoccus*. He wrote

Cran Berry, or Bear Berry, because Bears use much to feed upon them, is a small, trailing Plant that grows in Salt Marshes, the tender Branches (which are reddish) run out in great length, lying flat on the ground, where at distances they take Root, over-spreading sometimes half a score Acres, sometimes in small patches of about a Rood, or the like; the leaves are like Box, but greener, thick and glittering; the Blossoms are very like the Flowers of our English Night Shade, after which succeed the Berries, hanging by long, small stalks no bigger than a hair, at first they are of a pale yellow Colour, afterwards red, and as big as a Cherry, some perfectly round, others Oval, all of them hollow, of a sower astringent taste; they are ripe in August and September.

For the Scurvey. They are excellent against Scurvey.

For the Heat in Feavors. They are also good to allay the feavour of Hot Diseases.

The Indians and English use them much, boiling them with Sugar for Sauce to eat with their Meate, and it is a delicate Sauce, especially for Roast Mutton. Some make tarts with them as with Goose Berries.

This is early documentary evidence that the cranberry was used by the Indians and by the very earliest settlers, and that medicinal value was attributed to the cranberry even then; that it was made into a sugared sauce to accompany

meats (even though there is no mention of turkey); use of the cranberry in tarts was a popular utilization of the fruit until well into the 19th century.

Since Josselyn spent most of his time in New England in what is now Maine, it was there that he presumably observed the wild cranberry rather than on Cape Cod, but he did specify that cranberries grew near salt water.

Furthermore, he spelled the cranberry just as the fruit is spelled and pronounced today. Yet he placed it among the unknown plants, even though the closely related specie (*Vaccinium Oxycoccus*) grows in Northern Europe and Asia. This is a smaller, less desirable variety than the big, handsome American cranberry (*Vaccinium Macrocarpon*) found within its limited habitat in North America. In England the smaller wild cranberry has been known as the "marsh-wort", or the "fenne-berry", and in other European countries by other names. As *Vaccinium Oxycoccus* is found in Asia the Russians called it something else, and the Japanese name is unknown. But this is not the American cranberry.

Origin of the Name

The ancient Scottish clan, the MacFarlines, occupying the western bank of the Loch Lomond, the name signifying "Sons of Bartholomew", has for its badge the cranberry, and incidentally there is the coincidence that later the McFarlins of Carver, Massachusetts, descendants of the immigrant Purdy or Purthe MacFarlane, who came to America very early, taking up cranberry culture, did and do contribute much to its development. Why the cranberry was adopted by the Scotch clan as its badge, some little research by descendants of the first McFarlin, the original Carver settler by the McFarlin name has not yet revealed.

There are two versions of how the cranberry received its name. The one most generally accepted is poetically fanciful. This theory is that the original name of the berry was "crane berry" and this was derived from the appearance of the bud. Just before expanding into the perfect flower when the stem,

calyx and petals resemble the neck, head and bill of a crane, hence "crane berry" through usage became "cranberry". The lesser-told version is that cranes feed upon cranberries and because of this fact the name was given to the berry.

Yet the early writers, as well as proving that the berry was used from the earliest times, almost without exception give the berry its present spelling.

John Eliot

A letter of John Eliot, apostle to the Indians, printed with Thomas Shepard's "Cleare Sunshine of the Gospell" (3) 1648, is one more item of such evidence, both as to use of the cranberry by Indians and by the English and to its early spelling. Referring to Concord, Middlesex County, Massachusetts, he wrote:

The natives were employed to some extent by the English in haying time, and at harvest, but they preferred the more congenial occupations of hunting and fishing and making brooms, staves, eel pots and baskets, for which they found a market among the whites. They also brought to market in season, huckleberries, strawberries, cranberries, grapes and venison.

The Indians of Middlesex County are thus recorded as traders in wild cranberries not long after white settlers arrived.

To Appease Royal Wrath

As a final corroborative note of the early popularity of the cranberry is the often quoted fact that "In 1677 the Authorities of the Massachusetts Colony sent three of their most choice products as a gift to King Charles the Second, to appease the royal wrath for their temerity in coining 'Pine Tree' shillings' a gift comprising ten barrels of cranberries, two hogsheads of 'samp') Indian corn broken and boiled) and three thousand codfish."

Just a few years after this, 1686, specimens of the cranberry were again sent to England to John Ray, noted English botanist of the time. He described this berry sent him from New England and gives it its American name of "Cranberries, or Bear Berries."

Early New Jersey Writers

Equal proof that the cranberry was valued in New Jersey, as in Massachusetts, in the early seventeenth century is found in several sources. One of these is from one of the first books about America, and appropriately written by Thomas Budd of Burlington, New Jersey, who was an ancestral relative of the Budd family, long prominent in New Jersey cranberry cultivation. Thomas Budd was a Quaker who came to America some time before 1678 and settled with his family at what is now Burlington. He speedily became a man of importance in the Province of West Jersey. In this little book, "Good Order Established in Pennsylvania and New Jersey in America", he lists cranberries as among the natural resources worthy to be so mentioned.

Fruits that grow natural in the Countries are Strawberries, Cramberries, Huckleberries, Blackberries, Medlers, Grapes, Plums, Hickory Nuts, Mulberries, Hasselnuts, etc.

It is interesting to note that Budd, in this book published in 1685, does not call the fruit "crane berry" nor even cranberry, but "cramberry."

"Cramberries" is also the designation of Gabriel Thomas in "An Historical and Geographical Account of the Province and Country of Pennsylvania and of West-New-Jersey in America", published in London in 1698, after he had resided in Pennsylvania and New Jersey for about fifteen years. He wrote:

... Next, I shall proceed to instance in the several sorts of Wild Fruits, as Grapes. . . . Hurtleberries, Mulberries (white and black), Rasberries, Strawberries, Cramberries, and Plumbs, of several sorts. . .

And, of Cranberries Again

From "The Falls of the Delaware (near the present city of Trenton Mahlon Stacy on the 26th of the month 1689 wrote (to his brother in Yorkshire, England) of the native red cranberry. As did Josselyn, he wrote in some detail and referred to their use in tarts, and in sauce to go with meats, specifically mentioning turkey, and told of the Indians bringing them to the whites.

"We have from the time called May until Michaelmas, great stores of very good wild fruits, as strawberries, cranberries and hurtleberries, which are like our bilberries in England, but far sweeter; they are very wholesome fruits. The cranberries, much like cherries for colour and bigness, which may be kept till fruit come in again, an excellent sauce is made of them for venison, turkeys and other great fowl, and they are better to make tarts than either gooseberries or cherries; and we have them brought to our homes by the Indians in great plenty"

Perhaps most important of his observances is the fact that the long-keeping quality of the cranberry has been recognized and that this was one of the most desirable qualities of the new fruit.

The Rev. E. H. Durrell, president of the American Cranberry Growers' Association in the annual meeting of that association at Philadelphia, January 28, 1902, in an address referred to this writing of Mahlon Stacy.

Pattern of the Earliest Years

Yes, the crimson thread of the cranberry is in the now faded weave of the pattern of these earliest years of American settlement. This thread of documentation is really surprisingly distinct. That specific mention of cranberries is not more frequent in such scanty writing of early explorers and settlers is perfectly accountable. The explorers set down what seemed to them of most moment. Such of the settlers as could or did write, and whose writings are preserved, are likewise of events or observation which at the time seemed of most importance. The many references to "berries" in these writings may certainly be assumed to have often included cranberries.

Everybody up at dawn, the men going back and forth in their leather breeches and leggings and flannel shirts and jerkins, cutting their firewood, clearing their fields to put in rye, flax, peas, beans and corn; going to the shore for shellfish and salt hay, hunting deer, foxes and other game and wild fowl, saw the cranberries glistening on the ground. They, or more probably, the women and children picked them.

Thomas Howes, one of the pro-

prietors of Yarmouth, built his first mud and wattle house not far from the "Black Earth" of Dennis, where cranberries had grown as far back as Cape memory ran. This ancestor of the many Howes, who have since grown cranberries, or members of his household may surely be considered as having gathered them there. Cranberries grew near the abodes of all these men, John Crow, John Hall, Richard Sears on the Cape, and Henry Leland in Middlesex. Thomas Budd wrote he saw them in New Jersey.

These, and other pioneer ancestors of cranberry growers, knew the taste of the wild American cranberry. In the crisp autumn, with the long, cold winter ahead and hay and grain to be stored for the oxen and food provided for themselves, they cherished the cranberry for its long-keeping quality. The just-ripened cranberries were picked and assuredly picked in large quantities and stored away.

(1)—William T. Davis, the late eminent Plymouth historian in "Plymouth Memoirs of an Octogenarian, 1906, wrote: "They (cranberries) have always been a native of New England and John Smith found them in a visit in 1614."

(2)—John Smith's Works, edited by Edward Arber, Whatman Edition, of 25 copies, pages 721 and 715.

(3)—"New England Rarities Discovered".—John Josselyn (Gentleman).

(4)—Mass. Hist. Soc. Coll. 3rd Series, vol. 25, page 67. Also in "Concord in the Colonial Period", Being a History of the Town of Concord, Massachusetts, 1636-1689, by Charles H. Walcott.

Cranberry Station and Field Notes

(Continued from Page 4)

quainting growers with the seriousness of the problem and to outline control practices.

Gypsy Moth

This insect has been a serious pest on our bogs for many years. However, with new materials that are now available, it is possible to eradicate this pest. We understand that in Barnstable County large-scale upland spraying was carried on very successfully this past summer. It is further understood that legislation is contemplated this year to provide funds for a complete eradication of this pest in Massachusetts. The committee recommends that the cranberry growers through their organizations, and as individuals,

give their full support to such a program.

Other Major Pests

Girdlers, fireworms, fruit worms, and weevils cause considerable damage to our crop. It is recommended that the Educational Program be conducted by the Extension Service to acquaint growers with accepted control measures developed by the Cranberry Experiment Station. Before leaving the field of insects, we would like to express our appreciation for the valuable work carried on by Dr. H. J. Franklin of the Cranberry Experiment Station in the field of insect control as well as the other important research under his direction.

Weeds

Considerable progress has been made during the past year by growers in controlling weeds in cranberry bogs by the use of chemicals. We recommend that Dr. C. E. Cross continue his research on weed control at the Cranberry Station and that the Extension Service keep growers informed of the new developments in this field.

Diseases

Fruit rots are another major problem on cranberry bogs. This past year saw a definite increase in the amount of spraying and dusting carried on to control these diseases. We recommend that research work in this field be continued by Dr. H. F. Bergman of the United States Department of Agriculture.

Fertilizers

The continued study of the proper use of fertilizers, now carried on by Dr. F. B. Chandler of the Cranberry Station, is of importance to the industry and should be further investigated according to the committee.

Quality Fruit

We have seen a tremendous change this year from the quarter-barrel box to the one-pound cellophane package. The importance of packing a well-graded, high quality, consumer's package is obvious. The foregoing cultural recommendations are of utmost importance in attaining the goal of producing a high quality product.

(Continued on Page 15)

PEACE ON EARTH—GOOD WILL TO ALL

SNOW has fallen. It is Christmas time again. Still, it is not a Christian world, in the true sense of the word. There is too much animosity, both at home and abroad. There is struggle in many parts of the globe. Chinese are fighting Chinese; Arabs are fighting the Jewish people in Palestine, the Holy Land. The threat of an atomic bomb attack hangs over all of us. Why should this be? Most of us want only Peace and Good Will toward our fellow man.

At any rate CRANBERRIES takes this opportunity to wish all a Merry Christmas and a most Happy New Year.

SATISFACTION IN STRUGGLE

SOMETIMES as we sit in our "Ivory Tower", so called, we wonder if the game is worth the struggle. And then, again, we think it is. Without a struggle what would life be worth? We try to do our job as best we can. There is satisfaction in doing one's best, even though this best may not be so worthy. Some achieve great fame and fortune, others do not. However, there is satisfaction in trying to do the best with such talents as the Maker gave us.

CRANBERRY INDUSTRY NOT BORN WITHOUT A STRUGGLE

THE cranberry industry was not born without a struggle. The pioneers in every cranberry-growing area did not have the benefits of modern science, such as weather forecasts, modern insecticides, modern means of application, such as helicopters, straight-wing planes, and the improved ground dusters and sprayers. These pioneers had to fight it out with sheer muscle and will power. What would they think if they were alive today?

CRANBERRY HISTORY

WE would like to especially call your attention to the beginning of a series of articles by your editor upon the cranberry industry as a whole. He has attempted to make this as accurate as possible. But to err is only human. If errors

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are found he would like to have them called to his attention. There should be an accurate history of the cranberry industry. This series of articles, which may be later printed in book form, is an attempt to do this.

THIS is our last issue with pictures of cranberry queens for this year. Perhaps this is something to be grateful for. Queens have their place if they help move the crop, as we said last month. But too much of a good thing is too much.

Cranberry Crop Is Estimated as All-Time High

November estimate of the 1948 cranberry crop, as released by New England Crop Reporting Service, C. D. Stevens and A. C. Hackendorf, Statisticians, gave Massachusetts an up in production to 575,000 barrels. This is an increase of 19 per cent over last year.

In addition the report gave the nation 992,000 barrels, which is a record. Previous high was in 1937 with 877,300.

The estimate says in part:

"Weather conditions during October were favorable for the completion of the harvest of the cranberry crop in Massachusetts. Very little damage by frost occurred in October and the after-harvest reports of growers indicate rather substantially larger yields than expected a month ago.

"Cranberry production in Massachusetts is estimated at 575,000 barrels this season. This total exceeds the 1947 production of 485,000 barrels by 19 per cent, and the 10-year (1937-46) average production of 445,000 barrels by 29 per cent. The record 1948 production is only slightly larger than the 1942 crop which totaled 572,000 barrels.

"The size of berries is slightly below average, due to dry weather late in the growing season. The shrinkage of berries in screening is expected to be near-average. On the whole, berries show satisfactory color and keeping quality.

"Cranberry production in the United States is now estimated at 922,500 barrels. This record production is well above the previous record large crop of 877,300 barrels produced in 1937. Cranberry production totaled 790,200 barrels in 1947, and 673,940 barrels in the 10-year (1937-46) average production.

"Production in New Jersey is estimated at 67,000 barrels, 18 per cent below last year and 22 per cent below average. The New Jersey crop was reduced considerably as a result of sun-scald.

"The Wisconsin crop is estimated at 225,000 barrels, 40 per

Oregon Queen Chosen at Festival

Under the reign of Queen Lois I, the second annual Bandon Cranberry Festival closed Nov. 6 with all reports indicating an even greater success than was anticipated. Crowds turning out for the parade, fair, Cranberry Bowl game, coronation program and dances virtually all neared capacity.

Highlight of the two-day festival was the queen coronation program, which Master of Ceremonies Art Dobney opened by introducing the eight candidates, Lois Blakely, Diane Burrell, Marie Fasnacht, Lavera Kinnett, Betty Loshbaugh, Florence Moore, Nancy Price and Phyllis Pullen. Each girl voiced thanks to her sponsoring organization while judges pondered over their scoring cards and auditors worked out ticket vote percentages. Meanwhile musical entertainment was provided by the Bandon high girls' glee club.

When the judges' and ticket vote percentages were totaled Lois Blakely, Bandon Active club candidate, was announced queen of the festival.

When time came for the coronation, no crown could be found. Dobney announced that widespread search had failed to locate a crown fitting for the Bandon queen, so it would be necessary to turn to magic. A large black box was put on the stage. With proper ceremony, Dobney poured into this box silvery ocean spray from the Bandon beach, silver sand, rays of sunlight captured earlier in the day, greenery from cranberry bogs and finally a quantity of ripe cranberries. With the proper incantations, the master of ceremonies

cent above the previous record-large crop of 1947 and twice the 1937-46 average. Growing conditions were unusually favorable in that state this season.

"Acreage has increased in the past few years. In Washington and Oregon production now is estimated to total 55,500 barrels, 11 per cent smaller than last year, but 52 per cent above average. Harvest was practically over by Nov. 1."

stepped back, there was a large report and a great puff of smoke came from the box—and a crown had been readied for the queen.

The crown was placed on the head of Queen Lois by Mrs. Ralph Cope, Jr., Langlois (the former Ruth Kreutzer) who was queen of the first festival. Queen Lois was helped to her throne and the key to the city was presented by Mayor R. V. Backlund.

Many gifts were presented to the queen and princesses. Queen Lois received a gold bracelet and each of her court was given a necklace of pearls, with the best wishes of the following Bandon business establishments:

C. C. Inman, Style Shop, Ed Capps, West Coast Telephone Co., Paul's Jewelry, McNair Hardware, Davison's, Bob-Otto Court, Ed Gallier, Haga's, Coast Lumber Yard, Shell Service Station, George Chappell, Jack Ward, Coquille Valley Dairy Co-Op, Kay's Feed Store, Tuttle's, Bandon Theatre, McCartney & Sharp, Merritt J. Senter, Coast Sales Hardware:

Sportsman's Cafe, The Pastime, Lloyd's Cafe, Croxall & Perry, Golden Rule, Minute Cafe, M. & L. Grocery, Carr's Variety, K. I. Franklin, Shindler's Drug Store, George's Electric, Arcade Garden, Chick's Service, Bank of Bandon, Keatings, Moore Mill, Western World, and Our Bakery.

A huge decorated cake with a miniature queen on top was presented Queen Lois by Our Bakery. Lorenz department store, Coquille, sent each of the eight girls a pair of stockings, and other gifts were received from the sponsoring organizations. The formal gown each wore was a gift from the Festival association.

At the close of the program the royal court with their escorts performed a grand march and started the Coronation Ball. Escorts included Bill Brown, Jerry Wright, Jim Scott, Bob Newport, Ralph Hutchison, Jack Donaldson, Walter Shutt and Don Morris.

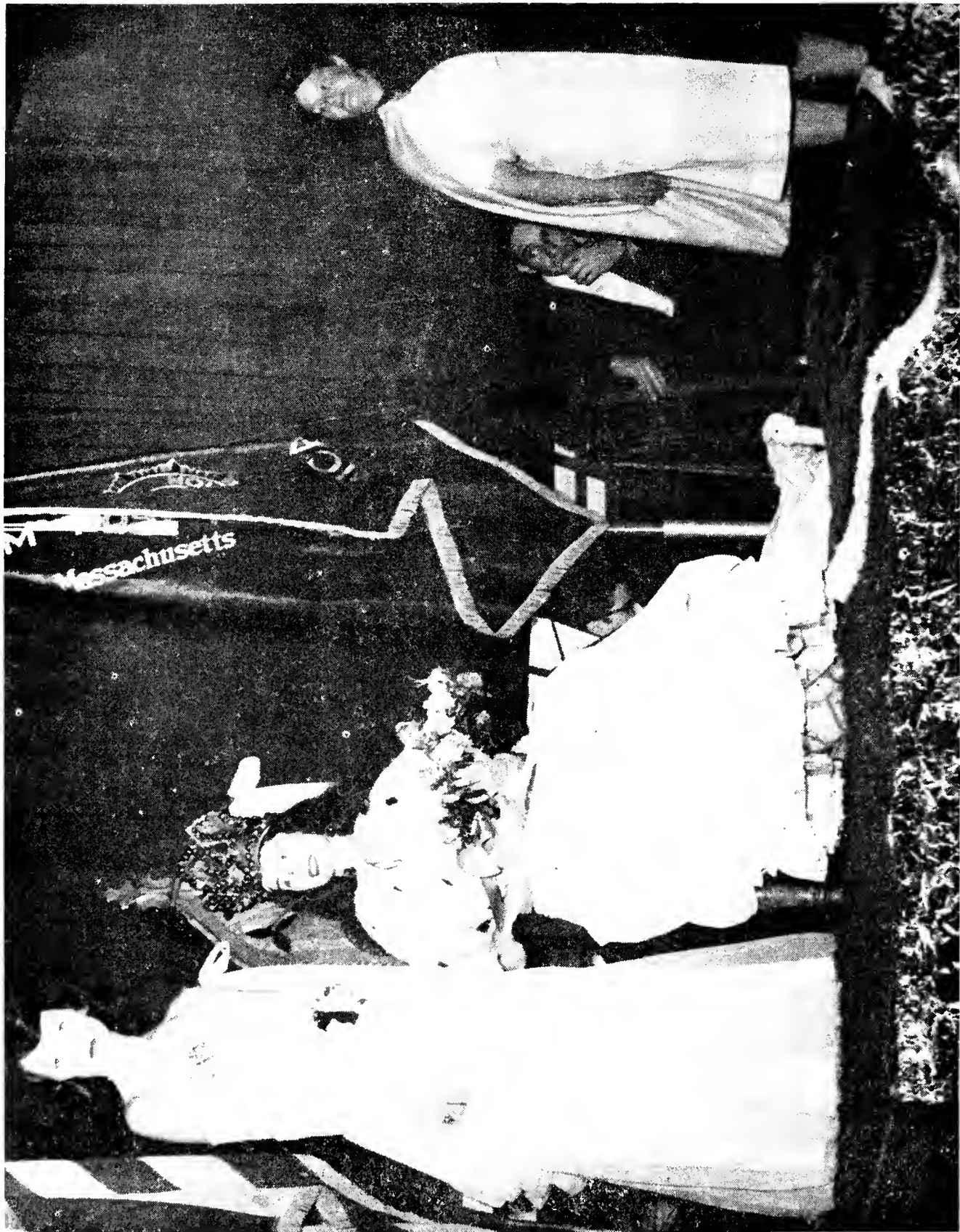
Bandon Volunteer firemen injected a surprise thrill into the big Festival parade Saturday morning on Main street when they put on a Keystone Comedy style demon-

(Continued on Page 14)



Cranberry Queen "Terry" Guertin, backstage at "Howdy Mr. Ice", with (left) stars Eileen Seight and (right) Jinx Clark.

(Photo Courtesy ACE)





Vernon Goldsworthy and Walter Goldsworthy looking at vines planted in spring of 1948. The scene is at Thunder Lake in Northern Wisconsin, properties of "Goldy." By proper use of fertilizer these vines will come into full production several years ahead of vines in the past in Wisconsin and in 1949 will have a partial crop and in 1950 may go as high as 100 bbls. to the acre.

Prizes Await Massachusetts Lady

These are for Best Pie, Made of Cranberries and Apples—Contest Sponsored by the Massachusetts Cranberry and Apple Industries

Boston—A crisp \$50 bill is waiting for the Massachusetts lady who can bake the best pie out of a cranberry-apple combination. Thirty dollars will go to the second best pie maker, and \$20 to the third best.

This contest is sponsored by the Massachusetts apple and cranberry industries. Prize-winning pies will be judged January 4 at Worcester as part of the big three-day annual Union Agricultural Meeting which is a cooperative effort by 40 Massachusetts and New England farm organizations.

Preliminary contests will be held in each county under the direction of the county home demonstration agents. Ten dollar prizes are being offered for the best county pie. The score card and other details on the pie-making contest may be obtained from the home demonstration agents.

In announcing these awards, Agriculture Commissioner John John Chandler, who is chairman of the Executive Committee of the Union Meeting, said that this was the first such contest designed to emphasize the many fine combinations which can be made with the two most important fruits produced in Massachusetts. Additional features honoring apples and cranberries at Worcester will include a series of window display contests open to all Worcester merchants in which substantial prizes will be offered for the best displays of cranberries and apples or a combination of both.

Walter E. Piper of the Division of Markets of the Massachusetts Department of Agriculture has been named general chairman of the contest. He will head a statewide committee which includes William H. Wyeth, Chairman Public Relations Committee, Cape Cod Cranberry Growers' Association, Warcham, Mass.

More Cranberry Publicity Than Ever

First "National Cranberry Week", October 18-23, having proven to have been successful in gaining publicity, National Cranberry Association executive committee on November 4th approved "National Cranberry Week" for 1949. Other "queens" chosen than the NCA and other publicity activities, have given cranberries more publicity than ever before in the history of the industry.

Cranberry Festival

(Continued from Page 10)

stration of how NOT to put out a fire.

Starting a spectacular but harmless fire in a cardboard "Chic Sale" facsimile, the smoke-eaters put on a wild show with men running up ladders with disconnected lengths of hose, etc., in mock efforts to squelch the blaze. At first the act was so realistic that an elderly woman bystander remarked, "Isn't that a shame! And right in the middle of such a nice parade!"

The parade, which started from the Coast Guard station, was led by colors and guards from Bandon and Coquille V. F. W. posts, included more than 30 separate units.

Queen Lois and her court presided over the colorful spectacle from a convertible Packard car piloted by Martin Kranick.

Selected as outstanding entries by the judges, were the fire department as the best organization, and the Coos Cranberry Co-Op's float as the best commercial entry. The co-op's entry was a flatbed truck on which were a group of women actively "picking" cranberries under the "strawboss", Elmer Gant. The truck was also decorated with "Eatmor Cranberries" advertising.

Prizes were awarded to children.

Spirited marching music was provided by the Bandon high school band with Director L. E. Wright.

A sound truck, used all during the festival through the courtesy of Dodge & Greene, followed the parade, announcing other events and winners.

CANDIED CRANBERRIES

Candied cranberries are easy to make, but they do take time. So it may be just as well to give them a little advance thought. The bureau of human nutrition and home economics suggests the following method of making them:

For 1 pound or quart of berries, use 3 cups sugar and 2 cups water. Select large, firm, perfect berries wash and drain. Make 2 or 3 small slits in each berry with the point of a knife. In a large saucepan boil sugar and water together until clear. When cool, add berries, bring slowly to the boiling point, then remove from the stove and let stand overnight. (The pan should be large enough to allow a berries to float on top of the syrup during the cooking. If the berries are heated too quickly the skin will burst before they absorb the syrup).

Next day drain the syrup from the berries and boil until it is thick. Allow the syrup to cool, add the berries, heat slowly and cook gently 3 or 4 minutes. Allow berries to stand in syrup 2 hours or more. Then cook slowly for the third time until the syrup will pour easily and drain berries from the syrup. Spread them on a rack covered with cheesecloth to dry. Store in tightly covered jar.

The syrup left over after the berries are candied make delicious dessert sauce or is good to use in holiday punch.

Cranberry Datelets

- 1 recipe plain pastry
- 1 cup Jellied Cranberry Sauce
- Rind $\frac{1}{2}$ lemon
- $1\frac{1}{2}$ tblsps. lemon juice
- 2 tblsps. water
- 1 cup pasteurized dates, chopped
- 1 cup seedless raisins, halved
- $\frac{1}{2}$ cup chopped nuts

Crush cranberry sauce with fork. Add lemon juice, lemon rind water, dates, and raisins. Stir until well blended. Add chopped nuts.

Roll pastry to $\frac{1}{8}$ inch thickness and cut into rounds of about 2 inches. On half the rounds place a teaspoon of the filling. Cover with second round. Press edge

together. Prick holes. Bake in hot oven (459 degrees F.) for about 15 minutes.

Cranberry Station and Field Notes

(Continued from Page 8)

Forestry

It is recognized that a large percentage of our forestry holdings in southeastern Massachusetts are owned by cranberry growers. In order to preserve this natural resource and also provide an opportunity for off-season work, we recommend the continued study of outlets for forest products by our State, district, and county foresters. Finally, we recommend attention to improved forestry practices on the part of cranberry growers through an educational program carried out by the Extension Service.

Respectfully submitted,
Edward Bartholomew, Chairman
J. Richard Beattie, Secretary
Emil St. Jacques, Wareham; Feris Waite, Plymouth; Howard Hilmer, Rochester; Joseph L. Kelley, East Wareham; Robert S. Handy, Mattamet; William Wyeth, Wareham; Kenneth Garside, Duxbury.

Scoops and Screenings

Since the orchids are being passed out, it might be no more than fair to hand one to Sherman L. Whipple, 3rd, upon his excellent article in the program for the Wareham Coronation. This was

entitled "Cranberries—Flour Barrel to Cellophane."

Scoops and Screening's family enjoyed cranberry sauce over Thanksgiving, this being from a cellophane pack put out by "Pals." "Pals" is Peter A. Lesage of Yarmouth, Massachusetts, an inde-

MAY THERE BE HAPPINESS THROUGHOUT THE WORLD

We look forward with delightful enthusiasm to the good cheer and fellowship that is an essential part of the Yuletide season. Our kindest regards to each of you on this Christmas day.

Decas Bros.

WAREHAM, MASS.



Christmas returns to ED AVILLE

Again this year, "old No. 7 invites you to accompany "Her" along her route of happiness, where new and more adequate facilities have been provided for your pleasure and comfort.

May we extend through Old No. 7, our best wishes for this Season's Greetings.

Sincerely,

(MR. & MRS. ELLIS D. ATWOOD)

pendent. This same family has also recently enjoyed excellent sauce, both processed and home-prepared, put out by others. You know there must be something wrong with your bud tasters if you don't like cranberries.

NOTICE TO MASS. GROWERS

J. Richard Beattie sends notice to growers:

"In view of the relatively high temperatures experienced in November, cranberry buds may be

rather subject to frost damage when the next real cold spell occurs. Dr. H. J. Franklin of the Cranberry Experiment Station advised cranberry growers to put on their winter flood just as soon as severe temperatures are anticipated.

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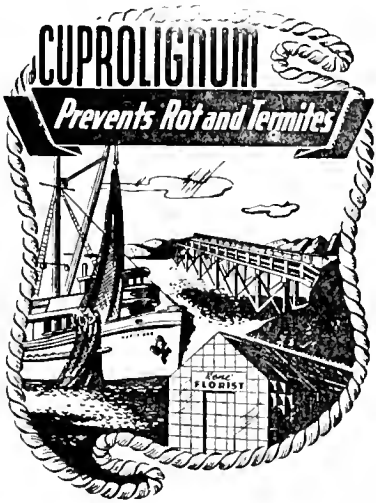
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Approximately 500 ft. 8 inch used Steel Pipe in excellent condition. G. E. HOWES, Tel. 161, Dennis, Mass.

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North Carver, Mass.

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with the addition of Cuprolignum gives added resistance to barnacles or teredoes by penetrating the wood cells, depositing toxics which remain after paint film has completely disintegrated.

New England Representative

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Manufacturers: RUDD & CUMMINGS, Seattle, Washington

Western Pickers Inc. Cites Picking Costs

Now that the 1948 Picking Season is over, it behooves all cranberry growers to take stock—to evaluate their own position in a more competitive market and to prepare for the future (if any).

When growers were getting more than \$25.00 per bbl. the whole business was a bed of roses and picking costs were unimportant, so long as the berries were picked somehow.

Comes now the year 1948, with berries bringing around eight dollars a barrel. If it costs ten dollars per barrel to raise cranberries, a grower will have to produce a goodly number of barrels to make any money selling at eight dollars per barrel!!!—or he is going to have to cut his costs.

This is where the Western Picker comes in. Let us cite a few examples:

At George Cowen's bog, North Rochester, Mass. $\frac{5}{8}$ acre was picked in 2½ hours by two machines. Mr. Cowen reports that the picking was cleaner than his hand scoopers and that the berries were not noticeably bruised.

At George Briggs' Billington bog, near Plymouth, Mass., berries were picked for 21c per barrel. (No apparent bruising).

At UCCC Co. Bog No. 13, near Bryantville, Mass., the picking costs were 21.4 cents per barrel. (No visible bruising).

At Bandon, Oregon, Mr. Hooker reports his costs at 12.5 cents per barrel.

These costs are sufficiently low to cause an average small grower to wonder what has been happening to his industry wherein he has had to pay as high as \$4.50 per barrel, just for picking.

The difference in these picking costs spells profit or loss in the business in which he makes his living.

Mechanical Picking is here to stay because it is cheaper, because it is cleaner on the average bog, because it is quicker, and because it frees a grower from a large part of his labor worries.

Western Pickers, Inc., has just successfully closed the first Purchasing Pool in Mass., but will accept further orders in this state only until Jan. 15, 1949. Address Western Pickers Inc., Coos Bay, Oregon. (Advt.)

"New bogs which haven't been flooded should be protected right away to prevent possible frost heaving of hill vines."

SUNSHINE IN MASSACHUSETTS

The sunshine in Massachusetts in November at Boston was nine hours short of the November average. The year to date is 15 hours short from the average. This should not make too much difference in the crop prospects for next year, as many other factors enter into the picture.

Late Prices

The American Cranberry Exchange opened its price for Wisconsin at \$3.85 to \$4.10, plus 35 cents for cellophane. Eastern late varieties ran from \$3.60 to \$3.75 on late Jerseys to \$3.95 on Cape Cod and New Jersey late Howes and \$4.25 for cellophane.

CORRECTION

To correct an error, Miss Virginia Corrie of Oregon was captioned as Miss June Peabody of New Jersey, one of the many Cranberry Queens.

RAIN BIRD

Protects Cranguyma!

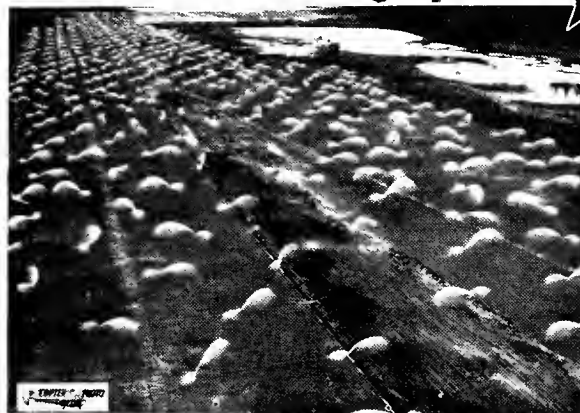


PHOTO COURTESY OF PORTLAND OREGON JOURNAL



SPREADING out in an impressive acreage in the great Northwest, Cranguyma Farms at Long Beach, Washington, represents an important part of our nation's cranberry production. Standing as dependable guardians against frost and drought 1000 Rainbird sprinklers provide the correct and necessary rainfall whenever it is needed. This outstanding installation is indicative of the dependability of Rainbird Sprinklers. The distributor or dealer listed below will be pleased to furnish additional information upon request.

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R. M. WADE and CO. ARMCO DRAINAGE & STOUT IRRIGATION INC.
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L. R. NELSON MFG. CO.
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MASSACHUSETTS DEALERS

JOSEPH BRECK & SONS IRRIGATION DIVISION VEGACRE FARM
85 State St., Boston, Mass. Forestdale (Cape Cod), Mass.

RAIN BIRD SPRINKLER MFG. CORP.
GLENDORA CALIFORNIA

Wareham American Legion Chooses Cranberry Queen

This is the 4th Event Sponsored at Wareham—Queen is Miss Theresa Guertin, who Received Many Gifts and a Glorious Trip to New York as Guest of NECSCO and American Cranberry Exchange.

The fourth Cranberry Queen Coronation, Festival and Dance, sponsored by Wareham Post, No. 220, American Legion and Auxiliary, was held at Wareham (Mass.) Memorial town hall, Friday, Nov. 19. The new queen, chosen from 11 contestants, was Miss Theresa Guertin, 18, of Middleboro.

More than 800 attended the affair, in spite of heavy rain.

Miss Guertin was chosen by a

committee of judges headed by Cledge Roberts, who is now associated with television in New York. This committee included Russell Makepeace, A. D. Makepeace Co., Wareham, E. L. Bartholomew, Wareham, a grower.

The Program began with a concert at 8.15. Then came greetings by Alton H. Worrall, a member of the post, who is chairman of the Wareham Board of Selectmen and Representative-elect to the Massachusetts legislature. The 1947 queen, Miss Sharon Casey, formerly a resident of Onset, a village of Wareham, and who is now a student at a New York modeling school, was introduced. It was she who placed the crown upon the head of the new queen, coming from New York to perform the ceremony.

There was a professional vaudeville show and music by an orchestra. There was dancing until 1

a. m. Refreshments were served

The program was in charge of a committee headed by Henry Hawes of Wareham, a cranberry grower. A principal speaker was "Bob" Kornfeld, editor of "Cranberry World", of New York, this being the house organ of the American Cranberry Exchange. It was Mr. Kornfeld who had charge of the New York trip of the new queen this being as guest of the New England Cranberry Sales Co. and of the Exchange.

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Sliding Gate Reservoir Flumes—the kind that let you sleep on frosty nights.

Dog-leg Reservoir Flumes—for Oxygen Enrichment.

Flashboard-type Lower Flumes—for close regulation of water levels.

WITH ARMC0 PIPE

Long lengths—few joints—easy to handle. Galvanized, asbestos bonded, completely coated, with a paved bottom to take the wear.

AND NO SPILING

Instead, on short pipes, reservoir flumes, or where eels and muskrats are bad, use a corrugated-iron seepwall collar, extending two feet above, below, and both sides of pipe.

ASSEMBLED IN A FEW HOURS

Excavating and backfilling your chief problem.

NO SETTLEMENT

Except as the whole dike settles, even on the softest bottom.

DELIVERY

Normally within three weeks from the time you order. Material trucked from Palmer. Unloaded as near the sites as they can reasonably get with a loaded trailer truck.

PRICE

Depends on size, height, length, etc. Unless the flume is unusually high, wide and handsome, the cost will not exceed \$10 per inch of outlet diameter; 18" outlet, \$180. Short, simple flumes are as much as 25% less. This is delivered price; you install it. I sometimes supervise installation for a fee.

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CUT TALL GRASS... WEEDS... BRUSH

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Mows fast and clean around buildings, fields, under trees, fences, along roadsides, and in light corners.



Cuts 4 to 6 acres in 8 hrs. Easy to handle on rough ground or steep slopes. Cuts 1 1/2" from ground. Rugged. Economical. Dependable.



For Farm, Orchard or Truck Garden. Easily and quickly mounted on any irrigation pipe. Heavy duty brass and bronze construction for long service. Sand and dirt proof. Water lubricated bearings—no oil or grease required. No fast moving parts to rapidly wear out. Maximum coverage—even distribution.

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WEST NEWTON 65, MASS.

While in New York Miss Guertin and her mother stayed at the Hotel Astor.

Her first event in New York, Monday, November 22, was a fitting for her cranberry red dress at the Ceil Chapman studio. She was given a hat fitting to a queen, gloves, hose, hand bag—in fact, a complete outfit.

Following this she went to Mademoiselle magazine for an interview. She was interviewed by "Teen Age" magazine editor, Marion Glendenning. In the evening she went to see the play, "Where's

Charley?" She taught Charley's "Aunt", which is played by Ray Bolger, how to cook cranberries.

On Tuesday she paid an official visit to Columbia University. She brought with her a plastic box full of cranberries. The Columbia student who guessed closest to the number of cranberries in the box was her escort that evening to dinner and the "Ice Follies."

Wednesday she presented a live turkey and cranberries to the mayor of New York, William O'Dwyer. She met Jack Haley of "Inside U. S. A.", and gave a cranberry-

cooking lesson to mother of "Life with Mother."

On Thursday she appeared on a one-hour television show with Gloria Swanson, this being broadcast over station WPIX. She saw Macy's Thanksgiving observation and had her own Thanksgiving dinner at the Astor. Other events were radio broadcasts, one with Tom Page, farm editor for NBC, also Dorothy Sarnhoff, star of "Magdalene", and Ann Jeffrys, star of "My Romance", their topic being cranberries. (Photo page 12)

Cranberry Growers...

You value the sound, proven recommendations of the East Wareham Cranberry Experiment Station in growing your crops successfully.

Equally invaluable to you is sound, properly written Insurance fitted specially to the needs of Cranberry Growers.

E. A. Thacher of this firm will be happy to discuss your requirements, and without charge or obligation, prepare a survey of your property and needs.

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INSURANCE

56 Battery March Street, Boston

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Prominent Mass. Grower Passes at Age of 78 Years

This is William Crowell of Dennis, who Died Suddenly November 13—His Son Expects to Take Over His Father's Cranberry Interests.

William Crowell, 78, of Dennis, Cape Cod, Massachusetts, a leading cranberry grower, died at his home November 13.

He was born in Dennis, the son of Captain William and Cynthia (Hall) Crowell. After finishing his schooling on the Cape and in Boston, he started in business as a cranberry broker, as his father had been before him.

Mr. Crowell was active in Cape Cod agriculture and was a member of the Cape Cod Farm Bureau. He

WINTER Reminders...

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BOG PUMPS—7 in. to 20 in.

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\$400 TO \$500 AN ACRE ORDINARILY SUPPLIES EVERY ITEM FOR A COMPLETE SYSTEM.

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Doesn't this sound like good business?

Write for free folder containing information on all items necessary for a complete irrigation system. This includes Flex-O-Seal lightweight portable pipe in galvanized steel or aluminum, Chrysler gasoline engine pumpers, Buda and Hercules War Surplus Diesel pumpers, Rainbird and Buckner sprinklers, suction hose and discharge fittings. All equipment delivered to bog and experienced irrigation personnel available to direct installations.

We have installed both High and Low Pressure Systems on Cranberry Bogs in Bristol, Barnstable and Plymouth Counties.

VEG-ACRE FARMS IRRIGATION DIVISION

FORESTDALE

Cape Cod

MASSACHUSETTS

served as director of the New England Cranberry Sales Company. He was a selectman of Dennis for many years and was a member of the Barnstable County Selectmen's Association. He was a member of the Cape Cod Cranberry Growers' Association and of the Lower Cape Cod Cranberry Club. He was a faithful attendant at meetings of various cranberry groups.

He was a charter member of the Dennis Grange. He belonged to the Quivet Tribe of Red Men, and was also a member of Mount Horreb Lodge, A. F. and A. M. of West Harwich.

Mr. Crowell married Miss Francis I. Higgins, who died last year. Surviving are a son, William Ernest Crowell, and a daughter, Mrs. Norman A. Hallett, both of Dennis; a daughter-in-law, Mrs. Nathalie C. Lowe of Toronton; and five grandchildren.

Funeral services were held November 16th at his home and was largely attended. Burial was in the Dennis cemetery, where a Masonic ceremony was conducted.

Mr. Crowell's father, Captain Crowell, was also active in the cranberry industry, and was one of the leading Cape brokers. He

invented the "Crowell Patented Fruit Box" in 1879. This was accepted by many Cape growers, and while not a standard measure, was a step toward getting better shipping containers for cranberries.

Mr. Crowell at the time of his death owned several bogs in the Dennis-Yarmouth area to the extent of 12-14 acres. He had operated the Harlow Brook, the Lock, and the Old Orchard bogs in the Wareham area.

His son, who is also a cranberry grower, expects to take over his father's interests.

Edaville Again Welcomes Visitors Over the Holidays

Mr. and Mrs. Ellis D. Atwood of South Carver, Mass., will again put on a Christmas-New Year observance for the general public. This will be very similar to last year, with music over loud-speakers, and multitudes of colored lights. The Edaville Railroad will make frequent trips over its five and one-quarter mile course around bogs

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If you are buying or selling Cranberry Property it will pay you to see us.

A number of properties available, more wanted.

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"KEEP SMILING"

Peter A. LeSage

PLYMOUTH

Tel. 740

Distributor of Cape Cod Cranberries

YARMOUTH

Tel. Barnstable 107

and reservoirs.

Four more cars will be added to the train to care for the visitors, and possibly two trains will be sent out if warranted.

Up to just before Thanksgiving,

approximately 145,000 passengers had been carried as against about 100,000 last year.

The observance will extend from December 12th to January 2nd and the "Welcome" sign over the en-

trance to Edaville means just what it says.

A Prophetic Address of 24 Years Ago

(Editor's Note.—The following is an address delivered by Robert B. Hunter, a canner, of Wareham, Massachusetts, at the Spring, 1924 meeting of the Cape Cod Cranberry Growers' Association. It appeared originally in The Wareham Courier of June 6th, 1924 and is reprinted as being apropos of conditions as they are today).

"Of the familiar fruits which are not commonly eaten raw or in their fresh state, see if you find even a single one in the following list of 20 well-known fruits—apples, apricots, pears, peaches, plums, oranges, lemons, grapefruit, watermelons, canteloupes, figs, dates, bananas, grapes, cherries, pineapple, strawberries, raspberries, blackberries, blueberries, etc. Such fruits can be eaten out of hand, or can be served at our tables without being cooked. Haven't they all a great primary market to be consumed just as they are presented by Nature? They are all available in their season

Save Priceless Water

**BUY
PORTABLE OVERHEAD SYSTEMS
for
IRRIGATION AND FROST CONTROL**

**STEEL or ALUMINUM PIPE
Equipped with
McDOWELL STEEL COUPLINGS**

**There is no other similar or equal equipment
NO LATCHES NO HOOKS**

Write or phone. Our local representative will call.
No charge for Design and Blueprints to suit your particular
bog.

LUNDQUIST COMPANY, Inc.

TEL. PUTNAM (CONN.) 1917

WEST WOODSTOCK, CONN.

Colley Cranberry Company

**SHIPPERS OF CAPE COD
CRANBERRIES**

REGISTERED

"SUITSUS" Brand

Plymouth, Mass.

**Office
17 Court Street**

**Telephone
Plymouth 1622**

to be eaten raw, either where grown or where displayed by dealers.

"But fresh or raw cranberries are not served at our tables nor found in our lunch boxes—nor do we buy them at the fruit stand for an in-between-meals desire to satisfy a craving for some fruit.

"True, there are some persons

who are sufficiently fond of cranberries to nibble a few at the bog or screenhouse, but it may be considered as an established fact that the cranberry is the only fruit which must be cooked before it can be eaten, therefore the cranberry grower is deprived of one of the principal means of having a great portion of his crop absorbed like other fruits.

"Another reason for the slower consumption of cranberries as compared with other fruits is this. The usual recipe for cranberry sauce: one quart of cranberries, one pound; two cups of sugar, one pound; two cups of water, one pound; a total of three pounds of ingredients before one pound of cranberries can be eaten, and only one-third is really cranberries—in other words, the bulk of volume of cranberries has been stretched or expanded thrice its original size. Thus by the time a crop of a half-million barrels or 50,000,000 pounds has reached our table it represents 150,000,000 pounds to be consumed. How is it with most of the fruits to be consumed? Their bulk is really reduced before being

consumed. A pound of strawberries is less because of hulling. A pound of oranges or bananas is less because of having to be peeled.

"No doubt these same two arguments (a) 'must be cooked' (b) 'bulk increased by consumer', have been presented to you before, or have already occurred to you.

"The grower's problem now is to find a broader, freer outlet with a more continuous flow than has heretofore existed when his only dependence for an ultimate consumer has been upon the one who cooks the fruit at home in some form or other.

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New England Cranberry Sales Company
THE CRANBERRY COOPERATIVE
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"When properly prepared there is no fruit more appetizing, delicious or pleasing, or possessing more tonic-like virtues than cranberries. Most everybody likes cranberries as commonly served—they why don't the people use more of them? Because cranberries require some sort of preparation. Vegetables can be cooked without the addition of any other substance except the ordinary seasonings, but cranberries must have plenty of sugar and as a rule be carefully watched during the cooking. Hence the bother of cooking, and also the lack of uniformity in results.

"Fortunately the cranberry can be commercially prepared in more forms than most other fruits. When speaking at your fall meetings in 1921 I attempted to vision some of these forms. Since then the canning of cranberry sauce has taken a tremendous stride as a successful canner of this product will tell you. The field for commercially-prepared cranberries is so large that it is to be hoped, and reasonably so, that many concerns will engage in putting them out in the various commercial forms. There is plenty of room for all who are engaging in cranberry products.

"There are great markets to be had right here in our own nation for the factory-prepared products of the cranberry—through the grocer to our homes; through the public eating places; through the bakers; through the confectioners; through the ice cream parlors and soda fountains.

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"Cranberries are practically unknown to the world outside our own boundaries, except as foreign citizens have enjoyed them when in the United States. Cranberry products will also find their way into the foreign markets in such forms as will best suit the peculiar desires of their taste. I venture to predict that the not distant future will find many concerns pre-

serving this most likeable and healthy fruit in some one or more of its many forms. The last census gave the total pack of all canned fruit as nearly 30,000,000 cases (about 75,000,000 cans) for the year 1919. May we not reasonably expect that the next U. S. census will record prepared cranberries in their rightful proportionate share of the total?"

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WAREHAM, MASS.

Merry Christmas

TO ALL CRANBERRY GROWERS:

We wish that you who raised a record crop of cranberries this year will harvest a record crop of peace, happiness and success in the year ahead.

We wish that the true cooperative spirit may prevail among nations as well as cranberry growers. History offers the most imposing proof of a truth learned long ago by many members of our industry—

Cooperation clears the way for peace, peace leads to order, and order is the way to prosperity.

Your faithful servant for 42 years,

The American Cranberry Exchange, Inc.

The Cranberry Growers' Cooperative

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"WHEN THE DAYS BEGIN TO LENGTHEN, THE COLD BEGINS TO STRENGTHEN"—A Cape Cod scene. (CRANBERRIES photo).

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January, 1949

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Growers Cranberry Company, Inc.

Oldest Cooperative in the Cranberry industry
Oldest agricultural Cooperative in New Jersey

PEMBERTON, NEW JERSEY

What Will Happen in 1949?

The 1948 season is past history. Cranberry growers are now thinking of 1949. In some minds, doubts are forming as to what 1949 will bring.

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(A Cooperative)

WISCONSIN RAPIDS

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To work for prices which will be reasonable to consumers and will bring fair returns to cranberry growers.

To do all in our power to bring greater cooperation within the cranberry industry, because only through a strong cooperative can growers be assured of sound marketing and stable prices.

To be ever mindful that we are the servants of the cranberry grower, and that our every act is dedicated to achieving greater security and prosperity for our members.

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Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE
Extension Cranberry Specialist



Our congratulations to Mrs. Kay Mitchell of Wrentham, Mrs. Wickham Ames of South Harwich, and Mrs. Edward L. Bartholomew of Wareham for their Prize Winning pies which won top honors in the county and state Cranberry-Apple Pie Contest. This pie contest was one of the highlights of the Union Agricultural Meetings held in Worcester January 4-6, one of the largest agricultural gatherings in New England. This is a real honor for these women, considering the keen competition. There were 237 cranberry-apple pies entered, with each county well represented. Curiously enough, the three prize-winning pies came from eastern Massachusetts, which is quite fitting from the cranberry growers' point of view. First prize of \$100 in state competition was awarded to Mrs. Kay Mitchell in Norfolk county; second prize of \$30 went to Mrs. Wickham Ames in Barnstable county, and third prize of \$20 was won by Mrs. Edward L. Bartholomew in Plymouth county. By the way, Mrs. Bartholomew was the only prize winner who is the wife of a cranberry grower (known as Bart to most people), so she really upheld the cranberry interests for the entire enterprise. Each of the above women also collected \$10 as winners in their respective counties.

The Cape Cod Cranberry Growers Association sponsored two educational exhibits as a part of the Worcester meetings under the direction of William Wyeth, chairman of the Public Relations Committee of the Association. "Bill" and his committees did a fine piece of work in promoting cranberries at these meetings. Incidentally, this is the first year that cranberry growers and their organizations have participated actively at this event. Both cranberry exhibits at-

tracted considerable attention. They featured displays of fresh cranberries exhibited in the various consumer type packages plus a fine exhibit of the different processed cranberry products. In addition to the pie contest, and the two exhibits, there were 15 window displays in down town Worcester featuring cranberries and apples. Prizes were awarded by the Department of Agriculture for the most outstanding window display. The Union Meeting banquet is another highlight of this session. Cranberries were on parade again in the form of a liberal serving of whole sauce for the dignitaries and guests present. Yes, cranberries were definitely in evidence and well received in Worcester January 4-6.

Growers will be interested to know that all of the cranberry marketing agencies cooperated 100% in making possible these exhibits and window displays by giving of their time, money, and products. Special thanks are due the following growers and their wives who went to Worcester, set up the exhibits, and manned booths for the three-day meetings. Mr. and Mrs. William Wyeth of Wareham, Mr. and Mrs. Edward L. Bartholomew of Wareham, and Mr. and Mrs. Ferris Waite of Plymouth.

Visitors at the Cranberry Station within the last year or two have seen our new heating plant. It replaced Dr. Franklin's "old pot bellied stove" which had served the station with distinction for many years. Dr. Franklin decided for several good reasons that the old stove would not be discarded with advent of our new oil burner. This caused some good-natured bantering, as would be expected. Well, the storm of December 19th resulted in widespread power failure

in this area, but demonstrated the wisdom of Dr. Franklin's decision. The "old stove" really came into its own and provided some much-needed warmth—so it was business as usual on Monday morning when many other establishments were forced to close shop because of lack of heat.

The Massachusetts Cranberry Advisory Committee met at the Cranberry Station December 27 to assist the Extension Service in preparing what we hope is an effective cranberry program for the coming year. There was an excellent delegation of growers present representing the four Cranberry Clubs and the Cape Cod Cranberry Growers Association. The County Agricultural Agents in the leading cranberry counties were present, together with members of State University and Cranberry Station. The discussion was divided between production and marketing problems. One or two objectives as expressed by the committee under each heading follows. In terms of production problems, it was the opinion of the committee that insect, disease, and weed control measures be stressed in every possible way this year when there may be a tendency to curtail certain bog operations. In fact, the discussion centered around the need of cutting costs of production all along the line plus increased attention to greater mechanization of the industry. The field of marketing also received major attention in our discussion. The feeling was expressed that possibly too much time had been devoted to production problems in years past and too little time and thought to our marketing problems. The question was posed to James W. Dayton, County Agent Leader, as to where marketing came into the picture as far as the Extension Service was concerned. Dr. Dayton stated that anything to do with the production of quality fruit and its related functions was a definite part of the Extension job. He also stated that he felt that the fundamental principles and concepts of marketing came within the field of education and therefore would come into the scope of Extension work. Dr. Dayton raised the question to the growers pres-

(Continued on Page 22)

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

December Storm

December was a rather miserable month. On the 19th there was a snowfall of 5.8 inches, the snow including sleet, which made for great difficulty. Power lines were down, also telephones and many trees in Southeastern Massachusetts. It was a week before conditions returned to anywhere normal.

Coldest Day

The coldest day of the year was on December 27 when -2 was recorded at the State Bog at East Wareham. The rainfall for the month was 2.51; the total snowfall 16.6. The warmest day in December was the 7th, when the temperature (State Bog) was 57.

By January first all or most all crops which had winter flowage were flooded.

Car Loadings

Car loadings through Middleboro as of January 1 were approximately 920, as against 620 for the corresponding date last year.

WISCONSIN

The annual meeting of the Wisconsin Cranberry Sales Company was held at the Elks Club at Wisconsin Rapids on December 13th. Miss Jean Nash, president of the company reviewed the operations for the past year. "Del" Hammond, Jr. gave a report on the shipments in which he mentioned that shipments were about evenly divided between "wood" and cellophane. He reported on the keeping quality of the crop and made several recommendations for the coming year.

The main theme of his talk was,

of course, the necessity of a good pack next year, due to the fact that most of the company's fresh fruit could be in a pre-packaged form for shipping. When cellophane shipments are rejected, the cellophane and cartons are a total loss because the bags have to be torn open and the boxes in most cases have to be torn open, too. It is not the same as shipments made in "wood." The quarter-barrel boxes can, in most cases, be salvaged or else used to re-ship the berries after re-milling.

C. M. Chaney, president of ACE in his talk to the members, discussed the low price of cranberries this past year.

L. F. Garrett of the Garrett-Holmes Company of Kansas City, Missouri, gave an extremely interesting talk on the problems of the market.

Vernon Goldsworthy, who was on the road for the Exchange for five weeks, gave his views on the market and told of what he had seen, and also of what he thought could be done to improve the market.

Delegates from the Wisconsin Cranberry Sales Company to the Board of Directors of the ACE were elected as: Craige Scott, Harold DeLong, Vernon Goldsworthy and "Dan" Rezin.

The newly-elected Board of Directors of the Sales Company is composed of Miss Jean Nash, Newell Jasperson, Tony Jonjak, Keith Bennett, John Sullivan, William Harkner and A. T. Yanke.

Miss Nash at this meeting on the 13th of December was re-elected president, Newell Jasperson was elected vice president to take Ver-

non Goldsworthy's place, and Mr. Hammond was re-elected as secretary-treasurer and re-appointed manager.

The annual banquet of the company was held at the Golden Gate Supper club. This began at 6.30. Guest speaker was Claire Jackson of the Wisconsin Council of Agricultural Co-operatives. He is from Madison. He is the assistant secretary of the council. He spoke upon co-operatives, co-operation among members of the co-operative and things gained by co-operation. Richard Lawless, executive vice-president of the Wood County National Bank of Wisconsin Rapids, also spoke. There was a floor show, followed by modern and old-time dancing. This concluded the evening.

NEW JERSEY

Weather

The weather was kind to South Jersey during November and most of December. Temperatures at Pemberton averaged well above the seasonal normal in November and during the first three weeks of December. November temperatures averaged 50.8°, which is 4° above the normal daily mean, while December temperatures averaged 35.2° or almost exactly normal. Unseasonably cold weather during the last few days of December were what brought the monthly mean down to normal.

The unseasonably mild weather of November and early December was the cause of some apprehension among both cranberry and blueberry growers lest a sudden severe cold snap injure the fruit buds. An 8 to 9 inch snowfall on December 19 and 20 solved the problem

(Continued on Page 23)

The Chippewa Indians Had a Name for Cranberries

This Was "A'ni-bimin", and the Indians Made Use of the Cranberry as a Food and Probably Cooked with Maple Sugar.

By CLARENCE J. HALL

(Editor's Note: This is a continuation of the Cranberry History).

I-bimin

"The cranberry, whose botanical name is *oxycoccus macrocarpon*, was called by the Chippewa Indians I-bimin. The fruit of this vine was used as a food and cooked, probably with (maple) sugar." (a)

Prof. Frank G. Speck, professor of anthropology, University of Pennsylvania, and editor "American Anthropologist", wrote to the writer that the cranberry should be included in his reference to "I-bimin" (bitter berry), in his work "Penobscot Man", a study of the Indians of Maine. He also wrote (b):

"Cranberries crushed and mixed with cornmeal make a poultice which is most effective in case of blood poisoning".

Seemingly, and of course entirely logically, the Indians made use of cranberry sauce, or ate the berries raw. There is evidence of this in the 18th century in the following item:

Colonel James, who was captured by the French and Indians at Fort Dubesque in 1755, lived with the savages in Ohio and Michigan from that year up to 1759. He later wrote that the Indians had many apples (wild crab apples) stored up. Here, too, he saw for the first time cranberries which grew in swamps and were gathered by the Indians when the swamps were frozen. These berries were about as large as rifle bullets, of a bright red color and of agreeable flavor, though rather too sour of themselves, but when mixed with sugar had a very agreeable taste. (c)

Probably the use most popularly ascribed to the Indians was that of mixing the cranberries into their pemmican.

Eastwood, in his book, wrote (although he named no source or local evidence) that the cranberry

was used by the Indians and they gathered and roasted the unripe berries and used them as poultices, believing that when applied to the wounds made by the poisoned arrows they had the power of drawing the venom forth.

When the "First Comers" arrived on Cape Cod they found the Indians a friendly, peaceable people, divided into small tribes. The region was not a wilderness, but there were villages where the natives lived in dwellings which were "made with long, young Sapling trees, bended and both ends stucke into the ground; they were made round, like unto an arbour, and covered down to the ground with thicke and well-wrought matts. . ." (a). They were agriculturists. They used hoes made of quahog shells and the shell of the horse-shoe crab was a shovel. (b). They allowed " . . . not a weed to advance his audacious head above their infant corne, or an undermining worm to spile his spunes." (c).

Indians Never Attempted To Cultivate Cranberries

Yet industrious and intelligent farmers as these Indians could be, not a particle of evidence has come to light that on the Cape or elsewhere they made any attempt to cultivate the cranberry and grow it for their own use. The cranberry was just a berry and as such was plenteously supplied by nature. The settlers owed much to the agricultural teaching of the Indians, but never learned from him that the cranberry might be cultivated.

Indian Cranberry Lore Back to 1550

How far back in time the use of cranberries by the Indians has

gone is for the most obvious reasons impossible to say. Probably it began when there first were Indians and there first were cranberries. As an interesting point although of no particular importance, perhaps, the use has been traced back directly at least about 1550, or about the close of the Middle Ages. This has been done by Joseph White Norwood in his book, "The Tammany Legend". He did this through translation of the ancient Indian "Walk Olan", or the "Red Score", which is Indian history, as recorded "bundles of painted sticks." Ostanza of this he translates as:

Pakimintzen followed next there "On the shore", the (old house place),

Keeping up the work of the King,

"Coming-as-Friend" of Nitispay, Pakimintzen", "Cranberry Eater. Made the treaty with the Tawa. Welcome back these ancient rebels

"Pakimintzen", or "Cranberry Eater", Mr. White has fixed as one of a long line of Delaware sachems. He was given this title of "Cranberry Eater" because he had the duty of cementing anew the ties of friendship between divisions of the Indian nations of the East and the Middle West. Cranberries grew along the Eastern Seaboard and also in the Middle West, and at state feasts he partook of cranberries until after a time cranberries began to be associated with "Pakimintzen" and these stalwarts of peace. This, perhaps the earliest record of any sort of the American cranberry, interestingly associates the cranberry with missions of peace.

But to return from this almost legendary glimmer of red cranberries and Indians in the dim forests so far back to a relatively modern tale of Indians and cranberries, actual Indian-cranberry legends have been told of the natives of Cape Cod. Shortly after the "Ten Men of Saugust" (Lynn Mass.) with their heavily-laden teams, their women and children came along the ancient Indian trails to settle at "Shaume", now Sandwich, to found the first settlement upon Cape Cod, there followed in the spring of 1637 a young Freeman, Richard Bourne. He

alone, of all those early settlers, seems to have given the slightest thought as to where the Indians might live after the settlers had displaced them.

He obtained a grant of land or the "South Sea" (those living along Vineyard Sound", in 1660. Here in Bourne's "Kingdome of Mashpee", a region of heavy woods, filled with game, and streams filled with fish, and bordered by the salt water filled with shellfish and fish of the sea, they found refuge. Here cranberries grew naturally, and here is where the Indians obtained the greatest benefit from their natural heritage of the American cranberry. And here on these Indian lands was to be built the finest of the early larger cultivated bogs.

Mashpee Indians Had Their Legends

The Indians of Mashpee had their legends, some about the cranberry, and innumerable ones about Richard Bourne. In this legend, fact, fancy, the young Apostle Bourne, the Indians and cranberries are delightfully interwoven in a legend which may be found in a book about Cape Cod, "The Narrow Land", (a) by Elizabeth Reynard. The legend:

"At one time an angel appeared before him in the forest and touched his brow with a golden sword of which he always bore the scar. He frequently wrestled with Lucifer and always defeated his adversary, though his arms twisted, his shoulders thick with the weary strain of the fight.

"He met a Witch Doctor by a river, and solicited Christian conversion. The angry magician chanted a bog-rhyme and Richard's feet became rooted in quicksand. With all his strength he could not stir. "Let us have a contest of wits", said he. If I lose I agree to serve you. If I win, you shall release me and trouble me no more." The Medicine Devil agreed to this, so for fifteen days and fifteen nights they discoursed by the river. The tide swam up, the tide swam down; the sun climbed over Nauset sea, and paused for a while on the top of the sky to hearken to their wisdom. Still Richard Bourne and the Witch Devil argued

by the river. The Medicine Man began to feel empty, like an air-filled reed. He swayed where he stood; but Richard Bourne was as firm on his feet as when the contest began. Every now and then, while the Witch Doctor spoke, taking his turn at showing what he knew, a white dove flew down from heaven and laid a round, red berry on the lips of Richard Bourne. Once the dove let go his burden 'one sand-dropping' of the hour-glass too soon. The berry rolled to the edge of the bank and caught in the river mud. Then the Witch Doctor saw what the dove was doing and tried to lay his spells on it. But the bird flew past, merry as a song, and came and went, giving sustenance to the White Sachem and none to the Heathen Witch.

"By and by the Medicine Devil could stand upon his legs no longer, so he laid him down on the ground. The minute that he stepped off his feet, Richard Bourne could walk again, and went at once to his house to fetch a bowl of wild turkey soup. Before he took one sip off the ladle, he offered the bowl to the fainting witch, who put his lips to the rim and drank till all the soup was gone. Now that bowl, made of pure silver, shone inside as bright as a mirror, and in the bottom of it, when the last drop of soup was drained away, the Medicine Devil saw reflected all Damnation and the Judgment of Sinners. He fell to his knees, and the good White Sachem blessed him and taught him how to become a loyal Christian Brave.

"Meanwhile the berry that the dove let fall grew and fattened by the river. Finding it there, the Cape men knew there was truth in the story that the cranberry came down from heaven in the beak of a winging dove."*

Gay Head's Cranberry Day

This is Gay Head's "Cranberry Day", a holiday probably without counterpart. When it is deemed the wild cranberries on the common lands, still held undivided, have ripened sufficiently for harvesting, a Cranberry Agent, duly elected by the voters in annual town meetings, declares this "day" is at hand. School is closed at Gay Head, the

usual business of farming and fishing is suspended, and each family goes to the cranberry ground to get its winter supply of cranberries, and its supply to sell, or trade for groceries and gasoline in neighboring towns or on the mainland.

They come on foot, in automobiles, and even in ox carts, as in the days of their fathers, men, women and children, the old and the young, to partake of their share of their natural heritage. At noon these Gay Headers of Indian descent build little fires among the dunes and eat their communal lunch. When the long shadows of evening fall, back cross the bleak and windswept hill of Gay Head, across land never owned by White Men, back to their homes they go.

"Cranberry Day" is a day when time pauses, and the cranberry carries for a day the customs of a people back to the days when their forefathers gathered at the Gay Head cranberry grounds to pick the fruit, to wrestle, to run races, and to engage in other sports of the cranberry festival, and to make an offering of food to their patron deities, Squant, to compensate her for the berries they took in the harvest. This cranberry custom of these people takes back to the time before the coming of the white men and back to Colonial times.

Across Vineyard Sound from Mashpee, to Gay Head on the Island of Marthas Vineyard stretch the tenuous chain of ancient association of the Indian and the cranberry into the present day. The Gay Head people, almost exclusively of Indian descent, carry on the Indian traditions of their forefathers. Since the earliest record of the White Man, and according to the traditions of the Indians themselves, the Red Men have here picked the wild cranberry.

The berries grow among the hollows of the wildly-tossed sand dunes, not far from where the Island of Marthas Vineyard terminates in the magnificent Gay Head cliffs of colored clay, one of the most notable headlands in America. They grow today near the ocean and along the shores of Menemsha Pond, small and larger

patches of vines on the white sands. The snows and rains of winter flood these patches, protecting the vines, the high winds blow the sand over them. Unattended, they remain a gift of Nature to her native children. Never divided, these cranberry lands are common lands; every inhabitant of Gay Head, every person born within its boundaries, his heirs, all have equal right in these natural cranberry lands. Every fall the scarcely one hundred inhabitants of Gay Head leave their fishing, their lobstering, their making of pottery, and their farming, and pick cranberries, all on a certain day.

Did the Pilgrims Eat Cranberries?

Are the Pilgrims themselves actually known to have made use of cranberries? Long standing is the tradition of Pilgrims, cranberries and Thanksgiving. Most unfortunately there seems to be no satisfactory direct evidence of this. Authorities upon Pilgrim affairs know of not a single written document that the Pilgrims ever picked a cranberry. That they did not do so, however, seems beyond belief. That the Pilgrim women and children went to the swamps of Plymouth and gathered the food is but the most logical of reasoning. With food often so scarce they would not have passed the cranberry by. They had little time for frills, but food waiting to be gathered was not a frill. The fact of cranberries being served at the first Thanksgiving may be more problematical.

Not even a matter of record is it that they served turkey at that feast, although it is likely they did, since they went "fowling" in preparation. But turkey is not on the menu, as there is no known menu of that affair.

It does not take too much credulity, as a matter of fact, to believe that there is one direct reference to the fact that the Pilgrims at least saw cranberries, even though they did not know what they saw.

Another account tells of the exploration of the twenty men "armed cap-a-pie, with old-English matchlocks shouldered, heavy broad-swords dangling", who on the morning after leaving Prov-

incetown were at East Harbor and around the Head of the Meadow passing "through boughs and bushes which tore our very arms to pieces" and . . . Further on they discovered where the Indians had lately gathered corn; here were heavy walnut (hickory) trees full of nuts, and strawberries and vines. Of this Shebner Rich, in Truro, observed: "These strawberries and vines in December have puzzled the reader. Strawberries were then not much known in England, and it is altogether probable that cranberries were meant, which grow spontaneously on the Cape."

The First Thanksgiving

The entire documentary story, in fact, of this event which has come to be called the "First Thanksgiving", is told in a single brief letter, a letter believed to have been written by Governor Winslow to a friend in England. All that occurred which is not contained in this account is based purely upon tradition or imagination. The letter:

"A letter sent from New England to a friend in these parts . . . 'Our harvest being gotten in, our Governour sent foure men on fowling, that we might after a more special manner rejoyce together, after we had gathered the fruit of our labours; they foure in one day killed as much foule as with a little help beside, served the Company almost a weeks, at which time amongst other Recreations, we exercised our Arms, many of the Indians amongst us, and amongst the rest their greatest King Massosoyt, with ninetie men, whom for three days we entertained and feasted, and they went out and killed three Bears, which they brought to the Plantation and bestowed on our Governour, and upon the Captains, and others. And although it be not always so plentifull, as it was at this time with vs, yet by the goodness of God, we are so farre from want that we often wish you partakers of our plentie."
"Mourt's Relation", Boston, 1865 Edition, page 133.

A Pleasant Supposition

Since that is the sole evidence concerning the origin of Thanksgiving in America the matter of cranberries being consumed during that time of feasting must rest upon one's own interpretation. They

may not have thought to include cranberries, or they may have. At least there seems no harm believing in the pleasant tradition that they did.

Concerning the use of cranberries at any time, some indirect evidence may be gathered in its support. Josselyn stated that "English use them much", and they placed their use within the time of the older Pilgrims. A stronger and more localized bit of evidence may be in an account of the first supper of the Old Colony Club, Plymouth, although it did not take place until January 16, 1769, long after the last Pilgrim had passed on. At this supper was one man Ebenezer Cobb (1694-1801) who had known one of the Pilgrim Peregrine White, (1620-1704) although only as a small boy, so the fact would in all likelihood be of no importance. But at this repast all were dressed in the plain manner, as did the Pilgrims (an appearance of luxury and extravagance being avoided in imitation of our ancestors whose memory we shall ever respect", and the menu was consciously antiquarian and considered to consist of the same food as used by the Pilgrims. The menu (*) shows that at this date cranberries were believed to be part of the Pilgrim fare. They are:

A large baked Indian whortleberry (huckleberry) pudding, a dish of sauquetach (succotash), a dish of clams, a dish of oysters and a dish of codfish, a haunch of venison roasted by the first jack brought to the Colony), a dish of sea fowls, a dish of frost fish and eels, pie, and a course of cranberry tarts.

Even though it cannot be proved that the Pilgrims made use of cranberries at the first Thanksgiving feast, their descendant atoned for this at the first anniversary dinner of the Landing of the Pilgrims. This was at a dinner of the Old Colony Club, founded at Plymouth, January 16, 1769. At a dinner held the following December at the home of Thomas Southworth Howland the bill of fare was (8):

"A large baked Indian whortleberry pudding, a dish of sauquetach (succotash), a dish

(Continued on Page 12)

A NEW YEAR HAS BEGUN

A new year has begun. What it will produce is anyone's guess. We can only hope 1949 will be a less troublesome year than 1948.

We may hope for more peace throughout the world.

We may hope for more harmony within the cranberry industry. We may hope for a continued large crop and a market which will absorb it at a reasonable price, a price satisfactory to the grower and consumer.

This is after New Year, but CRANBERRIES may still wish all its readers and friends a better and more prosperous 1949.

HELPING A GUY OUT

THE storm in the cranberry area of Massachusetts on the 19th of December makes us conscious of how dependent we have become upon the conveniences of modern living. This is rather a personal note, but we think it makes the point we are driving at. When the electric power went off, through no fault of the local electric company, our furnace went off, our lights went off, our electric ice box stopped, so did our electric clock. Our automobile couldn't be driven because of the snow and the fact we had no chains available early in the morning.

But telephone men were at work repairing the damage as rapidly as possible, as were the power line men, and a local garage came to our rescue. The result was that we got into circulation without too much difficulty, thanks to the humanity and good will of neighbors, and employees of various companies to do their best to help a guy out of difficulties.

THE VALUE OF HOBBIES

HAPPY is the man who has a hobby. Ours is photography. In that we can indulge any time of the day or night, with flashlights, floodlights and spotlights. A hobby which can be combined with business, such as ours, we believe is especially fortunate.

THIS month we call particular attention to the article by Dr. Neil E. Stevens, and to our review of his "Factors in Botanical

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Publication and Other Essays". This is not because we are particularly proud of the review, but "Neil" has contributed much to the cranberry industry over a period of many years.

I (We) are Americans. We are free to travel as we please in this country of ours. We are free to think as we please, to vote as we please, and to do as we think best, if it is within the law, in this year of our Lord 1949.



This photo shows two children, with a Santa Claus at the "Edaville" R. R. Station, South Carver, Mass., during the holiday program. This started on December 12th and continued to January 2nd. During this period there were 48,069 passengers carried on the R. R.. There were clocked 28,650 automobiles as visiting "Edaville", and the biggest day was that of New Year when 6,331 rode on the train.



This photo shows a girl with cranberry-red lipstick.

(Photo courtesy NCA)

Cranberry History

(Continued from Page 8)

of clams, a dish of oysters and a dish of codfish, a haunch of venison (roasted by the first jack brought to the Colony), a dish of sea fowls, a dish of frost fish and eels, an apple pie, and a course of cranberry tarts."

(8)—"History of the Town of Plymouth", W. T. Davis, former president of the Old Colony Society and Plymouth Historian.

Use by Indians Proven

As concerns the use of cranberries by the Indians, there has been presented already the proof of Josselyn's account and that of the apostle, John Eliot. There is additional if not copious evidence as to this. There are at least two reasons why there is not an even greater abundance of writings certifying to the use of cranberries by the first Americans. They would seemingly have been almost bound to be consistent users of this fruit of their native land.

One of these reasons is the confusing habit of the Indians themselves in referring to similar items with a single descriptive name, and another was the great indifference of many of the early writers among the white explorers and settlers regarding the Indians in general.

On the part of the early explorers or other writers when they wrote the Indians used "berries", in many cases they meant to include cranberries, although not specifically saying so. As a people, living in a food-gathering economy, the Indians made use of all food sources found in the area in which they lived. This reasoning alone would prove the use of cranberries by the Indians. "Everybody" has always "known" the Indians used cranberries, and in this instance this common assumption is correct.

The Indians had their name for the cranberry, in fact more than one designation.

Early documentation for the use of cranberries by the Indians and that they had a name for cranberries comes from such an irrefutable source as Roger Williams, that pioneer of religious liberty, who, forced to flee the Massachusetts Colony, lived among the natives, learned their language, and founded Rhode Island.

Sasemineash

The Narragansett Indians had a word for cranberry and Williams interprets it:

Sasemineash—Another Sharp, Cooling fruit, growing in fresh water in the Winter; Excellent to conserve against Feavors, of which there are divers kinds, Sweet, like currants, Some Opening, some of a binding nature. . . .

Thus Roger Williams in his famous "Key", by 1643 had shown the use of cranberries by the natives and that they had regard for the medicinal qualities of the fruit.

"Sasemineash" seemingly was not merely the designation of the Narragansetts. An Indian place name, "Massassomineak", which is obviously based upon the same Indian word was the ancient Indian designation for "a place somewhere in the vicinage of Herring Pond, near Plymouth, Massachusetts. This word has been literally interpreted as meaning "Much Cranberries".

Lincoln Newton Kinnecut, however, has given an even more specific interpretation, writing:

"I believe, however, as the word is now spelled, a literal translation would be 'the place of the large cranberry', or 'where large cranberries are'. 'Sassa', 'great', 'sasemine', cranberry, and 'auk', place. (Sasemineach, Roger Williams). The plural of many kinds of berries was formed by adding 'ash' to the singular."

(*)—"Key into the Language of America, An Help to the Language of the Natives of New England." Narragansett Papers, Series I, Vol. III, 1643.

(a)—44th Annual Report of the Bureau of American Ethnology, pages 297, 307, 291.

(b)—43rd Annual Report of the Bureau of American Ethnology.

(c)—"Edible Wild Plants", Oliver Perry Medager, New York, 1939., pps. 75, 76.

(a)—"Journal of the Pilgrims of Plymouth", Cheever Reprint, pps. 39-40. WHAT ABOUT (b)?

(c)—"New England Prospect", William Wood.

(*)—"The Narrow Land", by Elizabeth Reynard, Houghton Mifflin Co., 1934.

(*)—"The Narrow Land", Elizabeth Reynard, 1934, Houghton Mifflin Co.

(*)—"History of the Town of Plymouth", W. T. Davis, former president of the Old Colony Society.

Effect of Last Winter's Flooding In New Jersey on the 1948 Crop

(Editor's Note: The following is from the Proceedings of the 79th Annual Convention of the American Cranberry Growers Association, New Jersey, held at Pemberton, August 26, 1948).

By H. F. BERGMAN

Your program committee has placed me in a difficult position by assigning to me the subject announced. After spending four days in visiting bogs (2) I find that the evidence to show the beneficial effects of having withdrawn the water from under the ice on winter-flooded bogs is not so clear-cut and outstanding as I had hoped it might be. Among the reasons for this are: (1) The lack of knowledge of the oxygen content of the water throughout the winter flooding period; (2) differences in the ability of vines to withstand oxygen deficiency; (3) the difficulty of finding conditions on bogs that were flooded all winter comparable to those on bogs from which the water was drawn out from under the ice; and (4) the operation of soil or weather factors, or a combination of them, which adversely affected crop production.

With respect to the oxygen content of the water, the best information would have been actual determinations of the oxygen content at frequent, regular intervals during the winter flooding period. However, only a few such determinations were made last winter. Such determinations should be made daily in very cloudy weather and, particularly, after a snowfall. During clear or only partly cloudy weather, determinations would not need to be made oftener than every two or three days. In the absence of actual determination of the oxygen content of the water, specific information as to the date of winter flooding, depth of flood, thickness of ice, sunshine or cloudiness during times when bogs were not covered with snow, depth and duration of snow cover, and date of withdrawing water from under the ice, particularly with reference to

the depth and duration of the snow cover prior to the withdrawal of the water, would have been helpful in determining whether or not conditions existed at any time which might have brought about an oxygen deficiency; but information on most of these points was not available.

Differences in the ability of vines to withstand oxygen deficiency seem to depend on the condition or vigor of the vines. Vines that are weakened in any way appear to be more subject to injury from lack of oxygen than are healthy, vigorous vines. Among things which affect the condition of the vines are: injury by insects, lack of drainage, weather conditions, and apparently also, the size of the preceding crop. These things affect the vigor of the vines through their effect on the formation and accumulation of carbohydrates (starch and sugars) which are used by the cranberry vines as a source of energy for growth and for other physiological activities. This energy is released in the process of respiration. Starch and sugars stored in the vines are very important in maintaining the normal physiological activities of the vines during the winter flooding period. During that time, if the oxygen content of the water drops to such a low level that the vines are unable to obtain the oxygen needed for respiration from that dissolved in the water, they probably are able to obtain it by breaking down the molecules of sugar and using part of the oxygen of the sugar molecule. In this way they are able to survive short periods of oxygen deficiency with little or no injury. Thus an ample supply of stored carbohydrates serves to protect the vines from injury, at least during short periods of oxygen deficiency. Therefore, any condition that operates to reduce the formation and accumulation of carbohydrates in the vines makes them more liable to be injured by a lack of oxygen in the water during the winter flooding period.

Difference in the conditions on different bogs and difference in the flooding of bogs during the winter make it very difficult to find bogs nearly enough alike with respect to bottom, density of vine growth, and vigor of the vines to compare the effect on the 1948 crop of drawing the water from

under the ice with that of keeping a bog flooded all winter. Only a few of the bogs seen were flooded all winter. Most of these showed clearly the effect of the prolonged flooding in the reduction in the crop. However, a few bogs that had been flooded all winter failed to show any outstanding difference in the size of the crop as compared with that on others from which the water had been drawn out from under the ice. In these instances, the bogs that had been flooded all winter were flooded during the summer of 1947 and so had no crop, whereas the bogs from which the water was drawn out from under the ice had produced a crop last year. This difference in cropping makes it impossible to compare the effects of the difference in the winter flooding practice on this year's crop. All growers are of the opinion that bogs that do not bear a crop one year produce a bigger crop the following year, regardless of winter flooding conditions, or other adverse factors, than do those that produce a crop every year. A probable explanation of this seems to be that vines that have not produced a crop have a greater reserve of stored carbohydrates, and thus have greater vitality and are better able to withstand oxygen deficiency during the winter flooding period than are those that produce a crop every year.

Many of the New Jersey bogs are badly out of grade. Ordinarily, on any such bog, if it is flooded all winter, the crop is decidedly better on the very shallowly flooded parts near shore than it is on the deeply flooded parts. This has not been found to be true this year on many of the bogs. In a few instances, the crop on the deeply flooded parts was better than on the shallowly flooded. Similarly, on bogs from which the water was drawn out from under the ice, the crop would be expected to be more nearly uniform on all parts of the bog if drawing the water from under the ice had reduced the amount of injury from oxygen deficiency. This also was not true in many instances.

These apparent exceptions may be due to one or more of several undetermined causes. Vines on high parts of bogs near shore are nearly always on a bottom of pure sand, which during dry periods

does not have an adequate water supply and is always lacking in nitrogen as well as in mineral nutrients. For these reasons, vines in such locations may not produce so many flower buds as do those in more favorable locations. The lack of water and nutrients, also may make it impossible for the buds formed to go on through the blossoming stage to the production of mature fruit. It is possible, also, that flower buds on vines on high parts of bogs which because of difference in grade cannot be covered by the winter flood are killed by drying out during the winter, or that they may be killed by early spring frosts because not protected by frost flows.

Another reason for the lack of difference in the crop on higher ground near shore as compared with that on deeply flooded parts, on some bogs, is that the winter flooding water may not have been drawn off early enough to prevent some oxygen deficiency injury. Observations indicate that most of the injury, in so far as it affects the survival of flower buds and the setting of fruit, occurs very soon, probably within one or two days, after the oxygen content is reduced to a certain danger level. There is some uncertainty as to the oxygen content at which injury begins, but this is now placed at 4.0 cc. per liter. Numerous observations seem to indicate that if the oxygen content does not fall below this level no serious injury will occur. However, if the oxygen content falls below this level and remains there for one to three days, the injury may be quite severe. Longer periods of low oxygen content cause more severe injury; but the severity of injury is not proportional to the length of time that the vines remain in water containing less than 4.0 cc. of oxygen per liter. A reason for this may be that the initial injury permanently retards the rate of respiration so that a greater deficiency of oxygen and one of longer duration is necessary to cause further injury. Since much of the injury from oxygen deficiency probably occurs within one to three days after the oxygen content reaches the danger level, it is very important that the water be withdrawn promptly as soon as the oxygen content reaches or approaches the danger level. This is

particularly true after a snowfall; the water should be drawn off within 24 hours after the snow falls.

Evidence of oxygen deficiency injury has been found on nearly all New Jersey bogs that I have seen. The injury, usually, was greatest on bogs that were flooded all winter and was greater on bogs from which the water was not drawn off until the middle or latter part of January than on bogs where the water was drawn off earlier, but only a few bogs appeared to be relatively free from it. Most of the injury observed had caused the death of flower buds at early stages of development or had caused the flowers to fail to set fruit. These are the first stages of injury and indicate injury of a less severe degree, yet they may cause quite as great a reduction in the size of the crop as would some more severe injury.

The effect of the death of flower buds at an early stage and of the failure of flowers to set fruit is apparent in the average number of blossoms and the average number of mature berries produced per flowering upright. A large percentage of the flowering uprights on many New Jersey bogs had only one to three blossoms each and most of the uprights had not more than one berry each. A considerable percentage of the flowering uprights failed to set berries, only the "blasted" blossoms remaining to show that the uprights had blossomed. Counts have shown that in Massachusetts the average number of flower buds formed per flowering upright is 5.0, and that this average number is formed regularly each year by a large majority of the uprights. Counts show also that the number of berries per flowering upright in Massachusetts may average 2.0. The corresponding averages in New Jersey, presumably, are about the same as in Massachusetts. The average number of blossoms and of mature berries per flowering upright on most New Jersey bogs this year, however, are well below the figures given. This appears to be the result of injury from oxygen deficiency during the winter flooding period, since the greater reduction in the average number of flowers and of berries per upright was found on bogs where the injury was more severe. The fact

that oxygen deficiency injury was found on many bogs from which the water was drawn out from under the ice indicates that the water on these bogs was not drawn off soon enough. If injury from oxygen deficiency is to be greatly reduced or prevented, the oxygen content of the water must be known and followed closely, and the water must be drawn off before the oxygen content reaches the danger level. By so doing, more of the buds formed will reach the blossom stage and more of the flowers will develop into mature berries, thereby increasing the production.

The hasty survey of New Jersey bogs, allowed by the brief time at my disposal, has brought out considerable evidence to show that drawing the water from under the ice last winter was beneficial. On many bogs, however, various factors other than oxygen deficiency in the winter flooding water operated to reduce or eliminate the crop on some parts of the bogs, thus making less evident any beneficial effects of this procedure. Notwithstanding this, it seems quite certain that the crop on many New Jersey bogs has been larger this year, as a result of drawing the water out from under the ice, than it would have been if the bogs had been flooded all winter. The crop on some bogs probably would have been larger if the water had been drawn off earlier. It seems very probable that much better results could be obtained if more care were taken to draw the water off at the proper time. In spite of the many difficulties in assessing the value of this procedure, drawing the water out from under the ice when the oxygen content fails to near 4.0 cc. per liter appears to be a good practice and the proper one to follow whenever conditions make it necessary.

Isaac Harrison: We took oxygen samples consistently, but saw no fluctuations upward. They ran about 7 to 8 cc. per liter consistently, but when the oxygen content started down it went down very rapidly. The water got stale under the ice. What makes the water get so foul smelling?

Dr. Bergman: I don't see why you didn't have fluctuations. The oxygen content should vary with the light intensity during the day. When the oxygen content gets low,

sulphur-containing compounds produce hydrogen sulfide. That may account for the foul odor.

Isaac Harrison: It was often several days between samples, so we probably missed the fluctuations.

R. B. Wilcox: Mr. Harrison did not take observations until the bogs were heavily snow and ice covered, so he probably wouldn't have diurnal fluctuations.

Dr. Bergman: I have sometimes noticed that the oxygen content does hold up even in the absence of light, possibly from water coming up from the soil.

H. B. Scammell: When the vines are completely frozen in ice as in Wisconsin, do they get oxygen from the ice or are they absolutely dormant and don't need oxygen?

Dr. Bergman: I have always assumed that they are dormant. Since the temperature of ice varies from 32°F. downwards, the respiration rate of the vines will vary with the temperature of the ice. In Wisconsin, the ice is seldom as warm as 32°F., so the vines are usually dormant. In Massachusetts there has been some indication of oxygen deficiency injury where vines are frozen in ice at 32°F. Theoretically ice at 32°F. contains the same amount of oxygen as does water at 32°F. Possibly the rate of diffusion through ice at 32°F. is essentially the same as through water at 32°F.

John Grey: Is a bog with a fast flowing stream better off than a bog with a slow flowing stream?

Dr. Bergman: That is generally true, though at some distance from the stream the effect may not be felt even where there is a fast flowing stream.

Pres. Crabbe: There is always a pile of cranberry research to be undertaken. Last fall I appointed a committee of nine, headed by Joe Darlington, to look into the most urgently needed cranberry research. Since Joe is no longer with us, I have asked Bill Haines to report to you on the progress this committee has made.

(1) Senior Pathologist, Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, U. S. Department of Agriculture, East Wareham, Mass.

(2) Indebtedness to Mr. Edward Crabbe and to Mr. D. M. Crabbe for providing a car for use in visiting bogs, and to Mr. R. B. Wilcox for much helpful information about specific bogs is gratefully acknowledged.

Hydraulic Institute Publishes New

(Editor's Note: The following is a review of a new publication, written by the publishers. This publication could well be of interest to many growers, with the increasing use of sprinkler irrigation.)

HYDRAULIC INSTITUTE announces the publication of a comprehensive Tentative Standard on Pipe Friction. The very latest data have been used to prepare tables and charts arranged in a convenient and usable form. This material will be of unusual interest to everyone concerned with the flow of fluids in pipes, as it is the result of one of the most progressive programs undertaken in years.

Everyone concerned with the flow of fluids in pipes is undoubtedly familiar with the work of Williams and Hazen, published over forty years ago. The next significant step in the study of this subject was taken by Prof. Lewis F. Moody, who correlated all the important data on pipe friction following the publication of the work of Williams and Hazen. The work of Prof. Moody, Professor of Hydraulic Engineering at Princeton University, was published by the American Society of Mechanical Engineers in 1944 in a paper entitled "Friction Factors for Pipe Flow", No. 44-SA-4.

HYDRAULIC INSTITUTE in 1946, felt that further work was required to present this data so as to permit widespread usage. With the cooperation of Prof. Clifford P. Kittredge, also of Princeton University, who investigated the subject, and with the help of its members, Hydraulic Institute prepared convenient and usable tables based on Prof. Moody's paper. Prof. Kittredge has been associated with pipe friction problems during his entire career and was imminently qualified for this program, especially through his work in editing J. R. Freeman's book on "The Flow of Water in Pipes and Pipe Fittings."

The friction loss for water is shown in the new Hydraulic Institute tables in tabular form for pipe sizes from $\frac{1}{8}$ " to 84". On the smaller pipe sizes, the tables are based on wrought iron or steel

schedule 40 pipe, and for the larger sizes, separate tables are given for each standard size for steel and asphalt dipped cast iron pipe. In each table, the flow in GPM and CFS are shown with the corresponding velocity, velocity head, and friction loss per 100 feet of pipe. The data is carried to three significant figures and is listed in small increments to avoid the necessity for interpolation.

For computing the friction loss for liquids other than water, a series of charts are provided for pipes ranging from $\frac{1}{2}$ " to 12", showing the complete range of viscous and turbulent flow.

In addition to the friction tables, there is a very complete listing of the losses in valves and fittings. Sectional diagrams of these items are shown to indicate their internal construction. Since there is a lack of uniformity, a range of loss coefficient is given. The data for bends, increasers and diffusers are shown in chart form so as to include the full range of the variable dimensions. This data was assembled from a number of sources and represents the latest and most complete compilation.

The Tentative Standard on Pipe Friction contains a brief review of the basis of the tables, and a very complete description of their use. Several illustrative examples are worked out in detail for simple and complex piping arrangements. To supplement the use of the friction tables and charts, the pamphlet contains tables on the viscosity and specific gravity of a wide range of commercial liquids and gases, as well as complete tables of dimensions of standard steel, wrought iron and cast iron pipes. This information, together with supplementary data on the properties of fluids and charts showing the full range of the friction factor, permit the computation of the loss for any liquid or gas in any of the commercial forms of circular pipe.

While the basis of the new tables is widely recognized, the form in which they are presented in this publication is unique. It has, therefore, been issued as a Tentative Standard to provide a suitable experience period.

A complete bibliography gives the source of the material used in the preparation of this Tentative Standard.

Cape Clubs Open Winter Meetings

The first meetings of Cranberry Clubs of Cape Cod were held at Bruce Hall, Cotuit, January 10, which was the meeting of the Upper Cape Club, with an attendance of 40; the second meeting was at the Harwich Chapel on January 11, with an attendance of below normal. This perhaps reflects a somewhat lack of interest in cranberry growing due to the prevailing low prices and poor market situation.

At each meeting Bertram E. Tomlinson, Barnstable County Agent, reviewed briefly his county cranberry program. This program was developed through a discussion of cranberry problems with the County Agent Advisory Committee and the recommendations are being followed in planning educational programs.

Professor Fred E. Cole, Extension Specialist in marketing fruits and vegetables, gave a splendid discussion on this subject. Among the important things he emphasized were the following: the grower must not believe that his responsibility has stopped when he has disposed of his crop to the fruit buyer. The grower must be interested in what happens to the crop from the farm to the consumer, and he should never forget that Mrs. Consumer, the one that actually buys his produce, is the one that must be satisfied or else there will be no repeat purchases. Mrs. Consumer is a very critical person when it comes to judging her various purchases at the grocery stores, and the things she buys must meet the "kitchen table test." This means that when she is preparing the material for the table, if she has to throw a great deal of it away due to poor quality, she is convinced that she has made a poor purchase and when she goes to the store again she steers clear of that particular article.

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FORESTDALE

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Professor Cole also emphasized that the need of getting buyer acceptance is through offering produce of good quality at all times. A sale is not completed until one gets the next order. In commenting upon cranberries, he also pointed out that growers must remember that cranberries compete not only with other cranberries but with all other fruits on sale.

There are only three ways of meeting competition: first through offering better quality; second, through superior services; and third, through lower prices. Advertising is effective only if all three factors are in line.

In regard to competitive pricing, Professor Cole raised the question as to when is a price right. This question was answered by citing to the Boston market when asparagus receipts exceed the normal supply for a few days, due to weather conditions, or whether they arrive at a time in the mid-

week when normal marketing is light. In such cases, the right price is one that will move the crop in the desired time, and the price received actually has nothing to do with the cost of production.

In commenting on quality he emphasized the fact that responsibility rests on the producer and he ought not to avoid this responsibility if he wants to stay in business.

Throughout his talk when these various points were made, Professor Cole drew on his own personal experiences in observing market conditions, and in observing the way the housewife makes her purchases. The whole job of marketing is just as complex as the job of production, and while the farmers may join cooperatives for the purpose of having someone else do their marketing for them, nevertheless as growers they are still responsible as to how that job is done and therefore must always maintain an active interest in that field of operation.

The schedule for the next meetings of the Upper Cape Club will be at Cotuit, February 7th, March 11. The Lower Cape Club is scheduled for February 6, March 8 and April 12. The February 8th meeting is to be held at Grange Hall, Dennis.

Disease Forecasting As Common Sense

By NEIL E. STEVENS

Bulletin 450 by H. J. Franklin and C. E. Cross of the Mass. Agr. Exp. Station, just issued, furnishes the background for an important long-time experiment in disease forecasting. As this is a phase of plant disease control in which I am much interested, some comments may be forgiven. They may possibly even be useful.

The object of disease forecasting is well known. It is to reduce, materially, the cost of disease control without greatly increasing the chance of serious losses from disease. There are, in the United States, a considerable number of sporadic diseases on cultivated crops. In some years a sporadic disease causes losses so severe that control measures pay for themselves many times over. In other years, however, spraying is a waste of time and materials, as well as a source of possible injury. It seems no more than common sense to try to develop methods of telling in advance whether such spraying will pay. The Plant Disease Survey of the U. S. Department of Agriculture has recently initiated a rather extensive project covering this type of work on several diseases.

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One Chrysler 500 gallons p. m. high pressure for sprinkling with outlet fixed for standard pipe. Thread and suction hose all in first class condition. \$550.00.

Also one high pressure sprayer without engine. \$100.00

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R. 1 Box 694 Warrenton, Ore.

Cod seems particularly favorable for such an attempt. In the opinion of most of those familiar with conditions, general spraying for the control of fruit rot is not necessary or profitable every year. There are certain bogs where spraying is necessary every year. These areas are mostly well known to growers and managers. Also, the committee of the New England which Mr. Trufant is chairman, has recently published a useful rule for picking out such bogs. Dr. Franklin's experiment in forecasting attempts to go further and to meet the general situation.

There are now on record contemporary estimates of the keeping quality of the cranberry crop in this area from 1912 to 1947. Of these 36 crops, 5 were rated very poor, 4 as poor, 5 as fair and 22 either good or very good. Poor keeping quality is largely a matter of abundance of decay-producing fungi. Thus an estimate of keeping quality is an estimate of disease incidence. In my opinion, then, the record shows that general spraying for the control of fruit rots would have paid exceptionally well in 5 years, well in 4 years, been of doubtful value in 5,

and would probably have done more harm than good in 22. No businessman should be advised to spray four years for reasonable assurance of return in only one. If he is so advised, he will probably not follow that advice.

It is well known that everyone is a good quarterback on Monday morning. So I should like to review the potential usefulness of Dr. Franklin's experiment in terms of what might have been accomplished if the experiment had been begun a quarter of a century ago. By the early spring of 1923 there was evidence in hand to indicate that an abnormally warm spring in this area would usually be followed by poor keeping quality in the cranberry crop. This hypothesis has been abundantly confirmed in the past 25 years. Beginning with 1923, there have been 3 crops rated as very poor, 2 as poor, 4 as fair and 16 as good. In other words, adequate spraying would have paid very well in 5 years, might have paid for itself in 4, and would have been worse than useless in 16.

Forecasts

How would forecasts based on the single factor then recognized as important have worked out? That would depend, of course, on the caution used by the forecaster. If he had leaned toward the thrifty side and recommended spraying only after the warmest seasons—0 in column 5 of Dr. Franklin's

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table No. 1, the growers who followed his advice would have sprayed in 1931, 1933 and 1942, all years of very heavy disease losses. They would also have sprayed in 1929, a year of severe losses, and in 1946 when spray for fruit rots would not have been needed. They would have missed spraying in 1930 when it would have been useful. The other 19 years they would have saved their spray money and with only a single exception been glad they did so. The record would thus stand, 5 recommendations to spray, all but one of which were fully justified, 20 recommendations against spraying, here again with only one miss.

The experiment in forecasting the keeping quality of the cranberry crop of Plymouth County which was started in 1923 seemed venturesome at the time. Actually, as the results proved it was almost too easy. Certainly, it was much easier than that now being undertaken by Dr. Franklin. Those earlier forecasts were intended merely to be of use in handling the crop and were made in September. By that time much more information regarding weather during the growing season was available than

there is on June 15 when the forecasts to be used in planning spray programs will be made.

In this discussion of what seems to me the possibilities of a useful cranberry disease forecast, as early as June, I have attempted no analysis of the results of Dr. Franklin's further study. It should add to the accuracy of forecasts based on a single factor. I sincerely hope that enough growers will act on the basis of his forecasts to give us a real check on their accuracy.


Chester H. Cowen

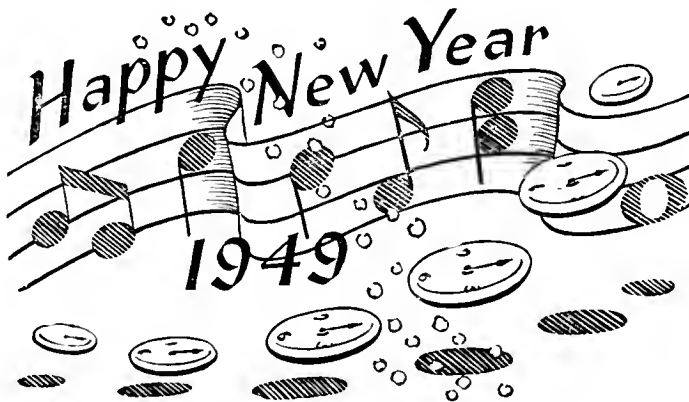
Chester H. Cowen, brother of George H. Cowen, president of

New England Cranberry Sales Company and director of American Cranberry Exchange (CRANBERRIES, November 1948), died at his home, North Rochester, Mass., December 21. He had been in poor health for about a year.

Mr. Cowen was active in the cranberry industry for many years and was a member of the Cape Cod Cranberry Growers' Association. He was also a member of the Farm Bureau, the Rochester Grange, and was Rochester road commissioner for 20 years.

He is survived by his wife, Bertha, a son, Chester, Jr., of Rochester, four daughters, a sister, and his brother, George.

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Keep the New Year's Spirit for the Next Twelve Months

"Keep Smiling"

Peter A. LeSage

A BOOK REVIEW

By CLARENCE J. HALL

"Factors in Botanical Publications and other Essays", by Neil E. Stevens, Ph. D., who is Professor of Plant Pathology, University of Illinois, formerly Forest Pathologist and Senior Pathologist, Bureau of Plant Industry, U. S. D. A. Professor of Botany, University of Illinois, and Senior Cranberry Specialist, Wisconsin State Department of Agriculture, is a most interesting publication which has been sent us for review by the

Chronica Botanica Company of Waltham, Massachusetts.

Dr. Stevens is well known to many cranberry growers.

For one thing it contains an excellent sketch of Dr. Stevens. The editor's foreword says: "We have much pleasure in presenting in this special issue of Chronica Botanica a collection of the general writings of Dr. Neil Everett Stevens, distinguished American biologist and essayist. These essays, he told us, were written 'as the spirit moved' over a period of more than a quarter century.

Many of them are of international importance and they are all of unusual permanent interest. Altogether these papers represent something less than half of Dr. Stevens' published papers of this type."

Chapter one is on "Radicalism and Research in America," which in brief says that undoubtedly the most radical document ever adopted by an American National Assembly was the Declaration of Independence.

The second chapter deals with the obligation of the investigator to the library, for as Dr. Stevens says, only a very few exceptional persons can own or provide room for a library complete enough to cover the range of his professional interests. With this we thoroughly agree.

Chapter three is "The Botany of the New England Poets". This refers to such poets as that little group usually known as the Cambridge school, namely Longfellow, Whittier, Holmes and Lowell. Dr. Stevens quotes from a number of their poems which prove their botanical knowledge as it was known in their day.

His chapter four is "Botanical Figures in Biblical Prophecy." In this he says that whatever the message of the Hebrew prophets their language was vigorous. He quotes from many passages in the Bible which prove that botanical references have wide appeal. For

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stance he gives the verse of
 "All flesh is grass,
 And all the goodness thereof
 is as the flower of the field;
 The grass withereth,
 The flower fadeth,
 Because the breath of the Lord
 bloweth upon it;
 Surely the people is grass!"

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The grass withereth,
 The flower fadeth
 But the word of our God shall
 stand forever."
 For another chapter he has
 "Brevity at Botanical Banquets."
 He says that brevity of speech is
 possible except to papers of a high-
 ly specialized character. He adds
 that brevity of serious speech is
 possible, referring to Lincoln's
 "Gettysburg Address", which con-
 tains but 266 words.

Another chapter concerns "Bur-
 eaucracy as a Way of Life." In
 this he says that the government
 worker lives in a glass house—his
 hours, his pay, his tasks are known
 or may be known to all. As a
 dweller in a glass house he is by
 proverb prohibited from throwing
 stones. He adds that on the other
 hand this government worker has
 two general, almost universal
 criticisms—first, that he is an in-
 efficient workman, and second, that
 he is a moral weakling.

The book contains 204 pages and
 most interesting to us is that fac-
 ing the back cover page is a draw-
 ing of cranberry vines with blos-
 som and berries.

SCOOPS AND SCREENINGS

Many thanks to "Buff" (New
 England Almanac of the Air) of
 Radio Station WEEL, Boston, for
 his praise of our Christmas card
 over the air on the morning of
 December 20th.

 We also very much enjoyed the
 Christmas card of Mr. and Mrs.
 Leslie Kranick of Bandon, Oregon,
 which showed their bog at Cape
 Blanco.

 It really is amazing how some
 of this cranberry information does
 get around. We have just re-

**MATHEWS
 CONVEYOR
 and
 TRACK**
 —
Frost Insecticide Co.
 Box 36
 ARLINGTON, 74 MASS.

NEW YEAR'S GREETINGS To Cranberry Growers

In this year of 1949 cranberry growers everywhere must unite in
 closer cooperation in order to restore stability to the cranberry industry.

Every new member added to this Company and to the American
 Cranberry Exchange will strengthen the prospect of the return of order-
 ly marketing to the industry and help bring prosperity back again to
 cranberry growers.

New England Cranberry Sales Company

THE CRANBERRY COOPERATIVE
 ORGANIZED IN 1907

9 Station Street

Middleboro, Mass.

ceived a letter from R. H. Fletcher, Imokilly Orchards, Shanagary, Middleton County, Cork, Eire, asking for a copy of the American Cranberry Exchange cranberry recipe cook book. This request has been complied with, thanks to New England Cranberry Sales Co. We might add that he enjoys CRANBERRIES magazine every month.

Cranberry Station

(Continued from Page 4)

ent as to their feelings in the matter. The committee were unanimous in their opinion that a consideration of marketing in its broad sense and principles involved should be available to all cranberry growers. They felt that since it was controversial, marketing in the past had been more or less side-stepped and that it was

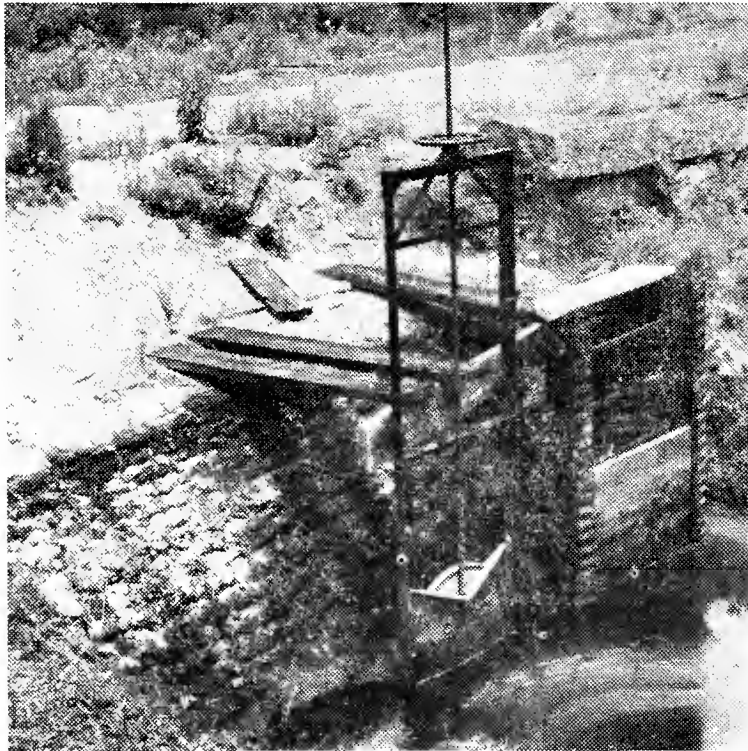
time that we consider it in our educational programs. In fact it was suggested that a Marketing Conference for all cranberry growers be arranged, but more about this suggestion a little later.

County Agent "Bert" Tomlinson called his county-wide cranberry committee together in early December to make plans for their cranberry programs. The Barnstable committee also expressed their belief that marketing should feature their club meetings and educational programs this coming year. "Bert" held a committee meeting of the club officers and directors. This group definitely favored more attention in the field of marketing and made plans to feature marketing discussions at their winter cranberry club meetings.

The council and guidance received from cranberry growers serving on the county and state advisory committees is greatly appreciated by the Extension Service. We shall do our best to incorporate these suggestions into our cranberry programs.

Crop Report

For the United States, as a whole, the 1948 cranberry crop is estimated at a record high of



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R. A. TRUFANT

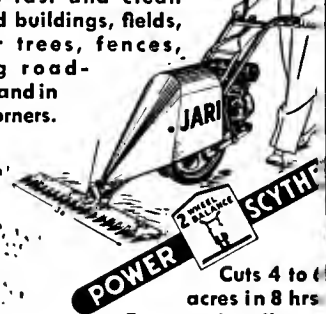
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22,500 barrels. This is 17 per cent more than the 1947 crop of 90,200 barrels and 37 per cent above the ten-year (1937-46) average of production. The previous record-high crop, produced in 1937,

totaled 877,300. The increase from last year is accounted for by the record crop in Massachusetts, which is estimated at 575,000 barrels, and Wisconsin, 225,000.

Production in Oregon with 13,-

000 barrels is less than that of last year, 14,200.

Washington harvested 42,500 this year as compared with 48,000 last year.

Sun scald caused heavy loss in New Jersey prior to ripening. The Jersey crop is estimated as 67,000 barrels.

These figures are from the United States Department of Agriculture, New England Crop Reporting Service, date, December 28.

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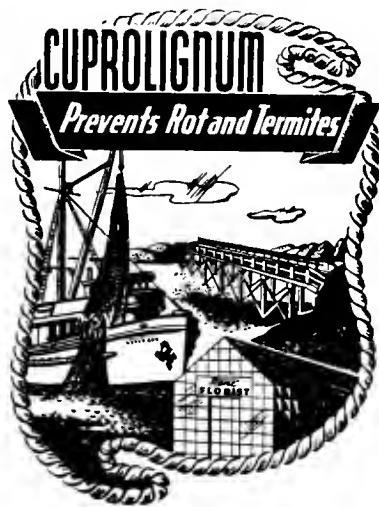
Fresh from the Fields

(Continued from page 5)

for the cranberry growers, while a gradual return to normal and below normal temperatures during the latter days of December should prepare the blueberry buds for most any reasonable temperatures that may follow. The coldest temperature to date this winter occurred on the morning of December 27th, when -4° was reported quite generally in the Pemberton area.

November and December Wetter

Following the two dry months of September and October, both November and December were wetter



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New England Representative

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than normal. November rainfall totalled 4.49 inches compared to a normal of 3.23 inches, while December precipitation totalled 3.61 inches compared to a normal of 2.46 inches. This rainfall has put the cranberry growers in a very good position as far as the winter flood is concerned.

Blueberries

The mild fall weather has been very favorable for blueberry pruning. By the end of December pruning on many properties was progressing well ahead of schedule.

The 17th Annual Blueberry Open House of the N. J. Cranberry and Blueberry Research Laboratory was held at Pemberton on December 11th. Over 130 persons were present to hear the talks on blueberry problems and research in 1948. At this same meeting the New Jersey Blueberry Farmers' Association was organized.

The Association is open to all New Jersey blueberry growers, regardless of marketing affiliations. It was formed to provide a common meeting place for all growers for the exchange of helpful information in growing blueberries. It also aims to promote research and extension work by the State University.

One of the inspirations for the new organization, a spokesman for the industry said, has been the success of the research work on blueberry stunt, a virus disease, conducted by the Agricultural Experiment Station of Rutgers University. The New Jersey Blueberry Cooperative Association of New Lisbon has appropriated \$5,000 each year for the last three years to conduct this research.

The following officers were elected: President, Lester Collins, Moorestown, N. J.; Vice-Pres., Harold Haines, Whitesbog, N. J.; Secretary, John W. Goodman, Pemberton, N. J.; Treasurer, Alfred Galletta, Hammonton, N. J..

Executive Committee: John Ber-

tino, Hammonton, N. J.; William Bertino, Hammonton, N. J.; Joseph Testa, Hammonton, N. J.; Alfred Galletta, Hammonton, N. J.; Ernest Bowker, Sr., Pemberton, N. J.; Mrs. Martha Wyman, Pemberton, N. J.; Delbert Bush, Browns Mills, N. J.; Harold Haines, Whitesbog, N. J.; Benjamin Cavileer, Lower Bank, N. J.; Lester Collins, Moores-

town, N. J.; H. B. Scammell, Toms River, N. J.

American Cranberry Grower Ass'n

The 79th Annual Meeting of the American Cranberry Growers' Association will be held at the Walt Whitman Hotel, Camden, N. J., on January 29, 1949. All cranberry growers are invited to attend this meeting.

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The fresh market for cranberries, supported over the years by the American Cranberry Exchange, is on its way back! It is a lucky thing for our industry the fresh market was there this year, ready to take a huge volume of cranberries.

The Exchange alone has advertised and sold fresh cranberries year after year—and kept telling growers it could and should sell more FRESH.

If distribution this year had been more orderly, the fresh cranberry market could have taken an even larger volume and at better prices.

Next year growers will need the fresh market as much or more than this year. Protect that market by growing berries suited for the fresh market, and by shipping them through the American Cranberry Exchange under the EATMOR label—the label that inspires confidence.

The American Cranberry Exchange, Inc.

The Cranberry Growers' Cooperative

Marketers of

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New York



CAPE COD
NEW BEDFORD
WISCONSIN
ORANGE
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Showing the waves and the white beach sand on the Dennis shore near where Henry Hall started the first cranberry bog. (Story page 7) (CRANBERRIES photo)

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Oldest Cooperative in the Cranberry industry
Oldest agricultural Cooperative in New Jersey

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were born in February – Washington and Lincoln.
They served our country well.

IN WISCONSIN THE WISCONSIN CRANBERRY
SALES COMPANY is strong, and, we believe,
serves the Cranberry Industry well.

Wisconsin Cranberry Sales Company

(A Cooperative)

WISCONSIN RAPIDS

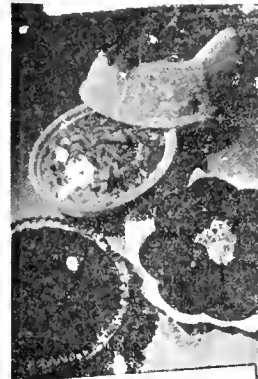
WISCONSIN

Cranberries and Spring Chicken...

belong together like butter and biscuits, liver and onions, may-poles and May.

NCA will spend more than \$200,000 this spring to carry on the chicken-and-cranberry campaign launched so successfully a year ago. Magazine advertising will suggest ways of serving chicken and cranberries together. . . and store displays will bring the chicken and cranberry message to the consumer while she shops.

With Ocean Spray's spring campaign, the cranberry industry will take another big step toward a wider market for cranberry sauce and cranberry juice cocktail.



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Like Chicken? Like Cranberry?
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Carol Reed

Ocean Spray Kitchen
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94

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Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE
Extension Cranberry Specialist



Temperatures have been running well above normal for December and January. Should this weather pattern continue through February, conditions will be favorable for the growth of scum or algae, as it's called, under the winter flood. Growers are urged by Dr. Franklin to be on the watch for this algae, which appears under the ice or water as a green film over the vines. In fact, it has already been seen on several bogs. The **Copper Sulphate Treatment** will take care of this problem effectively. Probably the cheapest treatment is to broadcast fine crystals on the ice at the rate of 10 lbs. per acre in February and again in March. However, if the ice is gone, place coarse crystals in a burlap bag and tow behind a boat, using approximately 4 lbs. of coarse crystals for each one acre foot of water. Since the algae usually has its start near the ditches, be sure that these areas receive special attention. The main point is to treat the bog early and repeat the application if necessary. A word of caution is necessary since copper sulphate is sometimes harmful to fish life. A reasonable period of time should elapse before draining off the winter flow into any fish stream or pond after treating for scum.

Growers will be interested in a note received recently from Walter Piper, Division of Markets, Boston. Mr. Piper was in charge of the cranberry-apple pie contest that received so much publicity at the Union Agricultural meetings in Worcester. A quote from his note seems in order:

"Beneficial results from the cranberry-apple publicity at the Union Agricultural Meeting in Worcester continue to accumulate. Evidence of the widespread pub-

licity given these two fruits keeps coming in from many places—some surprisingly distant from Massachusetts. For instance, we have a report of a newspaper story of the big pie from Phoenix, Arizona, and I have a letter from a friend in Wenatchee, Washington State, referring to a press story about the pie contest and the big pie. There's no telling how much actual space in the newspapers and on the radio has been given to this entire matter, but it certainly seems to have been tremendous.

"One reason for our mentioning that today is something new which has just come in the mail in the form of a request from a Chicago advertising agency, asking for the names and addresses of the contest winners. They are interested in communicating with these winners, to learn what ingredients were used. Something of this sort can easily expand into further favorable references to the advantages of using cranberries and apples as pie-making materials.

"All told, therefore, the recent combination of sales promotion devoted to apples and cranberries has proved to be a very fine example of **cooperation in public relations**. There was the contest itself; then the big pie as a special attraction; and of particular local interest, the window display contest in Worcester. All of these, tied together to demonstrate how well many groups can work together on a sales promotion project."

Important Meeting March 17

Speaking of groups working together, all cranberry organizations are uniting in the sponsorship of a **Cranberry Marketing Conference**, open to all growers. It will be held Thursday, March 17, starting

promptly at 10.00 a. m. at the Wareham Town Hall. The Massachusetts Agricultural Program Board are also cooperating with this venture. Cranberry growers have expressed themselves heartily in favor of such a meeting. Briefly, its purpose will be to present in a simple and direct manner some of the fundamental principles and concepts of marketing. If we understand some of the principles involved, it seems logical to assume that we will become better informed members of our respective marketing organizations. It should be clearly understood that no attempt will be made to settle controversial issues or become involved in such matters. This will be strictly an educational type of meeting. We are experiencing excellent cooperation from all the marketing organizations and their representatives in arranging the program and other details involved with this meeting. The committee in charge of arrangements include: M. C. Beaton, Wareham; Russell Makepeace, Marion; Orrin Colley, Plymouth; Edward Bartholomew, Wareham; Robert S. Handy, Cataumet; Emil St. Jacques, Wareham; Brandt D. Ellis, Dennis; County Agents J. T. Brown, Lewis Norwood, and writer.

The annual task of revising the **Insect, Disease, and Weed Control Charts** is nearing completion. The committee meeting of growers assisting with this work has been held, and a small editorial committee have been adding their final touches to the charts. By the way the experiences and observations of the growers assisting with this work are a tremendous help to the Experiment Station staff. We hope the new charts will be ready for distribution by the middle of March.

There is no doubt that discussions of **marketing** are by far the most popular topic at present which is understandable, but **cutting production costs** is another topic that is receiving considerable attention and is of vital importance to us all. We have had excellent reports from growers who attended the Plymouth County Club meetings and heard the eight

(Continued on Page 21)

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Probably the outstanding weather feature during the month of January was the remarkable warmth. The excess in temperature was 212 degrees for the month, or approximately 7 degrees per day. The ground was scarcely frozen except for a light crust on some days, therefore there is practically no frost in the ground. The warmest day was on the 9th, with a temperature (State Bog) of 56; coldest, 12 degrees above on the 30th.

Rainfall was 3.64 (State Bog) and snowfall 3.25. Such snow as fell did not last long, without the frost in the ground to prevent its rapid melting.

Bogs have been pretty much open water most of the winter. With this open water condition there could have been only slight oxygen deficiency, if any. There has been a little winter kill, but it is comparatively trifling.

As the result of the warm weather there has been no ice sanding possible. In short, January in Massachusetts was a comfortable winter month, in sharp contrast to that of last year. It has been a month easy on fuel supplies and a month in which it was pleasant to go out without bundling up in too many clothes.

The sunshine factor was relatively low, the report being 110 hours as compared to a normal of 132.

WISCONSIN

Wisconsin had extreme cold in the latter part of January. One

night the reading was 22 below, and there were several nights of 10-15 below.

There was an 8-10 inch snowfall, which stopped the sanding operations. However, this relieved the water situation considerably. There had been little water fall in the state until the snow, which will, of course, provide some degree of water for spring frost flowing.

NEW JERSEY

With a little more sunshine and less rain New Jersey could have competed with Florida or California as a winter resort this balmy January of 1949. At the time this was written (January 26) the average daily mean temperature at Pemberton since January 1st stands at 40°. This is 6.4° above the normal mean of 33.6°. The lowest temperature for the month was 24° on the 4th and the highest was 65° on the 19th. With temperatures near what we expect in March we wonder if January will go out like a lion, for it certainly came in like a lamb.

Rainfall has again been above normal for the third month in a row. The rainfall for January totalled 5.20 inches compared with a normal of 3.44 inches. There was no snow during the month at any time through the 26th. The month ended like a lion, with rain, snow, sleet.

For the third year the National Cranberry Association has sponsored a meeting open to all cranberry growers at the N. J. Farm-

ers' Week in Trenton. During this week 46 agricultural associations held annual meetings and various departments of the State Department of Agriculture and the Agricultural Experiment Station present programs of special interest to N. J. farmers. E. V. Lipman of NCA stressed the importance and value of the pending conferences on integration between the National and the Exchange. He urged that all growers lend their full support to this movement.

Professor Allen G. Waller gave an informative talk on the agricultural outlook for 1949. Charles Lamb of the Springfield (Mass.) Federal Land Bank reported on his tour of the nation's cranberry bogs and stated that the cranberry growers are in a better position than almost any other group of farmers in the country. This is true because of the fact that they have practically the whole problem right in their own hands and are in a good position to work out their solution, he said.

John E. Cutts was the presiding officer at the meeting. He called on a number of speakers from the National, the American Cranberry Exchange, and the Cranberry and Blueberry Research Laboratory.

The mild weather that has prevailed so far this winter has been ideal for all kinds of bog work, and several growers have taken advantage of this weather to do considerable amounts of sanding. Because of the prevailing mild weather many bogs have not been flooded at all this winter.

(Continued on Page 21)

Henry Hall, Pioneer Grower, A Vet of Revolutionary War

This Was Begun by Henry Hall of Dennis in About the
Year 1812 on Cape Cod.

By CLARENCE J. HALL

(Editor's Note:—This is a continuation of the Cranberry History which began in this magazine two months ago).

Everything—except perhaps Time itself—has a beginning, and the beginning of successful cranberry cultivation goes back to the days when the United States was very young. The mists of these long years, rising like the "fog" of a flooded cranberry bog on a frosty night, prevent a sharply focused picture of this beginning. Yet the beam of research, diligently directed back through these years, converges upon one scene as the birthplace of American cranberry culture and upon one man as the true sire of the cranberry industry.

The place is Dennis, Cape Cod, Massachusetts, and the man, Henry Hall, a veteran of the Revolutionary War.

Henry Hall

Tradition and vaguely-written word has long accorded these honors to Dennis and to Henry Hall. Others were engaged in getting cranberry growing under way at about the same time; it is altogether possible that others may have begun cultivation with commercial intent before he. But the most earnest efforts to ascertain the true facts of the beginning of cranberry growing only plant the feet of Henry Hall more firmly upon the pedestal reserved for the Father of the Cranberry Industry, and establish more securely that pedestal as the town of Dennis.

For more than one hundred years his efforts have been cited as proving that cranberries could be cultivated. As long ago as that his example was pointed out as proving this and his labors made a matter of inspiration to others. It is from his efforts and those of his Dennis neighbors that commercial cranberry cultivation may be dated.

Henry Hall may not be given the credit of alone having the inspiration to cultivate this lowly, native American fruit. It may be definitely established that to the minds of others entirely without knowledge of his activities, there came the same idea in approximately those same early years. There were spontaneous beginnings of cranberry cultivation in Middlesex County, west of Boston, and in New Jersey at least nearly as early as his. There is every reason to be convinced that these others had no knowledge of his start and that for many decades after that men began cultivating without knowledge of these Dennis efforts and sincerely believing they were pioneering a new form of cultivation.

The evidence, however, seems overwhelming that if cranberry growing may be attributed to any one individual, it was Henry Hall who contributed most to its successful start and that the flame of cranberry cultivation, for one reason or another, was kindled at Dennis by Henry Hall and his neighbors. It is fitting that cranberry growing should have a sire and a place of birth. The certifications for this are as credible at least as for the claim to fame of many another man or place in other lines of endeavor.

Into this same picture at this time must also come at least two others of Dennis. One is Elkanah Sears, also a veteran of the Revolution, and his son, William. Another is one Thomas Hall, first as a boy, then as a man. The cranberry interests begun by these men more than a century and a quarter ago still continue.

Early Dennis

It is possible to recall a fair picture of the times and the place when cranberry growing began.

Dennis, until 1793, was a part of Old Yarmouth, incorporated as a town in 1639. The grantors of Old Yarmouth were Ant(h)ony Tha(t)cher, John Crow (Cro, Crowe, Crowel and Crowell), and Thomas Howes. Coming a little later to Nobsussett, which is now a part of Dennis, were Richard Sears, styled "The Pilgrim", and John Hall. From these early settlers and others came the pioneers and early growers. The culture of the cranberry stems from the oldest bloodstream in America.

In the opening years of the 1800s Nobsussett boasted "52 dwellings and the Old Meeting House (the East Parish of the Yarmouth Congregational Church), a neat and convenient building without a steeple, Summers lodge of Free Masons. . . . a handsome edifice near the meeting house, 40 feet by 20 feet, the hall above, school below. Two windmills near the meeting house, five sail of fishermen and three coasters of 30 to 40 tons."

(This is the description of Dr. James Freeman as found in the Collections of the Massachusetts Historical Society).

In this scattered group of unpainted houses along the county road and the cartways leading into the fields and to the waters of Cape Cod Bay, occupied chiefly by Halls and Howes, but more Howes than Halls, and a number of Crowells, lived Henry Hall and the boy, Thomas Hall.

"A half mile to the east of the Old Meeting House, the rough hill of Scargo is the highest land in the county and is the first which is made by seamen approaching the south shore." (Dr. Freeman). And it was here by the side of Scargo Lake and by the side of Scargo Hill that Thomas Hall set out cranberry vines in 1813.

"Suet (where lived Elkanah Sears on Quivet Neck, still further to the east) "contains 36 dwellings on Suet (Sesuit) and Quivet Necks and has five sail of fishermen, and is a pleasant village compared to Nobsussett. It is flourishing, contributing salt works. . . ."

All along the sea, and even considerable distances from the shore were the "strings" of saltworks—

ter room, pickle room, lime room and finally salt room—low, square wooden boxes open to the sky if the weather was pleasant, the sun turning the brine into salt, hooded with movable covers if the day was cloudy or rainy. They, with the wicker windmills to pump up the brine through troughs, were an inescapable part of the landscape when cranberry growing was beginning on Cape Cod. And as the salt industry declined and the cranberry industry grew, their locations were replaced by cranberry bogs. It was due chiefly to the inventiveness of a kinsman of Elkanah (John Sears) who in 1799 obtained a patent for the process of making salt by solar evaporation, that this industry flourished. Henry Hall, Elkanah Sears and many another early Cape Cod cranberry grower was likewise a maker of salt from the sea. Many a night their slumbers, after working at cranberry growing during the day, may have been disturbed when they had to close the covers against a sudden rain.

"The best soil lies on the Bay, and near Quivet and Suet Creeks", wrote Dr. Freeman, "and with few other exceptions the soil is light and sandy". The bay side of Dennis had few large trees, or trees of any kind, except "a little white oak, some red and black oaks, but principally pitch pines. Thortu fifty years later called Dennis barren and bleak. "Sufficient butter is made, more onions are grown than may be consumed. . . . There are several small orchards which do not do well. . . . there are eels and plenty of eels. Bilious and nervous disorders are the most common diseases."

Attire of the Pioneers

No locomotive whistle was to trail over the marshes or echo from the sand dunes for nearly half a century. Mail came infrequently by packet or stage. With the beginning of the century stages were just beginning to roll their tedious way and the little packets were just beginning to sail with some degree of regularity from the Cape villages. If one of these men of Dennis of that day had gone up to Boston, dressed for the occasion, he would not have been out of place



Harry Hall, great-great-grandson of Henry Hall, scooping on the original bog. Photo taken several years ago. ((CRANBERRIES Photo))

if he attired himself in a white, home-made linen shirt, buff pantaloons tucked into boots, white stock, gay, flowered waistcoat, dark-colored coat with tails to the knee, and high beaver hat. He would have had no Cape Cod newspaper to read by stage or packet. So long ago was it when cranberry growing began on Cape Cod. Yet it was a time of rising prosperity for the Cape, interrupted by the War of 1812. Salt making was in the ascendancy, as were cod and mackerel fisheries, farmers were finding markets for their onions, corn, rye and wheat, in those early decades of the past century when cranberry growing was beginning.

Henry Hall

Henry Hall was born in Yarmouth, December 1, 1760 or 1761 (records vary), of the eighth generation from John Hall, who came

from England in 1630, descending through John's eldest son, John, reputedly one of twelve. Henry was twice married, and it was Henry and his first wife Data (Baker), who had deeded land for the building of the Summers Lodge of Masons. His second wife was Tamzin Clark.

With the lapse of the years, accounts of the personality and appearance of Henry Hall have lapsed likewise. But he is reputed to have been a man interested in community affairs. The Dennis town records show that in 1801 it was voted "at the request of Henry Hall and others to fence in the burying ground at our North Meeting House, to be done by subscription." In that same year, he with two others as a committee of three, reported to the town to lay out from the common lands at Black Earth,

or "Black Flats" for the use of individuals for salt works. "Black Earth", near Coy's or Kiah's Pond, was close by the seashore, and around this pond wild cranberries had grown and had been gathered since earliest tradition.

Henry Hall has repeatedly been referred to as "Captain Henry Hall." Of his right to this title there seems to be no recollection or definite written record. However, in a list of vessels enrolled from Yarmouth for the year 1778 a Henry Hall is listed as captain of the schooner "Viana", 31 tons, 69 feet, owner, Atherton Hall. This may substantiate his title, as there is no other Henry Hall in town records of that date.

Probably he was a "typical" man of Cape Cod of the day, had done a little inshore seagoing, and had mainly made his living by farming. He was, Dennis tax records show, a man of at least reasonable property, owning two dwellings, his outbuildings, had salt works, and his cleared land and his woodland. His Revolutionary War record is, if undistinguished, clear. The Massachusetts Collection of Revolutionary War Records has:

Henry Hall, born 1761 or '62, died 1850. Private, Captain Mica Chapman's Company. Service 13 days, Dartmouth, Sept. 6, 1778.

In a memorandum written by himself he states as follows:

"I was born in that part of Yarmouth which is now Dennis. I went to Holden in the County of Worcester to live with my brother, at which place on the last of March I enlisted 1777 in the Company commanded by Captain Stone for the term of 3 months and marched to Rhode Island and was stationed at "Obdike New Town" and served my time and was discharged. I returned to Holden. I enlisted in the Company commanded by Captain Edmund Hodges for four months. Company was under General Stark. We then marched to Barrington where we remained about two months. We then went to Albany where we remained a few days. We were then ordered back to Bennington where we arrived the day of the battle on the 17th of August. At the end of the term was discharged in August or September 1. Then entered the eight month service as a substitute of Enoch Hall, Company commanded by

Captain Joseph Griffeth and was stationed at Fall River. In August, 1779, I enlisted in the Company commanded by Captain Lot Crowell and marched to Falmouth, then to Waquoit, at which place I served four and one half months."

Henry Hall had three sons, Henry, Jr., Hiram and Josiah Baker. At some time he moved from a house along the County road to a little story and a half Cape cottage nearer the shore, and near where he began cranberry growing. As he felt himself growing older, it is said he made an agreement with his son, Hiram, to care for him and in return Hiram would be left this property, his "town house" going to his eldest son. The site of this house today is covered with a dense growth of tall silver leaf poplars, springing, it is said, from a single tree planted during Henry's life time. The house itself has since been moved to nearby Nobscussett Beach.

First Bog on the Cape

Assumedly it was while living here that he thought of cultivating the wild cranberries of Dennis. The long and often-repeated story is that he chanced to note that where beach sand blew over the wild vines the berries grew better and this gave him the idea of planting vines in sand. Fancy might say it was while he was a member of the town committee concerned with the land at Black Earth near the shore that he "noted" the sand among the cranberry vines. More likely he noticed the sand growing among wild vines on his own property toward the shore from where his little house was located. There is a small and very muddy pond, which has been variously known as "Miry Pond" and as "Hiram's Pond" (named for Hiram Hall). Its shores are swampy, natural cranberry ground. Certainly the sand from nearby dunes could have blown over the vines there. In wintry gales sands do still sweep over this spot. The shores of this pond have been pointed out as the site of his beginnings, by I. Grafton Howes, former president of the Cape Cod Cranberry Growers' Association and a descendant of Henry.

To the west and in back of the poplar patch there is a bog of

about four acres. This is known to older Dennis people as "the Hiram Hall bog", or "Grampa Hiram's bog". Henry's great-great-grandson, Harry Hall, whose mother, Mrs. Lillian Hall, owned an interest in this bog, said that Henry Hall first cultivated here. Very certainly Henry Hall cultivated cranberries here on this bog, which up to a few years ago was still producing, but now has only a few scattered vines. He may indeed have begun here, or he may have first cultivated by the side of the pond, transferring his activity to this latter side as a better one. Possibly this assumption is more likely. At any rate, the two spots are not many rods apart.

The exact determination of his beginning is unverifiable. The date has been variously ascribed, most frequently as "about 1816."

In all likelihood the exact year of his beginning can never be determined. It is not strange that this is so. He was probably quite unaware that he was starting an industry and so made no written record of the date. No one else would have been vitally interested—as stated, there were no Cape Cod newspapers at the time.

His experiments probably escaped any printed recognition for some years. But this state of affairs did not last long, and it is to these printed notices that the laurel for the first cranberry grower may be placed on the brow of Henry Hall and Dennis and Cape Cod definitely ascribed as the birthplace of the industry.

The First Grower in Print

Henry Hall did receive recognition for his efforts in public prints beyond the limits of Barnstable County very shortly. These recognitions which were contemporary with his early cranberry growing and definitely implying that he was pioneering in cranberry growing do not seem to have been disputed at the time. They seem to indicate that Henry Hall was then regarded as the pioneer grower, and from that time on seems to have been so held, and Cape Cod designated as the place where a new form of agriculture was being developed.

(Continued on Page 22)

EFFORT TO REMEDY SITUATION

WE are not privileged to print anything this month upon the efforts of the industry to benefit the general cranberry situation. But at least many realize that something drastic has to be done to improve prices in the future.

Strangely enough, there is a lot of ill will within the industry, yet there is still a lot of good feeling. The cranberry industry is an industry closely knit, even though it extends from "Shining Sea to Shining Sea."

Perhaps this is enough said upon this topic at the moment, maybe it is too much.

EROSION

WE have read a lot about soil erosion, but we never knew what it really meant until we made a recent trip to New Orleans down through the Piedmont country with its rich, red soil. Here the gullies are really something to see, as this fertile soil which produces corn, cotton, and other crops, along with peach and apple orchards. These gullies mean that this fertility is being washed into the tributaries that feed into the Mississippi and other streams and so into the Gulf, to be lost to agriculture. The erosion makes "Old Man River" and all the streams take on their rich coffee color. It was heartening to note, however, that a great deal of contour planting was being done to lessen erosion. As has been pointed out so often before, a growing America cannot afford to lose any more of its usable top soil.

CRANBERRIES AND FISH

CRANBERRIES have traditionally always gone with the turkey. The move to make the consumer conscious that cranberry sauce goes well with chicken is also a good one, unless too much emphasis is laid upon this angle. But how about cranberries with fish? There are many kinds of fish and many people eat fish, as it is relatively cheap. We believe cranberry sauce adds a tart taste which goes well with fish.

Another means of increasing cranberry consumption, if it could be accomplished, would be to induce restaurants, etc., to

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serve larger helpings. Have you ever noticed the little bits of dabs which you get in public eating places? You could stick these dabs in your left eye and still not blink.

ATTENTION is particularly called to an important meeting of all groups of growers at the Wareham, Mass., Town Hall, Thursday, March 17th, starting promptly at 10 a. m. This is for the sponsorship of a "Cranberry Marketing Conference." Briefly, its purpose, as pointed out by J. Richard Beattie in his article, is to present in a simple and direct manner some of the fundamentals and concepts of marketing.



Scene of the church at "old New England", Dennis Center. In the nearby cemetery Henry Hall is buried. (CRANBERRIES Photo)



A meeting of the National Cranberry Association was held at Trenton during the 1949 Farmers Week, January 24-29. John F. Cutts, Tabernacle, presided.
(Photo Courtesy New Jersey Department of Agriculture, Bureau of Information)



Much interest has been created in the 'cello machine with automatic sealer. Here the device is shown in operation, with the developers, E. C. St. Jacques and
son, Robert, of the Hauden Separators Mfg. Co. standing by. (Photo by KY SHOOSHAN)

New Cello Packer by Hayden Mfg. Co. Proving Popular

Designed by Emil C. St. Jacques and Son, Robert Eliminates One Worker—Will Pack 80-90 Barrels Per Day.

Much interest has been created in the cranberry world through the introduction of a new cellophane packing machine, complete with automatic sealer, which will be put out under the name of the Hayden Separator Manufacturing Co. of Wareham, Mass. It was devised by Emil C. St. Jacques and his son, Robert.

At a recent three-day demonstration, 65 growers attended. They were accompanied by foremen and other members of their organizations and witnessed the demonstration two or three times. A special feature of the machine is the automatic self-sealer which permits the machine to be operated by two rather than three per-

sons. It also weighs with good accuracy, well within the tolerance allowed.

The machine has a capacity of 20 to 28 bags a minute with a good average of 24. Three machines will pack a carload a day, as each machine is good for 80-90 barrels a day. During the testing and demonstration 575 quarter-barrel boxes were packaged.

The device has met with widespread comment. When Mr. St. Jacques attended the recent meeting of the American Cranberry Growers' Association at Camden, New Jersey, he found that news of the machine had preceded him and was one of the chief topics of conversation.

Besides being useful for cellophane cranberries it will handle other small fruits, small nuts, such as peanuts, dried peas, dried beans and hard candies. In short, it is an all-purpose machine. It sells for \$1,200, which is very substantially less than other cellophane machines with sealer.

(Photo page 12)

New Farm Radio Program for S. E. Massachusetts

This Is Daily From Brockton and Was Initiated by "Joe" T. Brown, Director Plymouth County Extension Service.

WBKA in Brockton Serving Farmers in Bristol, Norfolk, and Plymouth Counties

A cooperative farm radio program for southeastern Massachusetts is one of the features of the new radio station, WBKA, 1450 bicycles, Brockton, Mass. Farm organizations with the cooperation of the Plymouth County Extension Service are sponsoring a daily farm show from 12 noon to 12.30 p. m., Monday through Saturday. The initiative for this program is credited to J. T. Brown, director of the Plymouth County Extension Service. He is assisted by an advisory committee, each member of which is responsible for one day each week.

market news, the latest weather information, recognition of outstanding farmers, agricultural experts and leaders in person, transcribed farm broadcasts, and an-

The program features each day agricultural news, up-to-the-minute

nouncements of farm meetings. There are many contributors to the program, some of which appear regularly one day each month, others who appear with the seasonal interest of the community in which they are interested. Farmers and consumers alike benefit from this program and it has been especially timed so that they may listen during the lunch hour.

Cooperating agencies and organizations to the program are: Soil Conservation Service, Farmers' Home Administration, Agricultural Conservation Program, Farm Credit Administration, Plymouth County Extension Service, General Mills, Purina Mills, Wirthmore Service, Producers' Dairy Cooperative, Hood Milk Company, fruit, vegetable, and cranberry specialists and growers, landscape gardeners and architect, florists and greenhouse operators, forestry experts and tree wardens, Maritime milling, Plymouth County Farm Bureau, Eastern States Farmers' Exchange, Brockton Cooperative Egg Auction Association, East Bridgewater Farmers' Exchange, 4-H club leaders and members, vocational agricultural departments, National cranberry association, New England cranberry company, and Massachusetts experiment station.

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THE ADVANTAGES OF LAZINESS

by R. A. TRUFANT

Those of us who attended the Massachusetts GI cranberry schools a year ago had the opportunity to learn a great deal about many of the details of cranberry growing, and what it took to make a good grower. But in the whole list of speakers I failed to hear one who extolled the virtues of laziness. Yet many of them must have had a streak of it to get where they are today. I glory in my own laziness. We all ought to give it more credit. Many, many of the improvements and refinements in cranberry growing stem from no other cause.

Of course I do not mean the kind of laziness that can go to sleep alongside a job. I mean the kind that does not hesitate to do a job that is accepted, hard way, but while doing it figures how to do it easier next time. Our use of bulldozers, power shovels, railroads, and many smaller helps comes from a disinclination to do things the harder (and usually more expensive) way. And still we have not by any means exhausted the possibilities for the advantageous use of this kind of laziness.

Suppose you are building bog, and have cut the timber on the swamp and burned the trash, and now you want to get the logs and cordwood ashore. A double-drum hoist would be a fairly good answer, but how much lazier it would be to finish the lower dike and its prefabricated flume, and just raise the water and let the logs bring themselves ashore?

How to Get a Contour Map

Having been responsible for the driving of many thousands of stakes, I will go to almost any lengths to avoid driving more. I even think I could get a contour map of a swamp without driving a stake or bringing a level on the job. It could be done by starting with a full flow, and outlining the high water mark in lime like a tennis court, or with bright sand. Then drop the water an even six inches or a foot, and mark that water-line. Repeat until the swamp is drained. Then get a picture taken from an airplane, and there

is your contour map.

Now decide at what level to build the bog. It will be some certain distance below the high-water line. Now, when you stand up normally, just how high is your eye from the ground? Drive some cordwood sticks in at your high-water line, and mark them all at the point which is the height of your eye above your chosen mud-grade. Stretch tight strings across the swamp between these marks, taking the sag out with extra posts. Then, at any point on the bog, the grade is right only when you can sight the strings against each other in any direction without stooping or stretching. You can grade every inch of the swamp in this way without having a level on the job.

Suppose you are going to grade with a bulldozer. Just stretch the strings at the operator's eye-height when driving the dozer. Then he can watch his grade all the way anywhere on the swamp without stirring from his seat. Just get the strings the right height above the desired grade. He can duck his head when passing a string.

This string-sighting method can be modified to fit almost any condition. For example, the Middleboro High school bllfield has been graded to a one-per-cent slope at an odd angle with the field, yet it was graded by sighting-strings run from less than a dozen instrument-set stakes. Not to a level grade, but to the desired slope.

The same work-dodging impulse is behind our use of roller-conveyors for moving boxes of berries, our truck-height loading platforms and even the separators, weed-chemicals and almost every worthwhile improvement in the industry. Let's give it credit!

Crop Report

Production of cranberries in 1948 is estimated as a record of 922,000 barrels, according to a release of U. S. Department of Agricultural Economics, State of New Jersey, January 29th. This is 17

per cent more than the 1947 crop and 37 per cent more than average.

The Massachusetts crop is estimated at 575,000 barrels, 19 per cent above last year and 29 per cent above average. Production in New Jersey, according to the report, turned out to be 67,000 barrels, 18 per cent below last year and 22 per cent below average. (The Jersey berries received heavy loss from sun-scalding prior to ripening). The Wisconsin crop at 225,000 barrels is 40 per cent above the previous record in 1947 and more than twice the 1937-46 average. The heavy production is a result of increased acreage combined with unusually favorable growing conditions. Washington harvested 42,500 barrels and 40,000 barrels, last year, compared to an average of 26,710 barrels. The Oregon crop was 13,000 compared with 14,200 barrels last year and 9,730 average.

Use of Fertilizers

F. B. Chandler

Due to the present situation of the cranberry industry, many growers feel that fertilizers should not be used. However, with cranberries selling at a relatively low price, it is desirable to produce as large a volume from a given acreage as possible in order that the production cost per barrel may be reduced. Some cranberry bogs, of course, do not need fertilizer, but many bogs show an increase in yield when fertilizer is applied. The best response on the State Bog was obtained with 40 lbs. of nitrogen per acre. The experiments so far indicate better results with fertilizers containing about twice as much phosphorus as nitrogen. In other words, the ratio should be a 1-2-1 or a 1-2-2. It may be that in years to come the amount of phosphorus will even be increased. At present, Wisconsin is using a 1-4-1. Many growers feel that the quality of fruit is decreased by the use of fertilizer, and this is unquestionably true when excessive amounts of nitrogen are used. However, if the fertilizer is applied in the proper ratio and the proper amount, the quantity of good fruit will not be reduced. This year, it may be

difficult to obtain some fertilizers because of a shortage of nitrogen and potassium.

The data on soil moisture for 1948 has not been summarized. However, it is very evident that the level of water in the ditches is not a good indication of the level of water in the middle of the section. Water moves very slowly from the ditches into the section. Therefore, in hot, dry periods, the ditches may be filled, yet the centers of the section may be extremely dry. It is very evident that the water in cranberry bogs needs a great deal more study, and the growers can greatly assist the Experiment Station by expressing their experiences.

Long Beach, Wash., Cranberry Club Elects New Officers

Elwell Chabot, President,
Mrs. Rea McArthur, Secretary

Elwell Chabot, new president of the Long Beach Peninsula Cran-

berry Club, presided for the first time at the meeting which was held recently. Mrs. Mary Morton resigned as secretary of the club and Mrs. Bea MacArthur was elected to that office for 1949.

A discussion was held on dues for the coming year and the matter will be voted on at the February meeting. The auditing committee, Dr. J. H. Clarke and D. J. Crowley, approved the treasurer's books.

D. J. Crowley and Leonard Morris both gave reports on the State College Agricultural Advisory Board meeting which they attended in Puyallup last week. County Agent Nolan Servoss was present and also spoke briefly to the growers. Arrangements were made to have Clinton Hollinger, secretary of Pacific County A. C. A. attend the next meeting and sign up all members who desire help in conservation practices.

Mr. and Mrs. Robert Ostgard, Mr. and Mrs. Warner Smith and Mr. and Mrs. Wilson Blair served ice cream and cake at the close of the meeting.

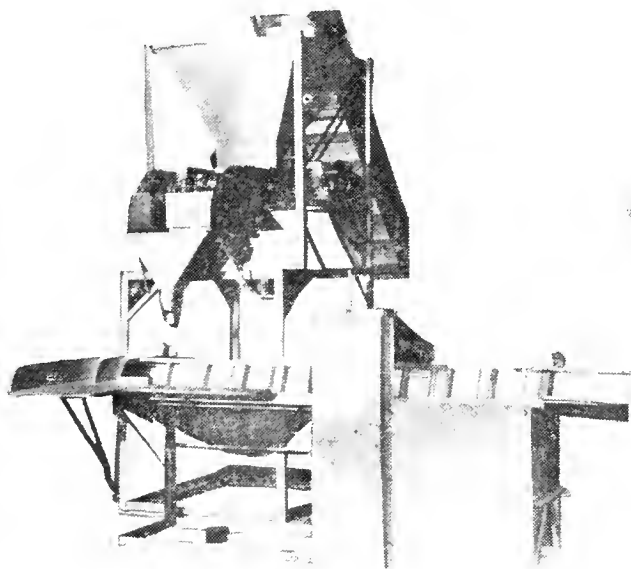
SCOOPS AND SCREENINGS

We thank "Buff" of Boston's WEEI once again for mentioning our humble publication over the air on the morning of February 1st. He referred to our series of articles upon the history of the cranberry industry.

From Franklin E. Smith, Boston attorney and treasurer of the Nantucket Cranberry Company which operates the world's largest bog in one section, we are grateful to receive the following information: quoted from the Fairhaven Star, Fairhaven, Mass., of January 14, 1899: "Cranberries are now said to be a specific for the grip when eaten freely". Somehow, it seems the cranberry has from the very earliest times been given beneficial medicinal qualities.

Turkey growers plan to increase turkey production in 1949 by 25 per cent.

The HAYDEN Cellophane Packer and Sealer for Cranberries



FILLER - Measures by weight
- accurately - output - 20-28
No. 1 Bags per minute.

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AUTOMATIC SEALER - Actuated by Filler Operator - NO
EXTRA GIRL NEEDED.

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tailored to
individual packing house.

HAYDEN SEPARATOR MFG. CO.

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WAREHAM 497-W

R. H. St. JAUQUES

We were glad to see "Del" Hammond, Craig Scott and "Dan" Rezin of the Wisconsin Cranberry Sales Company in the Massachusetts cranberry area. That is, we were glad to catch glimpses of their coattails as they raced about this and that on their brief visit.

A shortage of quality white pine in Plymouth County, Massachusetts, is to be expected within a few years. Charles Cherry, district forester, reported at a recent meeting. Under present methods the cutting is twice as fast as the growth. This is interesting to growers of that foremost cranberry-producing county, as growers own a deal of woodland.

MORE ABOUT THAT HUGE CRANBERRY-APPLE PIE?

The cranberry-apple pie contest at Union Agricultural meeting, Worcester, Massachusetts, was of interest to more than the women sending pies to compete. In honor of the contest the Newcomb Bakery of Quincy baked and sent up a pie that surely was immense. It was on display in the Hotel Sheraton during the day of the main banquet, and that night was cut and servings given to all who wanted to taste it. The next day that pie, which was five feet in the remainder was given to the St. Anne's orphanage in Worcester.

Just consider what went into diameter, the pie itself weighing

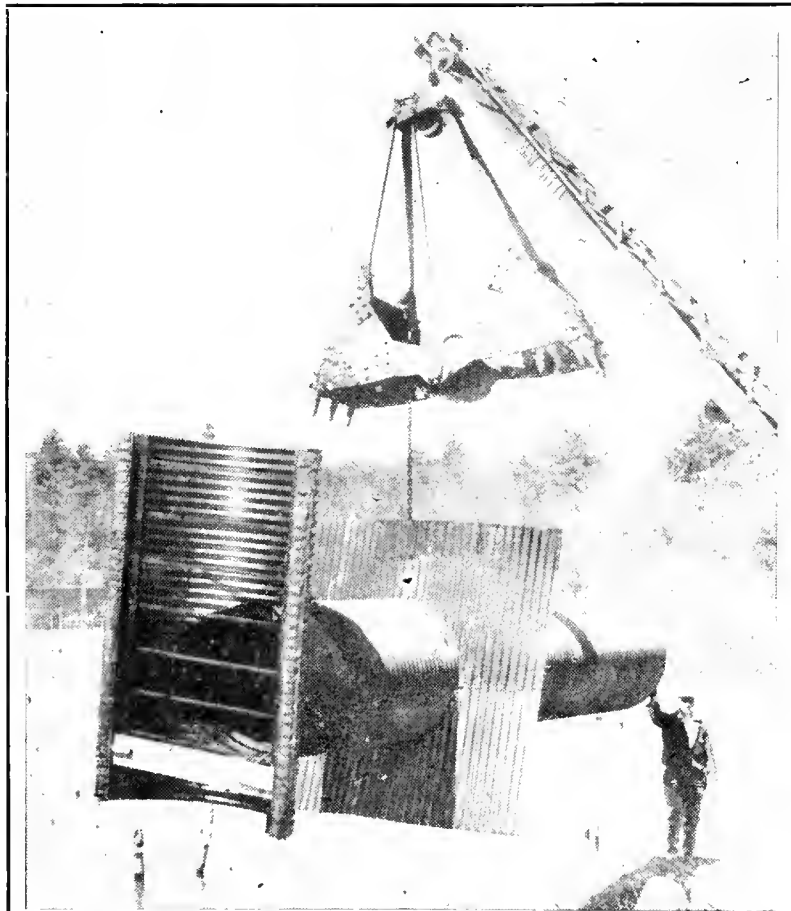
485 pounds and being five and three-quarters inches thick. Three bushels of apples, half a barrel of cranberries, 75 pounds sugar, 60 pounds flour, 24 pounds shortening. It took five hours to bake and nine hours to cool. When asked how the pie came safely over the road, an attendant stated that it was carefully cushioned and packed in a delivery truck all by itself, and in a frame that leveled off as the truck went up and down hill, so that the pie was always on the level. The pie plate was made of heavy steel and was flown to Quincy from Paducah, Kentucky.

Ray Bates Again Heads Coos Cranberry Co-op

Coos Cranberry Co-op, meeting at Bandon, Oregon, January 23, re-elected Ray Bates as president. Other officers chosen were: vice-president, George V. Cox, who succeeds J. K. Baker; E. A. Grant re-elected secretary-treasurer; directors, Reuben Lyons, Coos Bay, and Jess Pallen succeeding Charles St. Sure and the late Raymond Wilson.

Secretary Grant stated the members had received \$4.00 a quarter for "Fancy Pack", \$4.25 for "Extra Fancy". This was not as much as expected, he said, but it was conceded that in relation to prices received in the East it was very good indeed.

He referred to foundation plans which at that time were being laid for better organization and marketing in 1949.



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Mass. Growers of Blues Hold Annual Meeting

The annual meeting of the Southeastern Massachusetts Blueberry Growers' Association was held at the Plymouth Rock House, Plymouth, January 26, with 48 attending. This group now represents about 100 acres of the cultivated blueberries in this state, and the acreage is increasing. Five new members were taken in, making a total of nearly 70.

The 1948 officers were re-elected. These included: President, A. L. Dahlen of East Wareham; vice-president, Walton E. Truran, East Wareham; secretary-treasurer, Mrs. Joseph L. Kelley, East Wareham; directors, Lyman McKenna of Kingston and George R. Briggs of Plymouth.

The principal speaker was W. A. Farvis, Pemberton, N. J., who spoke of blueberry growing in his state. Prof. J. S. Bailey of Massachusetts State College spoke on leaf analysis. J. Richard Beattie, Cranberry Extension Specialist, spoke, as did also Dr. F. B. Chandler.

Jersey Meeting Accents Means of Increasing Crops

John C. Cutts is Chosen President of American Cranberry Growers' Association at Camden.

The 79th Annual Meeting of the American Cranberry Growers' Association was held at the Walt Whitman Hotel, Camden, N. J., on January 29. Seventy-five persons were present at the meeting to hear the talks, most of which accented the needs and possibilities of increasing New Jersey cranberry fields.

President Daniel Crabbe called the meeting to order at 10.30 a. m., and following a brief message of welcome, introduced W. E. Tomlinson, Jr., of the N. J. Cranberry and Blueberry Research Laboratory, who spoke about the cranberry fruitworm and tipworm infestation of 1948 in New Jersey and methods of combating these insects. The next speaker, R. B. Wilcox,

WESTERN PICKERS, INC. Publishes Excerpts from Its Diary

Aug. 23rd, 1947 Arrived in Mass. with 25 pickers. Found Early Blacks growing close to ground, and bog bottoms generally pretty rough. First pickings not very satisfactory. Machine had to be modified to suit Mass. conditions. Would not demonstrate on State bog Field Day till pickers could be adjusted. Much grumbling and criticism, saying that "any picker is good on the bank."

Sept. 15 Pickers now beginning to gather in the berries. But growers still skeptical. General feeling that cranberries are unsuited to mechanical picking—witness the great number of machines that have come and gone. Most growers hopeful and willing to be shown.

Sept. 25 Picker now doing a fair job in competition with hand scooping, on selected bogs. Many growers now believe that Western Picker has great promise.

Oct. 7 Western Picker has now been adapted to a larger variety of bog conditions. Is now competing favorably with hand scoopers for clean picking, but damage to vines is an unknown factor. Season ends with the growers in two camps—those who have used the picker and are very hopeful, and those who have heard early rumors and express great doubts.

Sept. 1, 1948 Arrived in Mass. with more pickers, with growers still in two camps. Find 90% of all bogs picked last year in better shape than adjoining hand scooped parts.

Sept. 20 Cleaner picking than hand scooping now accepted, but doubts raised about bruising of berries.

Sept. 27 Belt raised above teeth and an idler roll installed so that conveyor belt does not push berries down into the teeth spaces. Pruning device dulled, so not nearly so many vines cut. Users enthusiastic and beginning to invite demonstrations on their own bogs.

Oct. 5 Demonstrated that the Western Picker could pick in water at State Bog.

Oct. 11 Growers staking off picked test plots and storing berries to find out if storage qualities have been affected. Enthusiasm mounting.

Oct. 20 Growers now demanding actual picking costs on their own bogs, which range from 21 cents to 75 cents per barrel.

Oct. 27 Growers now report negligible bruising on earlier picked berries and now want machines sold outright, rather than on a royalty basis.

Nov. 15 Growers now convinced that mechanical picking is the answer to lower production costs. To many, it's either lower costs, or get out of the cranberry business.

Dec. 1 Western Pickers Inc. has decided that the machine is now ready for outright sale and is beginning to take orders for next year's delivery. The price to be \$1,200.00 with \$500 down and \$700 payable on delivery, or \$1,100.00 if all paid in advance. Any bank may refer to FIRST NATIONAL BANK, of PORTLAND, ORE., Coos Bay Branch, Coos Bay, Oregon.

Dec. 15 Many growers who have not seen the Western Picker are now deciding that if Western Picker is allowed on so many bogs after two years it must have something, or it would have been relegated to the dump before this.

RECAPITULATION

The Western Picker is a mechanical picker, weighing about 200 lbs., gas-driven on pneumatic tires, with all elements in contact with the bog and berries, made of rubber except the prong teeth, which are of metal. It picks an acre in from 6 to 12 hours, depending on a pre-set speed. Its driving mechanism is mostly all stock parts procurable in all sections of the U. S. A. It is easily moved across ditches, over dikes, and from bog to bog. One operator will do all the picking on 15 acres in a season. Its life expectancy is over 10 years, and if future machines vary greatly from the existing models, growers may expect a fair trade-in value on their old machines. Parts and service will be available in all cranberry-producing areas having ten or more pickers in operation, with attendant advice, instruction and service available.

Address all orders to
WESTERN PICKERS, INC., COOS BAY, OREGON

U. S. D. A. Pathologist, gave the audience some interesting and valuable information in a talk entitled "Some Factors Affecting Fruit Rot on New Jersey Bogs".

D. O. Boster, of the N. J. Crop Reporting Service, reported on the 1948 cranberry production, explaining that the decline in the New Jersey yield from the August estimate of 84,000 barrels down to the 67,000 barrel actual yield was due largely to the extremely high heat and humidity in late August.

Dr. Firman E. Bear, Chairman of the Soils Department at Rutgers University, spoke on "What We Need to Know About Our Cranberry Soils", in which he stressed the importance of finding out the nutrient requirements of the cranberry if yields are to be improved.

After dinner there was a short business meeting, at which time the Association passed a resolution favoring expansion of facilities of the Department of Horticulture at Rutgers University.

Officers

The following officers were elected for 1949:

President, John E. Cutts, Tabernacle, N. J.; 1st Vice President,

Vinton N. Thompson, Pemberton, N. J.; 2nd Vice President, William S. Haines, Chatsworth, N. J.; Secretary-Treasurer, Charles A. Doehlert, Pemberton, N. J.

Executive Committee: D. E. Ballard, Hammonton; Joseph H. Palmer, Tuckerton.

Cranberry Industry Committee: Stanley Switlik, Trenton; Francis W. Sharpless, Medford; William S. Haines, Chatsworth.

Following the business meeting C. A. Doehlert of the N. J. Cranberry and Blueberry Research Laboratory, spoke on "Some Practical

Frost Protection and Irrigation . . .

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Write or Phone for FREE Descriptive Literature with Prices on the following:

GORMAN RUPP PUMPING UNITS—all sizes.

CHRYSLER O. C. D. PUMPING UNITS—500 g. p. m.

BUDA DIESEL PUMPING UNITS (War Surplus) 1000 to 1500 g. p. m.

FLEX-O-SEAL LIGHT WEIGHT IRRIGATION PIPE.

"TEXTOLITE" high-pressure, non-corroding tubing for surface use, permanent installations or buried lines.

SPRINKLER HEADS in all sizes, 4 q. P M

(All items in stock at our Cape Cod Location)

Layouts and Estimates at no obligation. All equipment delivered to the bog and put into operation with our assistance. (Mass. bogs). Our "know how" is based on hundreds of installations on farms and bogs, as well as operation of this type equipment to water 200 acres of our own.

VEG-ACRE FARMS, IRRIGATION DIV.

Forestdale, Cape Cod, Mass., off Route 130, at Snake Pond Road by car
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Peter A. LeSage

"Keep Smiling"

PLYMOUTH
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Distributor of Cape Cod Cranberries

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Details of Cranberry Soils Research."

The last speaker on the program, Herbert W. Voorhees, President of the New Jersey Farm Bureau, spoke about "Europe as I

Saw It and the Lesson It Can Teach Us." Though not concerned with cranberries or cranberry growing, this talk and the Kodachrome slides left the audience with plenty to think about.

More Than 100 Attend Blue Co-op Meeting in Jersey

Co-op Sold 314,000 12-Pint Crates of Jerseys, 52,000 Crates of North Carolinas, 130,000 Crates of Michigans.

The annual meeting of the Blueberry Cooperative Association was held at Pemberton, N. J., on January 14, 1949, with over 100 members and guests attending the meeting and dinner. Otto Wells was elected to the Board of Directors from North Carolina, and H. B. Scammell, T. H. Budd, Sr., Milton V. Reeves, and William S. Haines of New Jersey were elected directors for three year terms. Harold Haines was elected to fill the unexpired term of the late Joseph W. Darlington, and W. Albert Jarvis was elected to fill the unexpired term of Samuel Yarnold.

The report of Stanley Coville,

THOMAS BROTHERS

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and Headgates**

CUPROLIGNUM SHINGLE STAIN

For new clapboards, old stained or new shingles. Can be painted over if desired.

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with the addition of Cuprolignum gives added resistance to barnacles or teredoes by penetrating the wood cells, depositing toxics which remain after paint film has completely disintegrated.

New England Representative

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Sales Manager, revealed that the Co-operative sold 314,000 12-pint crates of New Jersey berries, 52,000 crates of North Carolina berries. Also, 130,000 crates of Michigan berries of the Michigan Blueberry Growers' Association, which is associated with the Blueberry Cooperative Association, were sold under the Tru-Blu label. Total membership in the Association is 229 members: 23 in North Carolina and 206 in New Jersey.

Marion Allen and Col. King A. Thompson of the Charles W. Hoyt Co., Inc., reported on the publicity and advertising done by them for

the Blueberry Cooperative Association in 1948 and plans for the coming season.

C. A. Doehlert and P. E. Marucci of the N. J. Cranberry and Blueberry Laboratory spoke briefly about the breeding habits of the sharp-nosed leafhopper and the possibility of reducing its numbers in the field by pruning and cultivating. Evidence indicates that this leafhopper may be involved in the spreading of stunt disease.

W. E. Tomlinson, Jr., also of the Cranberry and Blueberry Laboratory, spoke of the 1948 Putnam

Scale infestation, and reported that plum curculio is taking a considerable toll in some New Jersey fields now and that it may well become one of the blueberry growers' most difficult insect problems.

Plymouth County Club Meetings

The first winter meetings of Plymouth County Cranberry clubs were held at the Rochester Grange hall, January 25, and at Plympton, January 27.

Dr. H. J. Franklin spoke on disease forecasting to cut the cost of production of cranberry growing.

At the meeting at Rochester, E. C. St. Jacques presided, and at Plympton, Orrin G. Colley.

A summary of experiments at the State Bog in 1948 were given. Dr. F. B. Chandler (as below) spoke on "Fertilizer and Soil Moisture"; Dr. Chester Cross spoke on Weed Control".

There was a panel discussion with Richard Beattie, Extension Cranberry Specialist, leader. Those on the panel were Raymond Morse, Francis Butler, Robert Hammond Francis Merritt, Robert Pierce Kenneth Beaton, George Short and Joseph Kelley.

The meetings were called by J. T. Brown, Director Plymouth County Extension, and Lewis F. Norwood, Associate County Agent.

RAIN BIRD

Protects Cranguyma!



PHOTO COURTESY OF PORTLAND OREGON JOURNAL

SPREADING out in an impressive acreage in the great Northwest, Cranguyma Farms at Long Beach, Washington, represents an important part of our nation's cranberry production. Standing as dependable guardians against frost and drought 1000 Rainbird sprinklers provide the correct and necessary rainfall whenever it is needed. This outstanding installation is indicative of the dependability of Rainbird Sprinklers. The distributor or dealer listed below will be pleased to furnish additional information upon request.

PACIFIC COAST DISTRIBUTORS

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RAIN BIRD SPRINKLER MFG. CORP.
GLENDORA CALIFORNIA

FOR SALE

Approximately 500 ft. 8 inch used Steel Pipe in excellent condition. G. E. HOWES, Tel. 161, Dennis, Mass.

Cranberry Boxes

B. H. COLE & CO.
North Carver, Mass.

1707

Tractor Tragedies

Tractors top the tragedy list in the modern farm factory. Within their clutching chain treads, their ordered tangle of gears and levers and moving parts, is the constant threat of injury and death.

Gas Buggy Farmers

American farmers owned more passenger cars in 1946 than all the people of Europe and Africa together.

Fire Protection Starts at Home

A good-sized water hole, a telephone, and plenty of hand extinguishers conveniently located in the various buildings are the first big steps towards farm fire protection.

Fresh from the Fields

(Continued from Page 5)

N. J. Blueberry Farmers' Ass'n
The Executive Committee of the New Jersey Farmers' Association

CRANBERRY MARSH FOR SALE

Plenty of water—240 acres of land. Caterpillar dozer, etc. Two homes, one modern. Reason for selling, ill health. \$20,000.00. Roussopoulos Bros., Millston, Wis.

ation held its first regular meeting at the N. J. Cranberry and Blueberry Research Laboratory on January 17th to outline plans. A committee of five growers was appointed to cooperate with the U. S. Department of Agriculture and the N. J. Agricultural Experiment Station in the breeding and naming of new varieties. The committee is designated as the Blueberry Varieties Committee.

Blueberry Pruning

Blueberry pruning has been almost a pleasure. If anywhere near as many blueberry fruit buds come through with a crop as is expected, it looks like a "bumper" for 1949. The light 1948 crop and favorable weather during the growing season have combined to produce a very heavy set of fruit buds.

WASHINGTON

Extremely Cold

Temperatures have been the lowest which D. J. Crowley, director of the Cranberry-Blueberry Laboratory, has experienced in the many years he has been in Washington. Recordings as low as 8 above have been made on some of the bogs. The cold began at Christmas, was still continuing at the end of January, and the ground was frozen. There has been very little snow,

however. Normally at this time of the year growers are thinking in terms of primroses and daffodils, as they often bloom in February, but the cold weather will have to take to its heels soon, as the cranberry area will have another belated spring.

Late Spring Affects Size

A late Spring effects the size of the berries, as it did the 1948 crop. Washington would have had a larger crop than it did have if berries had been of normal size.

Crowley Attends Conferences

Mr. Crowley of Long Beach attended the Western Spray Conference at Portland, Oregon, in the latter part of January. At this meeting were research workers from Washington, Oregon, Idaho, California, Montana, Colorado, Utah, British Columbia. There were also representatives of the USDA and some from the chemistry divisions to emphasize the lethal qualities of some of the new insecticides. Mr. Crowley has found these conferences very informative, as they give the opportunity of meeting research workers from fields and hearing their problems.

Cranberry Station

(Continued from Page 4)

growers who served on a panel discuss the topic, "Cutting Production Costs." It isn't an easy task for growers to appear before a group and relate their experiences and observations, but we are sure that the help these men gave us is greatly appreciated. The discussion presented by the panel will be written up by the editor.

Before leaving the topic of cutting production costs, growers will be interested in another meeting held recently at the State Bog. It apparently is the feeling of many growers that greater mechanization is needed within the industry as a means of cutting some of these excessive costs. In fact, the committee that met in Amherst during the Production and Outlook Conference recommended that a study of this type be undertaken immediately. However, it was felt that we should have some cost studies of certain of our bog operations as a basis to work from. Prof. Bradford Crossman,

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No charge for Design and Blueprints to suit your particular bog.

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of the Farm Management Department at the University, met with a small group of growers to consider the details involved in setting up such studies. This work will be undertaken very shortly, and we hope to have some very valuable information for growers when completed.

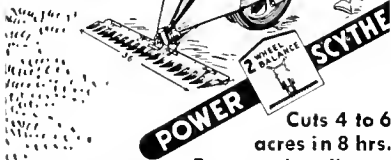
Cranberry History

(Continued from Page 8)

In its June issue, 1831, the NATURALIST, published at 9 Cornhill,

CUT TALL GRASS... WEEDS... BRUSH
Faster and Easier

Mows fast and clean around buildings, fields, under trees, fences, along roadsides, and in light corners.



Cuts 4 to 6 acres in 8 hrs. Easy to handle on rough ground or steep slopes. Cuts 1 1/2" from ground. Rugged. Economical. Dependable.

BETTER IRRIGATION
With LESS WATER
A Model Every Farmer
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Boston, had a brief article upon cranberries. In the text the article said:

"Mr. Hall of Barnstable, Mass. has been engaged for twenty years or more in the cultivation of this fruit (cranberries), and his grounds have averaged for the last ten years seventy bushels an acre and some seasons he has had one hundred bushels."

This account sets the date of his beginning at least as early as 1812. The fact that Henry Hall was set down as of Barnstable and not Dennis may, it would seem, be set down as an error in location at the Boston office of the NATURALIST. The writer of that date may easily have been referring to an article in the Barnstable Journal and loosely have written Barnstable, rather than Dennis on the Cape. This article is reprinted in full in the May 16 NEW ENGLAND FARMER, which began publication at Boston in 1822, and for many years thereafter showed a keen interest in cranberry growing. By doing this the FARMER (1) did much to stimulate an interest in cranberry growing.

(1)—A complete file of the NEW ENGLAND FARMER is at the library of the Massachusetts Horticultural Society, Boston.

There is no refutation of this article and the name of no one else is brought forth from any reader of the FARMER as being worthy of recognition as cultivating cranberries.

Again in an issue dated July 4 of the same year THE FARMER quotes from the Barnstable Journal, issue of May 24, 1832, as follows:

A particular account of the method pursued by Mr. Henry Hall of Dennis was some time since given in this paper. He has been engaged in the culti-

vation of this fruit upwards of twenty years, and his grounds have averaged about seventy bushels per acre usually. Mr. Hall practices taking the plants from their natural situation in autumn, with balls of earth about their roots, and setting them three or four feet distant from each other. In the course of a few years they spread out and cover the whole surface of the ground, requiring no other care thereafter, except keeping the grounds so well drained as to prevent water from standing over the vines.

Here is definite acknowledgment in the only newspaper published in his home county of achievements, definitely setting forth his cultural methods and giving a rough crop record and roughly setting the date of his beginning. Furthermore this acknowledgment is republished in a Boston agricultural publication standing, and so given wide circulation. And again no claim is forward for any other cranberry cultivator. There is no discoverable as to Henry Hall priority or to the giving of credit to him in the early days of growing.

Half a century later in 1868 when cranberry growing was a thriving industry, there is further and more definite corroboration of the date of his beginning and more detailed description of methods and of his crops. The source of this information is of very best, coming from one of the most successful Cape growers. This man was Capt. Cyrus Cahoon of Pleasant Lake, developer of the Early Black variety, and during his long life there was no sound authority on all phases of cranberry growing or more reputable authority than Cyrus Cahoon. T

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information is not given directly by him, however, but comes in an address before the annual convention of the American Cranberry Growers Association at New Jersey. The speaker was Oliver M. Holmes, of Mashpee on the Cape. Mr. Holmes was a Boston man, who came to the Indian village of Mashpee as a sportsman, but quickly established large interests there as a cranberry grower. At the time he gave this address Mr. Holmes was a very active member of the Cape Cod Cranberry Growers' Association and a leader in many cranberry activities.

This address is recorded in the Eleventh (11) Annual American Cranberry Growers' Association, Tuesday, August 28, 1883, and in his talk Mr. Holmes said he obtained his information from Captain Cahoon. In giving this account Mr. Holmes apparently foregoes any intention of crediting any other grower than Henry Hall with being the pioneer, either in his own or any other section of the Cape, or for that matter anywhere else in Massachusetts. Also it may be noted as far as the Proceedings go

there was no dispute of the facts by any New Jersey grower. His address follows:

A More Detailed Account

In 1883, O. M. Holmes told the American Cranberry Growers' Association at New Jersey that this was how cranberry cultivation had started.

"In the year 1810 Mr. Henry Hall of North Dennis was, with other lands, the owner of about two acres of low, swampy ground, which was covered with water in Winter, but was mostly dry in Summer, on which there grew various kinds of weeds and wild grasses, together with some few bushes.

"On the northeasterly part of the lot, nearest the ocean, some few cranberry vines grew in a wild state, and as they were very near a beach knoll, the northeasterly gales of Winter would blow the loose beach sand from this knoll on the vines, and partially cover them up. Mr. Hall noticed for a few years that whenever the vines were partially covered with this sand which had blown on them that the vines grew luxuriantly, and at the foregoing date Mr. Hall fenced in a few rods to prevent his cattle from tramping over them, and found that the vines ran out and

extended over the sand rapidly, and were very productive. In a few years after this it occurred to his mind that possibly he might extend his cranberry patch; notwithstanding the ridicule of his neighbors, he transplanted a few sods of vines in the shallow water and mud. As the water dried away the vines grew rapidly and spread all about, to his great astonishment. The next Spring he cut and transplanted more with the same success, and so continued the following Springs until he was satisfied in his own mind that it would be best for him to dig through his other lands and drain this low, swampy ground. This he no longer hesitated to do, and

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after draining and transplanting as heretofore, he was very successful, and his vines proved to be of the right sort.

"He enlarged his 'bog' sufficiently so that in 1820 he raised thirty barrels and shipped them to New York, where he found a ready market; and yet, Mr. Hall only managed to do what has been stated above until his death, which occurred in 1850. This can even hardly be called cultivation, and yet this was the way in which the cultivation of cranberries was brought about on Cape Cod.

"After the death of Mr. Henry Hall, his son Hiram took his father's place and was a successful grower."

Early Deeds and Tax Records

Directly substantiating the assertions that Hiram Hall carried on the cranberry interests begun by his father is a deed recorded at the Barnstable Registry of Deeds. This deed, dated March 1, 1834, is from Henry Hall and one Elisha Doane of Yarmouth and it gives Hiram title to:

A certain parcel of bush and cleared land and swamp and cranberry ground bounded on the north by the sea and containing by estimate, 20 acres, together with dwelling house, barn, all outbuildings, salt works and salt house."

This would corroborate the story that Henry Hall and his son engaged in cranberry growing together, after Henry had first begun, and that as he felt himself growing older he transferred his property with his cranberry bog to his second son.

The year he passed the deed, 1834, Henry is taxed for one-third of 22 acres of cleared land, one-third of buildings, one-third of 800 feet of salt works, and one-third of "cranberry yard." This is the first assessment for cranberry property which can be found in any town in Barnstable County. His total tax is \$1.60. Hiram's tax that year is for two-thirds of the cleared land, two-thirds of the buildings, two-thirds of the salt works and two-thirds of "cranberry

yard", eight acres of cleared land, six and one-quarter acres of woodland, 500 feet of salt works, and a cow, owning these later items in whole.

There is a coincidence there in the fact that in the year he deeded cranberry ground he is also taxed for cranberry "yard". Possibly this transfer of land specifically calling attention to "cranberry

ground" caused the assessors to place a value upon it.

There is still further significance in the year 1834 and cranberries in Dennis. That is the year when cranberries first appear in the town records. This year the town votes that Gamiel Howes be authorized an agent to rent out the "cranberry lands" near Kiah's pond, so called. This is the same Kiah's Pond, or

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Black Earth" to which salt rights had been granted from the common lands there.

Conjecture could be made upon this coincidence that Dennis townspeople had become aware of the fact that cranberry land was valuable enough to "rent out" and so aware of this value may have been led to assess Henry and his son Hiram, or because they were aware of the value of his lands it was so decided the natural cranberry lands at Kiah's pond could be made to provide assistance to the town treasury.

Of these events of a century ago records reveal no more than these facts, whatever their relation one to another.

From this year on until 1850, when Henry died May 7th, the taxes in regard to the cranberry bog remain the same. Henry is taxed one-third, Hiram two-thirds. Henry at his death left no will. The following year Hiram is assessed for the entire cranberry yard. During this period from 1834 to 1850 there is unaccountably but a single other tax for cranberry property. This begins in 1837 when Alexander Howes is assessed.

That the "cranberry yard" for which Henry and Hiram were taxed was the bog later known as Hiram's seems far more probable than that it was the spot by the name of "Miry" or "Hiram's" pond. Tradition has it firmly, however, that it was on the west and north sides of this pond in planting never exceeding a quarter acre that Henry made his first experiments. Possibly he extended his experiments to the other location and in his cranberry growing here Hiram assisted later. Around his bog are remnants of a rail fence. At the pond there is no sign of ditching or other work, but a few cranberry vines grow still. Of Henry the man, little more has come down. At his death the Barnstable Patriot merely recorded his demise, adding "Revolutionary War Veteran."

(Note: In next month's installment there will be further proof that Henry was indeed the pioneer, but with another version of how the sand got among the wild vines. Also the account of other earliest growers. It is the writer's hope that if any misstatements are noted in this history they will be called to his attention for correction.)

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THOMAS HALL, who set vines at Dennis, Cape Cod, in 1813. (Note: This is not Henry Hall Story of cranberry cultivation, page 12.)

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Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE
Extension Cranberry Specialist



The 1949 Insect, Disease, and Weed Control Charts have been recently mailed to the growers through the county agricultural agents' offices. Extra copies are available upon request. Considerable time and thought is involved in revising these charts annually with special efforts toward improving their usefulness. In spite of the combined efforts of growers and the Experiment Station personnel who work on these charts, they have slowly increased in size over a period of years. Someone suggested that if this condition continues we will have to use them as a scroll in the near future. In any event, it seems in order to discuss some of the major changes found in the new charts.

New Insect-Disease Chart Ready

Before discussing the new Insect and Disease Chart, the writer would like to remind the growers that Dr. H. J. Franklin's new Insect Bulletin No. 445 entitled, "Cranberry Insects in Massachusetts" is finally ready for distribution. This long-awaited publication containing the colored plates of many insects will fit a real need in the cranberry industry. It is beautifully illustrated, clearly presented, and a real tribute to its author—Dr. Franklin. If you do not have your copy, contact your county agricultural agent at once since the growing season is practically here. Careful reading of this bulletin will greatly increase the effectiveness of the Insect Chart.

It should be understood that these charts serve merely as a guide. The dates listed are set for as near normal years as possible. When two or more treatments are listed, they are arranged in order of effectiveness. **Timeliness** and **thoroughness** of the application,

plus a knowledge of the insect and disease to be controlled, are the keys to the success of these charts. With this in mind, let us turn to the **Root Grub** and **White Grub** listed first in the Insect Chart. You will note that the flooding treatment is given first place this year. Under "Remarks", we have pointed out the necessity of keeping the ditches empty after letting off the water early in April. The re-flood period should be made from about May 12 and held to until July 15-20, which adds a few days to the flooding period and is expected to increase the effectiveness of this treatment.

False Army and Blossom Worm is next, with the flooding treatment in first place. It should be noted that wherever practical the flooding treatments throughout the chart have been moved into first place in order to reduce operational costs. The section on **Weevils** (Snout Beetle) saw major changes this year. An extra treatment for mid-July has been added, recommending the use of a 10% DDT Dust. In order to determine the true abundance of this insect, it is recommended that the insect net be used on a warm day when the temperature is over 70° F. After considerable discussion, it was finally decided that over 10 weevils in 50 sweeps of the insect net calls for treatment as pointed out in the "Note" at the bottom of the Insect Chart. Growers will also see that the weevil which caused so much damage this past year is printed in the chart bold-faced type along with root grub, gypsy moth, and major insects. The **Rose Bloom** section finds a special note under "Remarks" stating that it has been observed that the root grub flow seems to completely eradicate this disease.

You will not find the Red-stripe Fireworm in this chart. This section was eliminated since this pest has been of little consequence in late years. However, a section on **Fruit Rots** was inserted in its place. It should have been included in past charts. Growers are urged to read this section carefully. We should also keep in mind Dr. Franklin's forecast on **Keeping Quality** which will be made about June 1. Those present at recent club meetings will remember that Dr. Franklin states there are many years when it is questionable whether wholesale spraying or dusting for fruit-rot pays dividends, so it would be well to follow his forecast carefully. **Spittle Insect** required special attention this year. A third treatment added recommending the use of a DDT Spray as outlined on the chart. The **Spotted and Black Cutworms** and **Army Worm** finds new treatment listed, using a 5% DDT Dust. The use of a bait was thought impractical for this insect and was eliminated in this year's chart. The final section includes special treatment for the **Fair Ring** disease, which is a new addition to the chart. Growers are urged to read carefully the Summary of Pest Control Recommendations. The so-called **blanket controls** are included in this summary.

Weed Control Chart

The Weed Chart, one of a few of its type in the country come in for its share of discussion. The introductory section on **General Comments on Weed Control** was very carefully prepared and contains vital information which adds to the effectiveness of this particular chart. However, we still need to spend considerably more time in the identification of our weeds. A new section under "General Comments" was added by Dr. C. E. Cross. It is listed under No. 5—**Bogs re-flooded for grubs**, pointing out that there is danger in using chemicals the same year of the root grub flow.

A. Iron Sulphate. The comments preceding the recommendations for individual weeds are especially called to your attention. You will see under "Hair Cap Moss" that iron sulphate is recom-

(Continued on Page 23)

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

March Begins Rough

March snarled in with the traditional roar of a lion, riding what was described as the worst blizzard of the winter. This began on the first and extended into the second, March 3rd the weather cleared with a minimum of 20 degrees in the morning as recorded at the Massachusetts State Bog. In the blizzard 6.75 inches of snowfall was recorded at the State Bog, while other communities in Southern New England reported a foot.

The snow covered the whole cranberry area driven by winds from 40 to 50 miles an hour.

February Warm

This unexpected crack from Old Man Winter followed a warm February, preceded by unusually warm January and December. So warm was the weather that crocus and other flowers were in bloom at the month's end, while ordinarily they do not bloom on the Cape until April. Rainfall for February was 5.93 inches and snowfall 4.06. The coldest day was 4 above on the 12th and the warmest 58 on the 16th.

Middleboro, with the many bogs in that area, had 14.6 inches of snow during February. The temperatures as recorded at the Middleboro pumping station were much higher than the corresponding month last year. Maximum was 61 on the 15th, minimum, 2 above on the 12th; the mean for the month 32.34.

Sunshine for the month of February (as reported at Boston) was 169 hours, against a normal of 166. Temperatures ran about five degrees a day above the normal. While the sunshine factor may not

be of any great significance in next year's crop, in the opinion of Dr. Chester E. Cross, he said it "certainly didn't hurt, any," and the fact that bogs had open water most of the time was decidedly advantageous from the oxygen deficiency standpoint.

WISCONSIN

Water Short

Spring was coming along fairly well in March and the melting snows were adding some to the water supplies. Not enough was being added to the reservoirs, however, and spring rains were very much desired to bring the reservoirs up to a normal. Growers feel almost certain if this does not occur, in the natural course of events, there will be spring frost damage. The last few dry years have taken a tremendous toll of sub-surface supplies.

New Acreage

New acreage that will be planted this spring will be much more limited than in the past few years. An estimate has been given that it is doubted if as much as 100 acres are planted. It even looks as if less would be set out in 1950 as most growers are making no plans whatever to expand, and practically no outside interest is coming into Wisconsin at the present time. There is much interest in how new bogs will produce in 1949. They will not have much bearing on the total crop, but some 3 year old bogs have produced 100 bbls. to the acre.

There is much interest in pre-packaging as in other areas, and Vernon Goldsworthy has estimated that at least 80 percent of the '49 Wisconsin will be "cello".

Less Ice Sanding

Winter sanding was below average. Bad weather was partially to blame, plus the fact sanding operations have been heavy the past few years.

Goldsworthy has purchased from Roy and Dean Pease the marsh they had at Three Lakes, a new development. There were 15 acres scalped, but not planted, and "Goldy" expects to get ready for planting this season.

Personal

Miss Jean Nash, as has been her custom for a number of years spent her vacation at Sun Valley, Idaho.

The D. C. Hammond, Jr., family, which has had considerable illness since it moved to Wisconsin, now has the chicken pox. As Mr. Hammond himself has never had this, he was in fear he might contract it.

NEW JERSEY

Temperatures

Temperatures at Pemberton were well above normal during February, making this a winter of record or near record mildness. Frogs were heard peeping as early as the 14th of the month. The highest temperatures occurred on the 15th, when 75° was recorded at the laboratory, and the coldest was on the 12th, when 8° was recorded in the shelter. The departure from the monthly mean of 33.6° was an excess of 6°.

The season is at least a month ahead of normal in South Jersey. "Peepers" were heard as early as February 14, and by the end of the month forsythia was blooming in sheltered locations. The snow and cold on the last day should

(Continued on Page 16)

Marketing Arrangement Between National, Exchange and Possibly Some Independents Seems Merging

Meeting at New York March 17th, following a Long Series of Previous Sessions. Moves Success Nearer—ACE to Sell All Fresh Fruit of Both Co-ops, NCA to Handle All Processed—Independents May Come in Under "Cranberry Growers Council", If They Wish.

On March 17 a meeting of representatives of the American Cranberry Exchange, National Cranberry Association, with others, at the Hotel Commodore, New York, nearly brought to conclusion a marketing program which it is hoped will benefit the entire industry. This group formed what will be known as the "Organization Committee" to develop the "Cranberry Growers' Council", which will co-ordinate marketing operations of both co-ops and independent growers who wish to become members of the Council.

All details have not as yet been ironed out, despite this and preceding meetings, but the feeling that an eventual plan benefitting the entire industry, the wholesaler, retailer and consumer will be worked out through more orderly marketing, prevails.

Those attending the meeting represented each of the two major cranberry co-ops. From Massachusetts were J. C. Makepeace, Ellis D. Atwood and Carl Urann, NCA; George H. Cowan, president New England Cranberry Sales Co., Homer Gibbs and A. D. Benson, general manager; from New Jersey, Theodore H. Budd, Isaac Harrison, NCA, J. Rogers Brick and "Burt" Haines, ACE; Wisconsin, Charles L. Lewis, Guy Potter, NCA, Harold Delong and Vernon Goldsworthy, Wisconsin Cranberry Sales Co. There were also John M. Quarles, attorney for NCA, Carl Loos, attorney for ACE, Chester A. Chaney and E. Clyde McGrew of ACE.

The objective of the new plan is stressed as co-operative marketing under a single comprehensive program of the largest possible percentage of cranberries grown in the United States. A primary duty of the Growers Council will

be to conduct orderly and effective marketing of all cranberries produced by its members. The plan, as is well known, in brief is this: that all fresh berries of ACE and NCA, and of such "independents" as wish to join the Cranberry Growers Council shall be marketed through ACE and under the "Eatmor" brand and that all processed fruit of the members of both co-ops and such independents as join will be processed and sold through NCA under the "Ocean Spray" brand. Sub-brands may be used so that a grower who has an established name will not lose his identity.

The two marketing agencies are to continue to operate in their respective fields without any substantial change in present financing and general policies. All members of ACE will be "A" members of ACE and become "B" members of NCA by acquiring at least one share of capital stock, par value, \$25. These "B" members will be enabled to vote for three NCA directors. All members of NCA will become "A" members of NCA, and "B" members of ACE upon the payment of membership fee of \$1.00 and be entitled to vote for three ACE directors.

Growers who on Dec. 1, 1948, were not members of either NCA or ACE may be entitled to become members of Growers Council and will become "C" members in both of the co-ops.

The council will be incorporated and coordinate the activities of its members and exercise such powers as are contained in its charter and by-laws. It will operate on the one-man, one-vote principal. The class "A" members of the council will be two each from Massachusetts and Wisconsin, one from

New Jersey, one from the West Coast. This will give both ACE and NCA six members each. Class "C" members shall be entitled to elect members of the Growers Council Board in a number to be determined by the aggregate of the crops for the year preceding the election to membership.

This final step carrying along the proposal for better marketing conditions came about through votes taken by directors of NCA at a meeting in New York January 28 at which directors of NCA voted confirmation, and of future membership meetings of the unit which make up ACE. That New York meeting, also attended by directors of ACE, followed several other meetings by these directors and also some independents, called by the "steering" committee.

All ACE Units Adopt Proposal

Wisconsin Cranberry Sales Company was the first to vote on the proposed new arrangement, taking unanimous favor on February 1. New England Cranberry Sales Company, at a special all-day meeting at Carver Town Hall February 25th unanimously voted to approve the plan as recommended and adopted by the Boards of Directors at the New York meeting. About 170 attended this meeting, one of the largest attendances of NESCO on record. The membership of this biggest unit of ACE had many questions to ask Mr. Benson, and he explained the plan in minute detail using a graph about 8 by 4 feet showing the proposed inter-relationship of the two national organizations. Previous to the meeting all members had been given printed copies which gave the outline of the plan.

On that same evening members of the Growers' Cranberry Company, in a meeting at Pemberton New Jersey, also voted unanimously to endorse the plan. The fourth and newest unit of ACE, the Coast Cranberry Cooperative meeting at Bandon, Oregon, stretched the approval across the nation for ACE members, making the proposal completely unanimous.

That this long series of meetings, considering the carefully-drawn up plans and proposals has

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Scald

By RUSSELL A. TRUFANT

The average cranberry grower, in New England at least, uses the term "scald" in a very loose manner. Any soft berries observed on the bog or in the boxes when picked are referred to as scalded. In my early days as a grower, I was taught that hot sun on wet vines generated a steam that scalded the berries; that was what made soft berries. Today we know that there is no such steam that cooks the berries on the vines. Yet the old-timers had good reasons to believe in this steam. What were they? And what was the error?

The most striking instance I recall was that on a certain bog the grower had sanded and fertilized and secured an excellent set of berries; the new growth continued and shaded the berries; the weather turned hot and moist; result, every berry scalded. That sounds like a steam action, to be sure. Yet we know today that the cause must have been an early rot which found the conditions of shade, warmth and moisture excellent for rapid development and spread.

Perhaps it would be well to review the presently-accepted causes of soft berries on the bog, and the suggested precautions against them. First of all, let us rule out berries with worm-holes in them, and those mechanically injured by hail, footsteps, etc., as well as those chemically injured by weed treatments, sprays, etc. Almost any grower will recognize these the second time. That leaves us with damage caused by water, drouth, heat, cold, and fungi. The old familiar buzz-saw: which tooth did the dirty work?

Water will drown berries by suffocating them, just as it would you or me. The action is fairly rapid in the early stages of the berries, but very slow in matured berries. A few hours submergence in early August is worse than a week in November. The indicated precaution is to avoid summer storm flooding and prolonged early Fall frost flows. Keep the water from coming in from upstream and

downstream; pump off the water you cannot keep out or drain out. Drowning is the only recognized water injury, except as water aids and spreads fungus infection, referred to later.

Drouth

Drouth in extreme instances may wither both fruit and vine, while in milder cases the result may not be noticeable on the vines, but the fruit is stunted or retarded. Complications such as grub injury to the root system may increase the severity of drouth. Fertilizer may increase the plant's reliance on surface roots so that damage results when only the top layer of the sand is dry. The precaution is to supply water when needed. On most bogs this means sprinkling; raising the ditchwater is ineffective on heavy mud bottom, and on out-of-level bogs means drowning the lower berries to save the higher ones.

Heat, aside from its help to fungus growth, damages berries much as it damages us. Partial sunburning results in the brown scab spots so noticeable in the 1948 area. Complete overheating leaves a soft berry like a frosted berry. The precaution is in sprinkling. The idea is that the evaporation of water from wet bottom or vines reduces the temperature of the berries, for as long as rapid evaporation continues. Flash-flooding at night may be effective, but carries with it the danger of drowning the berries (see above) and may increase fungus trouble. Sprinkling may be done without regard to sun, moon, wind, clock, or anything else. This has become standard practice on the Pacific Coast, and has been done here by the writer this past season. There was no sign of injury by "steam", lens action, or anything else to worry about. Even where the sprinkled area "feathered out" into unsprinkled bog, there was no water damage. I only wish I had started earlier and done more.

It might be well to speak of another form of damage by heat or drouth (or both) which Dr. Franklin and Dr. Cross described to us a year ago. This takes the form of a lowering of the resistance of the berry to damage from other causes;

the berries suddenly "go to pieces" in storage or shipment, without having given any previous indications of poor keeping quality. New England's experience with the 1948 crop indicates that we have much to learn about this damage. After heat and drouth, the Blacks kept excellently, the Howes poorly. This may indicate a difference in resistance due to variety, or it may mean that berries are susceptible to this damage only in one short stage in development. There may have been enough moisture when the Blacks passed thru this stage, but not enough when the Howes reached that point. At any rate, the present indication is that the way to avoid the trouble is to provide enough moisture at the right time.

Frost

Damage by cold (frost) is too well known to need any description. We all want to protect by flowing or, more recently, sprinkling. Note that drowning along ditchbanks is almost indistinguishable from frost damage itself. You may have both the same night.

Fungus damage has long been recognized by our experiment station men, and the growers have shown an increasing interest. We owe much to the studies and writings of Dr. Neil E. Stevens (see USDA Tech. Bul. 258 and Bul. 402 "Weather in Cranberry Culture"), and to the later work of Dr. H. F. Bergman, among many others. The fungus rots which show up before picking are referred to as field rots or early rots. Damage is increased by excessive fertilizing, heavy vines, reflowing, combination of heat and moisture, and especially by a warm spring. It is reduced by (1) absence or reversal of these conditions, and possibly by (2) increasing the phosphorus content of any fertilizer application, and by (3) late holding of the winter flood and by (4) direct fungicidal treatment. This means the Fermate ground spray which has been found effective in Massachusetts if treatments are properly timed and applied.

Late holding may be practiced as often as two years out of three provided it does not cause excessive vine growth. The bog can be drained in April and then reflowed

without material effect, to kill scum and do bog work. Allow me to present this rule for safe exposure: in April, the first twenty days or the middle fifteen or the last ten, or five days at the first of May. Be ready to protect from frost.

Of course the time to identify the cause of any damage is just after it occurs, while the memory of the recent weather is still fresh in mind. A mummy or a squashed berry tells few tales as to the cause. Better still, watch your weather and combat unfavorable conditions as they arise. A soft berry in the picking box means that you failed to do enough of the right thing at the right time, or you did too much of the wrong thing.

To remedy or avoid a trouble, the first necessary step is to identify correctly the cause. Since there is no such thing as scald, in the common, steamy sense of the term, the man who says "I hadda lotta scald this year" is likely to have similar trouble year after year. The man who says "I let my berries overheat this year", instead, will at least think about avoiding that trouble in the future.

The Growers of Canada Enjoyed Good Prices

Still Market Much Wild Fruit, But Cultivate in Nova Scotia, New Brunswick, Quebec, and P. E. Island.

While United States growers of cranberries were considerably dissatisfied with prices received from last fall's crop, the cranberry men of neighboring Canada received prices which probably averaged not far from \$30.00. The production was small, however, being estimated by E. L. Eaton, Horticulturist (native fruits) as 8,088 bbls. This figure would be only for Nova Scotia, which produced an estimated 5,628 barrels, selling at an average of \$28; New Brunswick and Prince Edward Island. There are no Government statis-

tics, as the Canadian Federal government considers cranberries too small for crop reporting service.

One very attractive pack put up in Nova Scotia sold for about \$30 a bbl. in Toronto, and a few shipments from New Brunswick which hit the Christmas trade in Montreal brought from \$8.00 to \$10.00 a box. In all the coastal regions from Yarmouth (Nova Scotia) to Labrador wild cranberries are found and are gathered for market in considerable quantity. Accurate figures are hard to get. For one thing it is impossible to know how many are picked for home use and local sales.

Could Have Used U. S. Fruit

It was said that many consumers were unable to buy cranberries and there is no doubt that dealers would have welcomed the usual supply from Cape Cod. The last year of imports from the United States which is available was 1946, and this showed a figure of 1,972,010 pounds, with a value of \$530,-

529. Imports of cranberries from the U. S. within the past year were forbidden, as they were classed as non-essentials, and with Canada buying a great deal more in dollar value from the United States than the United States was buying from Canada, preference was given to commodities which under trade arrangements were considered more important.

Greatest acreage of cranberry production is centered in Nova Scotia, estimated at 525; the largest single bog in Canada is the Larocque bog near Drummondville in the Province of Quebec. British Columbia is now growing a few barrels, with acreage estimated at 100 or perhaps much less.

CRANBERRIES is indebted to Mr. Eaton of the Department of Agriculture, Experimental Station Kentville, Nova Scotia, for the foregoing information and for the following table, all of which, he says, however, can only be considered as estimates.

ESTIMATED ACREAGE AND PRODUCTION IN 1948

Province	Acreage	Yield bbls.	Frost loss %	Net crop	Price per. bb
Nova Scotia (Planted Bogs)	525	5625	30	3938	28.0
Nova Scotia (Natural Bogs)	—	500	—	500	25.0
New Brunswick (Planted Bogs)	10	300	—	300	—
New Brunswick (Natural Bogs)	—	1700	—	1700	27.0
Prince Edward Island (Planted Bogs)	6	150	—	150	—
Prince Edward Island (Natural Bogs)	—	1500	—	1500	25.0
Total				8088	

Weed Control Experiments of 1949 Can be of Value in Practices of 1949

by DR. CHESTER E. CROSS (Mass. Cranberry Station)

Economy in bog maintenance has become a necessity to Cape Cod cranberry growers in 1949. For this reason, it is thought advisable to inform growers of the results of some of the 1948 weed control research—results which have been sufficiently verified to warrant specific recommendation in the 1949 Weed Control Chart. It is hoped that a large number of growers will use these results as a basis for small-scale test work on their own bogs and acquaint the Experiment Station with their findings. It is felt that the weed research of 1948 should prove to be a material help

to the growers in controlling their weeds cheaply in 1949.

Summary of Findings with Respect to Weather and Kerosene Spraying

1. All applications of kerosene 400-1000 gals./acre, are non-injurious to vines if terminal buds are no longer than 1/8 inch.

2. Kerosene sprays caused no injury to new-growth leaves or flower buds on upright or runner vines when the temperature at time of treatment was 60° F. or less.

3. Kerosene injured new-growth tips when sprayed at a temperature of 72° F., the sky clear, and the wind less than 5 m.p.h.

(Continued on Page 24)

NEW MARKETING PLAN UMBRELLA OVER INDUSTRY

A most decidedly advantageous step has been taken for the entire cranberry industry in the coming closer together of the two big co-ops, ACE and NCA. Many growers say this should have been done long before. Most growers say now they are glad this improved spirit of co-operation has been brought about and the feeling for the future seems to be brightening considerably, after the lows to which growers were plunged because of prices for the '48 crop.

This plan of the ACE, marketing all of the fresh fruit of NCA, and of any independents who want to come in under the long and favorably established EATMOR brand, and for all canning fruit of ACE and also any independents who wish to process and market under the famed OCEAN SPRAY brand should prove an umbrella for all growers of cranberries. It would also work to the advantage of the wholesalers and retailers of the fruit and the consumer, as it should promote an orderly marketing with steady, uniform prices. In all probability not all of the independents will come in as class "C" members and there will still be competition. Some feel that competition within the industry (that there is enough with other fruits) is not desirable—others feel it is healthy. There is seldom complete unity or total agreement of what is best, anyway.

The next step is to increase the sales of cranberries in both forms, fresh and processed. Perhaps the former needs greater expansion at the moment. The proposal for NCA as expressed by M. L. Urann for NCA to spend more than half a million dollars during the calendar year should help tremendously. The fact that 87,000 housewives wrote in for EATMOR cookbooks proved that advertising does pay.

BEST CRANBERRY STORAGE ADVICE

At the February Plymouth County cranberry club meetings a most interesting topic was brought up—that of better practices in the storage of cranberries. That was of interest to the growers was proven by their attention to the subject.

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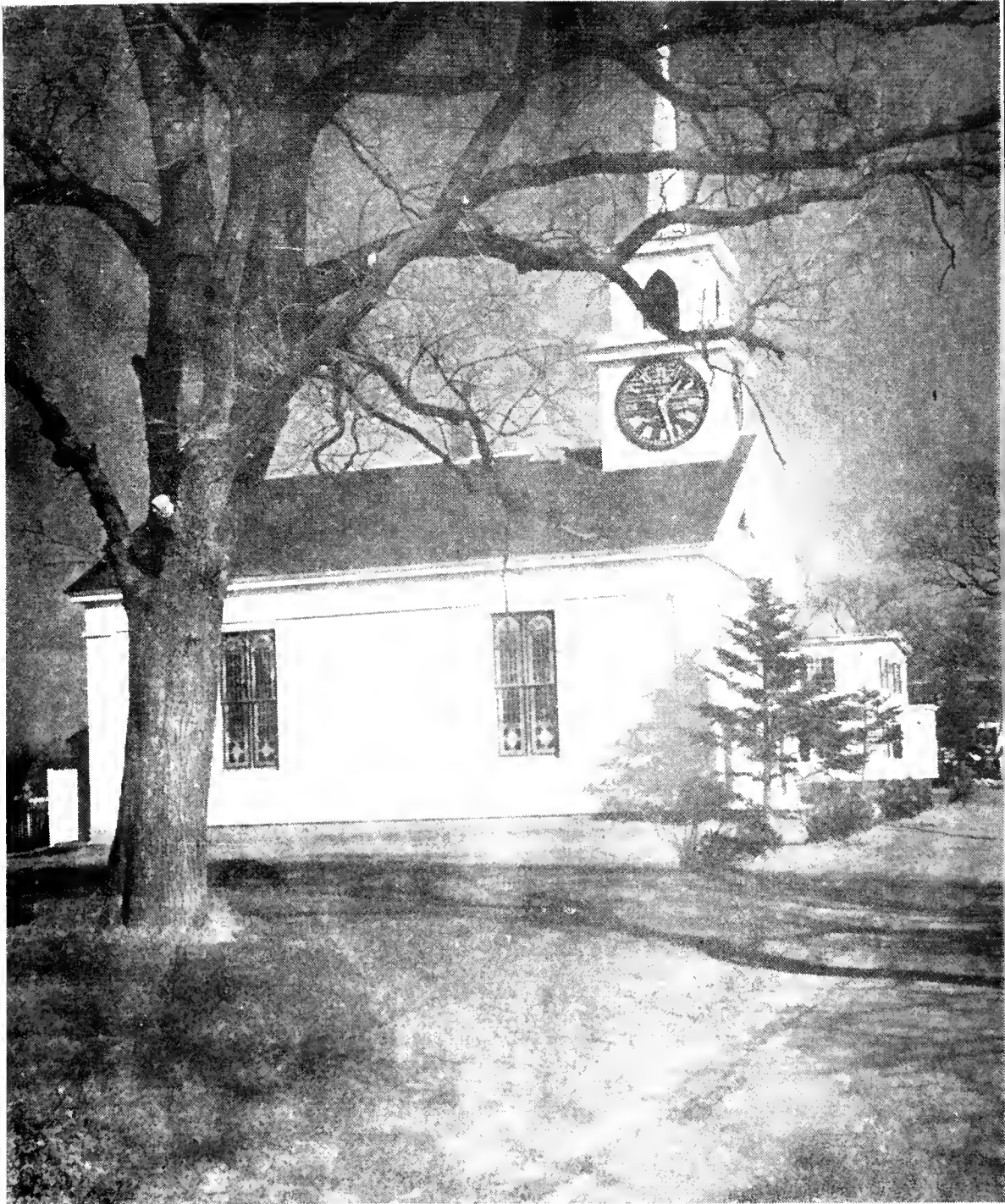
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If care is exercised in the growing of cranberries from the start of the season straight through and including the harvesting it does seem rather lacking in good sense to let a considerable quantity spoil in storage before screening and shipping through lack of knowledge of how to prevent this to a larger degree. Dr. Franklin stated that the late Prof. Guinness of U. of M. made extensive studies into the problem, but his findings were never brought into shape, his death preventing this. Here would seem to be a field for immediate study.



Old Church at East Dennis (Old Sesuit), where lived Elkanah and William Sears, pioneer cranberry cultivators.



MARCH, the traditional month of high winds. Photo shows ancient mill at ancient Eastham, Cape Cod. Windmills once were used to pump water for cranberry flooding.

More of the Start of Cranberry Cultivation at Dennis, Cape Cod

Further Evidence that Henry Hall Pioneered, Others Followed, and that Cultivation Was Bound to Spread.

by CLARENCE J. HALL

(Fourth chapter of a History of the Cranberry Industry).

Further buttress, as promised last month, of the fact that Henry Hall was the first to cultivate seems to be found in the writings of Cape historians, as almost without exception, when writing about cranberries, they give the credit to Henry Hall, even though there is the vagueness and discrepancy in dates of the beginning. Charles S. Swift, in his "Old Yarmouth", says:

"Mr. Hall of Dennis, having a marshy lot which produced some very fine berries, was led to try the experiment of transplanting some of the vines. The experiment was successful. . . . Others have followed the trail started by Mr. Hall."

In his later work, "History of Barnstable County", published in 1897, Mr. Swift would seem to have found no reason to change his mind, as he writes:

. The first successful cultivator seems to have been a Henry Hall of Dennis, who commenced the business in 1816."

Deyo's "History of Barnstable County" gives to Henry credit in beginning cranberry cultivation and to the use of sand. However, it is Deyo who gives the different version (mentioned last month) of how Henry made the discovery of the use of sand. He also refers to the before mentioned Elkanah Sears, who may have been Henry's closest rival for first cultivation. Deyo wrote:

"There has been much speculation regarding the time, the place, and the circumstances which began cranberry cultivation on the Cape. At North Dennis (Old Nobscussett) about 1816 one Henry Hall owned a piece of low land on which wild cranberries grew. Adjoining

this were beach knolls from which, after the cutting of some small timber, the sand was blown upon the vines. This, instead of injuring the berries of which he had made some use, was found to have greatly improved them, and they sprang up through the lighter part of the soil covering, and this is believed to have originated their successful cultivation. So little was this fruit prized even at its best that it was many years before any considerable use was made of this accidental discovery. In the meantime, William Sears and his father, Elkanah, set at East Dennis (Sesuit) some vines for their own use, and others in these vicinities soon followed the example."

(Note: This timber which was cut has been said to have been a silver poplar grove springing from a single tree, and the knoll or hill was not actually near the seashore, but a little way inland, and so the sand would not have been beach sand, but perhaps sand similar to that used by growers today.)

Henry Given Wide Credit

To go a little farther afield to prove the contention that Henry was the true sire of cranberry growing, H. L. Bailey's "Standard Cyclopedia of Agriculture", under the heading of "Cranberries, historical", quotes a William Kendrick, writing in *The ORCHARDIST*, 1830, says: "Captain Henry Hall of Barnstable has cultivated the cranberry for 30 years".

When Joseph J. White of the famous White cranberry-growing interests of New Jersey, wrote his book, "Cranberry Culture", publishing the first edition in 1870, he does not claim New Jersey credit for the start of the industry, but accords it to Cape Cod and Henry Hall. As his authority for so doing he quotes S. B. Phinney (assumedly Major Sylvanus B. Phinney, long noted editor of *THE BARNSTABLE PATRIOT*, one of the most widely-read papers of

that time, and himself a man of public affairs and later a cranberry grower) writing:

"The first attempts at the cultivation of the cranberry in this country were made on Cape Cod about the year 1820. The pioneer cultivators in that vicinity were enabled to gain considerable experience and proficiency in growing this crop before an attention was given to this branch of fruit culture in either New Jersey or any of the Western states.

"S. B. Phinney says: 'Captain Henry Hall of Dennis, in the County of Barnstable, Massachusetts commenced the cultivation of the cranberry. His bog, or 'cranberry yard', as he called it, has no year since failed of producing a remunerative crop. For the next thirty years after Mr. Hall commenced many experiments were made by other persons, and most of them proved to be failures'."

Cultivation Spread

Cranberry cultivation began on Cape Cod, but it could, in the very nature of things, not be long before this cultivation began to spread. On the Cape there were the natural growths, for instance in certain situations as Santu, Waquoit, Popponessett, on Gre Sandy Neck, and to the westward lands of Provincetown, to mention a few; also in Plymouth County Cranberries grew on the considerable peat meadows of Essex County, north of Boston; in the rich marshes along the Sudbury and Concord rivers and tributary brooks of Middlesex county to the west of Boston; along the Charles and Neponset rivers in Norfolk county to the south of Boston, Gay Head on the island of Martha's Vineyard. In New Jersey along the marshes of Barnegat Bay; in the swamps and morasses of the Great Pine Barrens of South Jersey. They grew in quantities along the Fox River in eastern Wisconsin and in Central Wisconsin.

Cultivation did begin in Middlesex County at least as early as 1831. Cultivation in New Jersey was begun by at least 1835 by or Benjamin Thomas near Pembe-

ten. It was not to begin in Wisconsin until about two decades later, but it may have begun as early as 1853; on the West Coast not until the '80's.

That "natural" cranberries were of some importance on the Cape is evidenced by the fact that in 1820 one town officially took action to prevent their destruction. This was at Barnstable, where, to quote Ames Otis, careful recorder of Cape historical and genealogical notes, "Since time out of mind cranberries have flourished at Sandy Neck". Sandy Neck is even today a wild and almost fantastic finger of land, a cape upon a cape, extending about seven miles into the waters of Cape Cod Bay from the Great Marshes at West Barnstable. Half a mile wide, chiefly pure beach sand, yet with a surprising amount of vegetation—beach plums, bayberries, wild cherries, cranberries, stunted scrub pine—Sandy Neck was mentioned in the earliest Cape records and for many years was much in the cranberry news of the Cape. Indians gathered cranberries there before the coming of the white men and after.

Barnstable Town

In the year 1820 records show that at the request of "ten freeholders and inhabitants" the Barnstable Selectmen inserted an article in the warrant for the annual town meeting:

"To know if the town will take any measures to prevent the destruction of Cranberries on Sandy Neck and to take such measures as the Town shall think proper thereon."

The Story of Hiram Hall

It might be well at this point to turn back to Dennis. That is to continue with the story of Henry's son, Hiram.

Hiram, born April 22, 1800 (according to Dennis Town Records, or 1803, according to the "Hall Genealogy" by the Reverend David B. Hall, A. M.) worked with his father during the latter's lifetime, as stated last month. He found cranberry growing to his liking, and by the time of his death, Oct. 14, 1886, had become one of the most successful of the earliest Cape growers and was a

vice president of the first Cape Cod Cranberry Growers' Association.

This same bog that Henry had started had become one of four or five acres and in his later years was known as "Hiram's Bog" and "Grampa Hiram's Bog."

As this bog could not be flowed it was Hiram's custom not to start picking until late, a practice of others of his time. He has been reported as seldom starting to pick before the 10th of October, and it has been recalled he often did not finish until Thanksgiving, harvesting not infrequently continuing until after snow had flown. The bog had a natural winter flood and he did not let this off before June 10th.

Older Dennis residents have told the writer they recall picking for "Grampa Hiram", gathering the fruit in burlap bags, and that as a scrupulous and prudent cranberry grower he was always exceedingly careful that his berries be picked "clean". He is said to have been especially proud of a berry then known as "Grampa's Big Blues."

Hiram's will left to his sons, Isaiah Baker Hall, Cyrus Hall and Perez A. Hall, "the respective pieces of cranberry ground which each of them have made and respectively improved". This proves that Hiram's sons worked with him on the original cranberry bog begun by their grandfather.

This brought the Hall cranberry cultivation down to its third generation and it was continued into a fourth by a son of Hiram, Wilfred. After his death, his widow, Mrs. Lillian Hall, continued to operate her interest in the property, the active work having been done for her by her son, Harry Hall, which made the cultivation of Henry's bog kept alive until five generations of Halls (mentioned last month).

Thomas Hall Set Vines in 1913

Before taking leave of these earliest Halls in cultivation of cranberries one more must be brought into the picture. This is the Thomas Hall previously referred to. By his own word in the Rev. Mr. Eastwood's book, Thomas said he planted some vines in 1813. That planting would have

put him ahead of Henry, if Henry did not plant until the year 1816. The year 1816, incidentally, was the year which has come down on the Cape as "the year without a summer", following the great gale of September 23, 1815 which swept water clear across the Cape and was followed by an extremely bitter winter.

However, as before inferred by the writer, Henry presumably began before 1813, and, at any rate, the 1813 experiment of Thomas was not continued. Here is his letter:

"In the year 1813, by my father's request, I planted some ten yards of cranberry vines by the side of Scargo Lake or Pond, which I took from a swamp where they grew in a natural state. They flourished well for some two years and bore some berries. Then, being neglected, the sand blew over them and they became extinct." (Editor's note: Scargo Lake is by Scargo Hill, the Cape's highest elevation in Dennis, but more pertinent than that fact is the one that sand blowing over the vines of Thomas had an opposite effect from the sand which blew over those of Henry)

"In 1840, cranberries bringing a very high price, my attention was again called to their cultivation. I concluded to go to work on the same spot and prepared the ground, which I did by removing the sand and leveling the ground of about 15 rods, within six inches of water. I then planted the vines without the sod, in hills about two feet apart, in the spring of the year. They grew well, bearing every year but one, when they were overflowed, the water remaining on them until the season for blooming was past, as the pond had no outlet, but now has. I have now three-fourths of an acre set with vines. The soil is coarse sand and it lies on the westerly side of said pond. I have never received any injury from frost, spring nor fall, and have always delayed gathering until about the 10th of October when the fruit would be ripe. I have kept no record of the

number of bushels I have gathered, but have taken ten and a half bushels from one rod in some years. When I first commenced, I made the ground level, but now I have it in the form of an inclined plane; my reason for alteration is, the land being high and too much cold water oozing from the ground, which I think is a damage that causes the moss to grow and root out the vines very soon; all they want is the ground moist and loose."

Thomas Hall, born January 10, 1799, like Henry, was descended from the immigrant John Hall (7th generation). He lived in a house still standing on the main Cape highway at the head of Cooperation street, which is not far from Scargo Lake, where he set the vines. His father, Jesse, who urged him to be one of the first to set cranberry vines, was lost at sea.

Thomas, as did so many of his generation, went to sea in his early life. He was for some years master of a Boston-Dennis packet

—The NORTH—which sailed from Cooperation wharf at Dennis. After that he farmed, as not too many occupations were then open to Cape men.

But he seems to have been a man of ambition and in 1845 was elected a selectman of Dennis, serving in that capacity for ten years. He went beyond that politically and served two terms as Representative in the Massachusetts Legislature, so was entitled to affix an "Honorable" before his name, as have been some cranberry growers since.

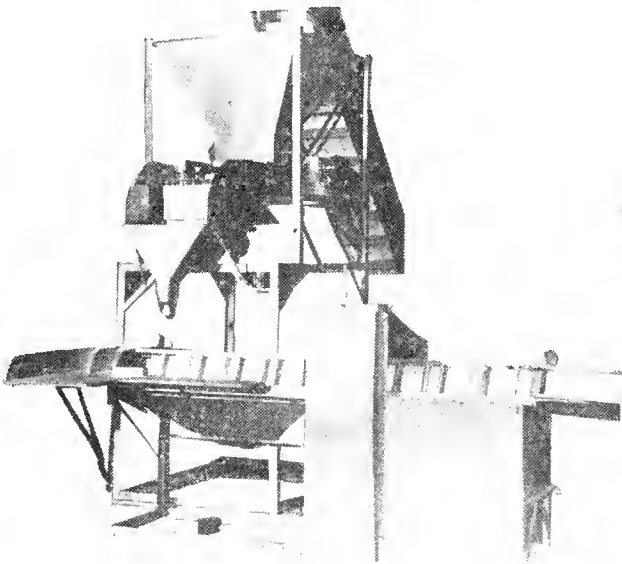
The Hon. Thomas Hall is known to have been a big man, weighing possibly 225 pounds. He was a good church member. He was also a jovial man and, it has been told, he liked to dance a jig for the amusement of his daughters. His wife, Hepzibah, did not approve of his dancing, and when she came into the parlor he hastily subsided into a chair, assuming a sleepy position.

One of his sayings has been handed down. It was: "Merciful man, merciful to his beast." Faithfully,

he lived up to this, and tragically it was the immediate cause of his death when he was 68. He would never sit down to supper until he had fed and watered his horse. He often walked beside it when it was pulling a heavy load, this to spare his extra weight. One day it was pulling a load of hay from his salt meadow and he was walking beside it up a hill. He dropped dead of heart failure.

Thomas Hall never became a large grower, although successful on a small scale, but he did start a cranberry line of interest which extended through two generations. His son, Luther Hall, played an important part in the Cape industry in the latter part of the last century. In about 1885 he became a partner of Captain Crowell (father of William Crowell who died recently) and the firm for a time operated as a commission house, later buying a considerable part of the Cape crop, shipping it to various distributing centers. Luther's son, F. Burnham Hall, continued the cranberry interest.

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Alexander Howes

Of Alexander Howes, the next to be taxed in Dennis other than Henry and Hiram, little could be ascertained. His first tax was in 1837, and was for a "cranberry yard", true value \$30.00, and his only other item was one-eighth interest in the schooner FRANKLIN. He was born April 12, 1810, son of Micah and Hepzebah Howes. He married Hulda Howes and died in 1867, leaving no children.

The Sears' Deserve Credit As Pioneers

The names of Elkanah Sears and his son, William, although perhaps it would be more accurate to say William and his father, Elkanah, as did Deyo, were certainly close contemporaries of Henry Hall and there have been local versions that they preceded Henry Hall. One printed version does, in fact, declare that the Sears preceded Henry. But painstaking scrutiny of available facts by this writer do not bear this out.

Elkanah Sears was born Oct. 22, 1758 in Dennis and was of the fifth generation from "The Pilgrim", Richard Sears, one of the Cape's more distinguished early settlers. He was a farmer, and a man of considerable property on Sesuit Neck at East Dennis, and had his "strings" of salt works and was likewise a veteran of the Revolutionary War. His son William was born in 1806.

The account giving Elkanah preference over Henry Hall is found in "Descendants of Richard Sears", 1890, by the Hon. S. P. May, and is as follows:

In the fall of 1819 Elkanah Sears, with his son, William, set out some vines at Flax Pond (now Scargo Lake) in East Dennis, and was the pioneer in the large and profitable business of cranberry raising.

Some years later, Henry Hall of Dennis, having a marsh lot which produced some very fine berries, was led to follow the experiment of transplanting some of the vines to another portion of the same swamp, and the experiment proving a success, he and others continued their efforts in the same direction.

But it took years of careful study and laborious and costly experiment to ascertain the processes, soil and conditions necessary to success.

In 1919 William would have been a boy of 13 and well able to have helped his father to set out vines or do other work in cultivating the native cranberry. And there is tradition, or strong impression, perhaps, that Elkanah did very early begin a bog at Flax Pond on Quivet Neck, but not at Scargo Lake, of old called by many Flax Pond. Other ponds on the Cape have gone by the name of Flax, reminiscent of the days when women came to these clear bodies of water to prepare their flax.

Elkanah Sears died in 1835, just a year after Henry and Hiram were first assessed for cranberry property. Elkanah was never assessed for cranberry property, nor was his son, William, until 1857.

This, however, is no proof that Elkanah did not have his bog. Only Howes and Henry and Hiram were taxed for cranberry property in the 1830's and only two or three in the 1840's, yet many are definitely known to have had cranberry bogs in Dennis during those decades.

This other Dennis veteran of the Revolutionary War, Elkanah, who was "In Lt. Micajah Sears' Company and marched on alarm at Dartmouth and Falmouth, September 6, 1776, and was on duty three weeks" (Sears Genealogy) must have had his cranberry bog, authenticated if by nothing else than Deyo, and the traditions of the Sears family and of many others. Certainly his son William was a grower of at least moderate success and William's son, William, a grower of considerable success. And this second William passed along the interest to his son, Edmund H. Sears, bringing

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this line of cranberry growing down into the present and the fourth generation.

(Author's note—Probably by this time if the reader has followed thus far, he is tired of Halls and of Dennis, so next month's chapter will go farther afield, although it will return to Dennis and other Cape towns, and other Halls. As requested before it will be appreciated if any inaccuracies found are reported for correction.)

Fresh from the Fields

(Continued from page 5)

slow things down somewhat and will be a benefit, if temperatures do not get too severe and hurt tender buds.

Precipitation

Rainfall was frequent and not too heavy at any one time during February. There was a total of 4 inches of snowfall on the 10th and 11th which quickly melted

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away during the warm days following. Another 3 inches of snow fell on the 28th. The departure from the average monthly precipitation of 2.65 inches was an excess of 1.65 inches.

Ocean County Cranberry Club
On Tuesday evening, February 8, a supper meeting of the Ocean County Cranberry Club was held at the Methodist church in Toms River. Following supper, Ocean

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County Agent, Dick Hartman, read the minutes of the last meeting and reported on his proposed cranberry extension program for 1949. Oscar Downs, president of the Ocean County Board of Agriculture, then made some brief remarks. Lewis Barton of Haddonfield, N. J., spoke on sprinkler irrigation for frost and drought protection. R. B. Wilcox, U. S. D. A. Pathologist, spoke on "Some Factors That Influence Cranberry Fruit Rots in New Jersey", and C. A. Doehlert discussed various phases of a research program on the nutrition of cranberries. At the short business meeting at the end of the meeting Isaiah Haines, New Lisbon, N. J., was elected president, H. B. Scammell, Toms River, N. J., vice president, and Richard Hartman was re-elected secretary.

Blueberry Meetings

On the evening of February 10th a meeting to discuss the 1949 Blueberry Insect and Disease Control Chart was held at Wesley Hall, Pemberton. Because of hazardous driving conditions due to

an all-day snowstorm, only about a dozen persons came to the meeting and another meeting is therefore going to be held. It was noteworthy that the smallness of the group did not in any way reduce the interest of the meeting.

On February 16th another spray chart meeting was held at Parkhurst's Office and Warehouse in Hammonton. About 65 persons attended and fired their questions in rapid succession on blueberry insect and disease problems at C. A. Doehlert and W. E. Tomlinson, Jr., of the N. J. Cranberry and Blueberry Laboratory. County Agent John Brockett was master of ceremonies. It was a lively and instructive evening, lasting almost till midnight.

Personal

P. E. Marucci of the Cranberry and Blueberry Research Laboratory has resigned, effective April 1, 1949, to take up work with the U. S. D. A. on Oriental and Malayan Fruit Fly control work in Hawaii. "Phil" has been working exclusively on blueberry stunt while at Pemberton, being financed

by the Research Grant of the Blueberry Cooperative Association known as the "Coville Fund."

OREGON

The weather until late into February was the chief topic of conversation in the Southwest Oregon cranberry area. Starting with about Thanksgiving there had been cold, snow, sleet, rain and hail. There have been times in recent years when temperatures have been lower, but this is the first time in 60 years that "King Winter" had paid such a lengthy visit.

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Photo Courtesy Bell Aircraft Corp.

MARKETING CHANGES

(Editor's Note:—The following is prepared from the "Wisconsin Cranberry News", published by the Wisconsin Cranberry Sales Company, March issue):

The marketing season of 1948, pertaining to cranberries, presented a sudden and drastic change from the bulk shipments in 1/4 barrel boxes to the pre-packaged form of one-pound cellophane bags and a pilot run of one-pound cartons.

The industry as a whole was not prepared to meet the demand for pre-packaged cranberries. This was true for two reasons: (1) Packaging machinery was not available and (2) The supply of cellophane was very short. Both of these obstacles were overcome during the shipping period. However, they did have a definite effect on the disposition of the crop.

The customers did not want 1/4 barrel boxes of cranberries, and the various companies did not have the facilities to pack cellophane in a sufficient quantity to supply the demand. Therefore, there was a definite slowing up of the disposition of the cranberries. We are sure that this will not happen again in 1949, as one of the chief topics of conversation in the cranberry industry at the present time is methods of increasing the sale of cranberries, methods of packing, and the ability to pack whatever type of container Mrs. Housewife demands.

Grower Problems:—The sudden change in marketing that occurred this year brought several problems to the grower. (1) It means that the grower must buy new machinery to be able to pack his cranberries in the forms that the customer demands. (2) The quality of the berries must be of the highest standard ever shipped. The main reason for this is that once the grower has packed his berries in the cellophane bags and the master container, if they are rejected he is liable for the loss, due to the fact that the cellophane bags and containers cannot be reclaimed. In the case of the 1/4 barrel box, the berries can be taken out and reconditioned for either the fresh fruit market or the pro-

cessor, and the boxes can be re-used.

Another important factor is that once you begin packaging any commodity in a unit package the customer expects a top quality product and is much more particular of what he buys, feeling that he is paying a premium for the product, even if this is not true.

All this does not mean that the 1/4 barrel box has become extinct. However, if the year 1948 is any criterion of how important pre-packaging will become in the future we can look forward to seeing approximately 75-80% of the fresh fruit sales go out in a pre-packaged form.

Marketing

(Continued from Page 6)

been no secret, and has, in fact, been the chief topic of discussion in all cranberry areas. That somewhat forward-looking and, if necessary, drastic step must be taken to pull the industry out of its difficulties has long been recognized by many. This new marketing arrangement may be said, in a sense, to end the "cold" war between the Co-ops chiefly over allocation of the crop between fresh and processed berries. With harmony restored, it is expected that the market should become stabilized, resulting in benefits not only to the growers but to wholesalers, retailers and consumers as well.

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Scoops and Screenings

"Charlie" Doehlert, head of the Jersey Cranberry-Blueberry Laboratory, J. Rogers Brick, Walter Fort, Growers' Cranberry Company, and Vinton Thompson, 2nd came up from Jersey to attend the February 24th meeting of South Shore Cranberry Club. In a two-day trip they made several other visits.

Four out of five of the Nation's 6 1/2 million farm families used help in 1947 from the Extension Services in one form or another, according to Extension Service, University of Massachusetts. That being the case, this agricultural assistance, including cranberry culture, must be appreciated.

"Del" Hammond, general manager WCSCO, has been appointed a director of the Wisconsin Council of Agriculture at Madison. The University of Wisconsin and the Wisconsin Council will be hosts on August 22-26 to the American Institute of Cooperation at Madison and Del has been asked to serve on the committee for recreation.

New Straight-Wing Insect Control Co. For Mass. Bogs

New England Air Spraying and Dusting Company Will Offer Dusting and Spraying, Operating from Three Strategically-Located Fields.

A new dusting and spraying service for cranberry growers is to be in operation this season in Massachusetts. This organization will be known as the New England Air Spray and Dusting Company. This is made up of the Cape & Islands Airways, which has maintained flying service and operated

the airport at Wareham for several years and the Brockton Airways of Brockton.

The new firm will operate out of Wareham, the cranberry center, Brockton and North Falmouth airport on the Cape, which gives three locations enabling the service to be within easy reach of most all of the bogs of Southeastern Massachusetts. The organization will have six Piper Cubs for dusting and two special sprayers. For the latter purpose, a specially-built Luscombe aircraft with built-in tanks and sprayers is to be used.

Dusting with small straight-wing planes has now proven successful for several seasons, especially on the larger-sized bogs without many bays or coves. Spraying is not so well established as yet on the bog proper, although woodland operations including bog sides have come to be well recognized as very efficient. Helicopters will again be in service to Massachusetts growers this season, these being especially efficient on small properties and those with coves, which are difficult of access for the faster straight-wings.

There will presumably be other air service as well.

REBUILDING OF NCA NORTH CHICAGO PLANT IS UNDERWAY

Work has begun on the rebuilding of the original section of NCA's North Chicago, Ill., plant which was destroyed on the night of January 21. Because of new construction, the new portion of the plant, completed in 1948, was saved. The past season this plant handled nearly 50 per cent of the total Wisconsin crop and is needed for service again next fall.

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Eatmor Cranberries

Membership in the New England Cranberry Sales Company entitles the grower to complete service in the growing, packing and selling of his product.

If you are not a member you are invited to become one and assist this Cranberry Cooperative in strengthening and stabilizing the 1949 cranberry market.

New England Cranberry Sales Company

9 Station Street

Middleboro, Mass.

S. W. Oregon Club Hears Why Bog Taxes Were Raised

Interesting Figures Are Discussed at Annual Meeting —Harry Jackman Succeeds "Jimmy" Olson as President.

Southwestern Oregon Cranberry Club at its annual meeting last month elected new officers and heard a discussion of cranberry bog assessment.

Harry Jackman succeeded "Jimmy" Olson as president; Louis Lowe, vice president; Jack Dean, corresponding secretary; "Twink" Chambers, recording secretary; Charles St. Sure, treasurer.

Mrs. Ethel M. Kranick, the only woman on the Oregon Agricultural Council, told of the council's new and increasing interest in cranberries.

County Assessor Charles W.

Save This
Magazine for
Future Reference

Forrest was invited to explain the reasons for increasing cranberry land taxes. Cleared, leveled and drained bog land was assessed for \$200 per acre. Bogs planted for three years and longer were assessed for \$500 an acre.

Mr. Forrest said his research showed the cost of developing a bog was approximately \$2,000 an acre. The average yield per acre in 1947 was 79 barrels, he said. Using an average figure of 70 barrels an acre (figured over several

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years) he said the estimated income per acre would be about \$1390 a year, this being based on average selling costs from \$11.40 per barrel in 1933 to \$27.60 in 1947.

There was some protest by growers, but Mr. Forrest countered with a report on a sales transaction recorded in the county clerk's office. The revenue stamps indicated a price of \$53,000 for 5.94 acres of producing bog with 1.3 acres newly planted plus additional land and improvements.

The county assessor said risk capital would not be interested un-

less gains were sufficient to justify that type of investment. No protest has been made on the assessment of this particular tract, Forrest said. He said this tract paid a tax of only \$44.80 prior to his re-appraisal, but \$201.81 after the assessment. Forrest pointed out this sale may or may not have been for an excessive figure, and in all probability included a growing crop plus some personal property, machinery and equipment.

The assessor explained that one acre assessed at \$200 would result in a tax of only about \$8. An acre assessed at \$500 would mean a

tax of slightly more than \$20 in the Bandon area outside the city limits.

Some cranberry owners said they believe bog land should not be assessed unless it makes a profit each year. Forrest pointed out that timber land owners pay taxes year after year without income until it is logged, and that many town lots are held without income and are similarly taxed.

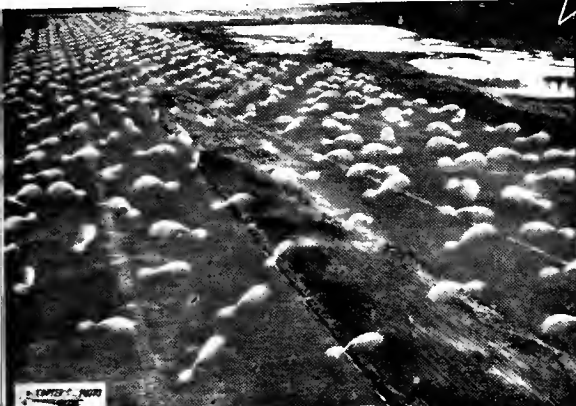
Benson Tells Cape Clubs New Marketing Plan

March meetings of the Upper and Lower Cape Cod cranberry clubs were held at Bruce hall, Cotuit, on Monday, March 7th, and at Dawes Memorial hall, Brewster, Wednesday, the 10th, respectively. These were evening sessions preceded by a supper.

Arthur D. Benson, general manager of New England Cranberry Sales Co., and originator of the plan for unification in marketing by the two major co-ops, ACE and NCA, was the chief speaker, telling in detail of the plan. He explained clearly to the growers

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When you do this, a lot of things become evident that are not apparent on casual inspection. You will follow the directions in the manual so you won't forget something. But the greatest benefit of taking your machine apart is that it takes all the mystery and uncertainty out of it.

You may decide at this time how much of the pruning attachment you will use. On these new machines it is possible to use no cutters whatever, or just the side cutter only, or to add the sickle, which measures the length of the vines before it cuts them. In any case, if you decide to use all the attachments the total number of vines you cut will be less than one-half of the vines cut and torn, using hand pruning and raking methods. Or you may decide to do all your pruning with a second operation of the machine.

As it has been found the most practical way, your sections should be laid out so the picker can go around the perimeter in a clockwise direction. The ditches, and a narrow strip, should be hand-scooped first, to permit the picking boxes to be distributed around the field before the Western Picker starts operating. Be sure your teeth are bright and shiny every day, free from yesterday's dried saps and waxes, and you will be surprised how easy it will be to pick. When your picker is functioning properly it should be possible for you to walk alongside of it and watch it pick automatically. Your costs will be less than one-half of what it has been previously, and in a year like this that is really worthwhile.

Western Pickers are still available for this year's delivery.

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that this was the first step in what he believed would lead to better marketing conditions, and that he positively believed the plan would work out successfully.

He gave a long period to questions and answered all questions, of which there were a great many, attesting to the natural interest of the cranberry men in this important step which is being taken.

George Johnson of West Barnstable, an agricultural student and winner of first place in a local school speaking contest gave a talk on sanding, showing a good grasp of this problem. Dr. Chester E. Cross spoke upon weed control.

N. J. BLUEBERRY "CONTROL" CHART OUT

The blueberry insect and disease control chart for 1949 for New Jersey has been issued by the New Jersey Agricultural Station, New Brunswick, New Jersey. It was prepared by C. A. Doehlert, R. B. Wilcox and William E. Tomlinson of the New Jersey Cranberry and Blueberry Research Laboratory, Pemberton.

Mass. Cranberry Men Urged to Grow Lumber Crop

Plymouth County Club Meetings Also Hear Talks on Fumigate Applications by Air and Ground, Fertilizers and Rot—Abuse of Cranberries in Storage, and that Sprinklers save Berries in Times of Heat.

The value of native woods—particularly white pine—as compared to "imported" woods in quality and price; the contrast between applications of Fumigate between 'copper and straightwing plane and ground machines; "The Effect of Fertilizer Applications on the Quality of Fruit", "Cranberry Storage Problems", and "Summer Management of Bogs" were the topics at the February meetings of Southeastern Cranberry Club, Rochester Grange Hall (Plymouth County, Massachusetts), February 23, and South Shore Club at Plympton February 24th. These were

afternoon meetings, followed suppers.

There were 68 of the 108 members attending at the Roches meeting, with President Emil St. Jacques presiding. At Plympton President Orrin G. Colley was in the chair and the attendance was about 60.

District Forester Charles Cherry, who had previously spoken upon the value of tree cropping on woodland around Massachusetts bogs, said that for nearly 30 years the State Forestry Department has tried to stimulate interest in the conservation project. "We have come a long ways", he said, "but we have a longer way to go and the objective will not be achieved until we have every grower who has woodland putting this on a business basis and getting a crop of timber every year."

With samples of both native and imported woods he told how some of the native lumber is just as good in quality as that imported from the Pacific Northwest. "You can have just as good lumber made up from your own stands," he said, "and at very considerable savings." He compared Ponderosa pine and Western fir and native white pine, and the differences in cost as he explained them were startling.

He compared the native "pitch pine to Southern yellow pine. He said redwood from the Pacific has been "imported" for flumes because of its durability, whereas native locust, "if put in butt end first will last forever and, if the other end is used, longer than that."

Example of Good Forestry

He demonstrated the value of proper pruning. As an example of good forestry practice he cited the instance of Herbert Whiting, Plympton, who has 200 acres of woodland. He said by selective cutting and proper care Mr. Whiting was harvesting 1,000 board feet per acre per year, which was bringing him better than 10 percent on his investment.

Mr. Cherry said he would not recommend the growing of white cedar because this takes twice as long as white pine, although this is excellent stuff. It is boat build

g timber. White oak cuts to terrific waste, but is a good wood. Good flooring can be made from native white oak. Hornbeam can be used for "rolls". Native spruce fine for wheeling plank. He told how Dr. Chester E. Cross of the Experiment Station had made cedar shingles from his own property for \$4.50 a square.

In conclusion, however, he said he would recommend white pine as the most useful and practical native lumber to raise. He said he

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strongly recommended "selective" cutting. Proper pruning, thinning, and the clearing out of undesirable trees and underbrush were his other recommendations. The Myles Standish Forest Reservation was designed for demonstration purposes, much as the Cranberry Experiment Station at East Wareham. Trained foresters would give their advice and services to cranberry growers or others upon request without charge.

Dr. Bergman told of Fermate applications upon three bogs last year, this being to contrast the effectiveness of 'copter or straight-wing spraying and dusting as compared with the efficiency of ground machines. He said the sprays from the air showed greater variation than dusts. As to his conclusions, so far he said neither dust nor spray from the air with Fermate had proven really satisfactory because of variation, and that ground machines with this fungicide were better, but by no means perfect, for the same reason. He said he might try other fungicides this coming summer, as he hoped to continue the experiments. The applications last year were made just as the vines were coming into blossom in early July and later in the month as the blossom was going.

J. Richard Beattie, Massachusetts Cranberry Specialist, "pinch-hitted" for Dr. F. B. Chandler, who was recuperating from an operation, reading from the latter's notes on "The Effect of Fertilizer Application upon the Quality of Fruit." Speaking briefly, the conclusions seemed to be that fertilizer applied in proper quantity did not produce additional rot, but if put on in excessive quantity it did.

Fred Hepburn, who manages the NECSCO screenhouse at Tremont, gave a most interesting talk upon "The Abuse of Berries in Storage". Here, he said, occurred one of the greatest losses in the whole process of getting cranberries to market. "You can't handle cranberries like billiard balls". They should not be moved in storage until ready to be screened. They should not have direct or cross-ventilation, but indirect ventilation which passes over the tops of the stacks of boxes and draws the warm air out through the roof of the building. "Black Rot", in stored berries he compared to leprosy in the human being.

"Summer Management of Cranberry Bogs" was the subject of Russell A. Trufant. He said he presumed that meant "quality". One recognized way of improving quality is to hold the water late, until into May. He spoke of the excessive heat of last summer, and said that one way that could have been aided, as he did on his own bog at North Carver, was by the use of sprinkling. He said he did this without regard to wind, sun, hour of day, or anything else and found no harm occurring, but that the results were good. This sprinkling removed the heat as long as the ground remained wet.

Lewis F. Norwood, Jr., recently appointed associate Plymouth County, was introduced and spoke briefly. He will be assigned to some cranberry work this summer by Director J. T. Brown.

Cranberry Station

(Continued from Page 4)

mended preferably in April on dry bogs and after harvest on bogs with frost flows.

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If you are buying or selling Cranberry Property it will pay you to see us.

A number of properties available, more wanted.

B. Ferric Sulphate. Never use this chemical on immature or newly sanded bogs. This is printed in bold-faced type to add special emphasis to this warning.

C. P. D. B. (Paradichlorobenzene). Be sure to read the introductory comments carefully. This treatment should not be made in the same year after the grub flow. This caution is followed by the statement, "Keep off treated area for six weeks". White violets and loosestrife are no longer included under this treatment since other chemicals are more effective and less expensive.

D. Salt. Pitchforks are now included in the weeds that can be controlled with this material, which will be very helpful in cases where iron sulphate did not control pitchforks early in the season.

F. Copper Sulphate. A caution has been included this year wherever using this chemical since it may kill fish. Hair cap moss is no longer included under the weeds controlled by the above chemical.

I. Water-white Kerosene. Listed under "Remarks" there is an important note stating that vines should not be disturbed for one week before and after treatments when using this chemical.

J. Nitrate of Soda. This is a new section in the chart and outlines to the use of this material in controlling hair cap moss.

The index at the bottom of the Weed Chart is prepared to simplify the location of individual weeds. The first treatment is the preferred one. As a final suggestion under Weed Control, your attention is called to Dr. Cross's statement made at the recent cranberry club meetings where he remarked that every grower in Massachusetts should have a knapsack sprayer if he is interested in controlling weeds on his bogs this year. If the Experiment Station staff can be of any help in your in-

sect, disease, and weed control problems, please feel free to call upon us.

Weed Control

(Continued from Page 8)

4. No injury to vines resulted from spraying at a temperature of 68° F., the sky cloudy, and wind in excess of 8 m.p.h.

5. Kerosene sprays applied 1 a. m. to 10:00 a. m. and 5:00 p. m. to 8:00 p. m. caused significantly less injury to the new growth vines than mid-day treatments.

6. Kerosene sprays applied moist or wet vines appear to be effective in killing grasses, sedges and rushes without causing significant injury to cranberry vines.

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Heavy rains falling one hour after oil was sprayed on sedges and they did not prevent the weeds from dying.

The flooding of kerosene-sprayed areas two hours after application did not affect the kill of most grasses and sedges, but the following "difficult" weeds did survive: cut-grass, loosestrife, horse-nettle, and needle grass.

A few test areas were sprayed during a light rain, and the kerosene spray was found effective and selective in these instances.

Cranberry vines were considerably injured when sprayed within forty-eight hours after they had been trampled by hand weeding.

New bogs with a heavy growth of grassy weeds can usually be safely sprayed with kerosene in late summer.

Summary of Tests with Stoddard Solvent

1. Stoddard Solvent can apparently be sprayed safely on cranberry vines at 200 to 400 gals. per acre up to the time the terminal buds break open about May 10.
2. These sprays burn new growth and flower buds when sprayed late in May or early in June, but rarely kill the cranberry vines.
3. The following weeds appear to be killed by sprays of 400 gals. less per acre: small bramble, chokeberry, asters (all types), loosestrife, and some grasses, sedges, and rushes.
4. If Stoddard Solvent is sprayed onto the crowns of the weeds listed above (No. 3) by inserting the spray nozzle under the vines, these weeds can be killed selectively anytime during the growing season.

Caution in Use of 2, 4-D

1. Cranberry growers should use only a salt (such as sodium or ammonium) of 2,4-D, and never the esters which are so volatile they will injure cranberry vines at some distance from the place they are sprayed.
2. If the wet glove method is used to kill loosestrife with a strong solution of 2,4-D, the treatment should be made in June before the loosestrife flower buds appear.

CONTROL

Cranberry Root Grubs
White Grubs • Chokeberry
White Violets • Loosestrife
Poison Ivy • Small Bramble
Three Square Grass • Wild Bean

use

SOLVAY



TRADE MARK REG. U. S. PAT. OFF.

PARA-DICHLOROBENZENE

The Massachusetts Cranberry Experiment Station Charts recommend Para-dichlorobenzene for treating Root Grubs, White Grubs, Chokeberry, Poison Ivy and Wild Bean. For best results, bogs should be treated in April or early May. Write for details.

SOLVAY PARA-DICHLOROBENZENE
FOR TREATING CRANBERRY BOGS
is distributed by

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LEWIS F. NORWOOD, JR., Plymouth County Agent

(CRANBERRIES Photo)

Story on Page 6

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Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE
Extension Cranberry Specialist



The frost season is here again, and plans have been completed to send out the frost warnings as usual over the telephone and radio. The telephone warning system offered by the Cape Cod Cranberry Growers' Association is still the most popular method, but the radio has proved to be an excellent supplement to the frost warning system. We have seven telephone distributors in the cranberry area who have been selected to handle this responsible task. Each distributor has a list of growers to contact, ranging as high as forty calls in some instances. It will save considerable time on the part of the distributor if the grower or his representative is near the home to receive the message. In fact, the directors of the Association decided again this year that only two calls will be made to a given number. After two attempts to reach a grower have been made the responsibility of the distributor ends. It is understood, of course, that if the telephone line is busy this would not constitute a call on the part of the distributor. We usually complete our calculations here at the Cranberry Station by 1.30 in the afternoon and by 7.30 in the evening, Standard Time, and then contact the distributors. Therefore, if growers at the start of the season are near the phone from approximately 1.30 to 2.30 and again from 7.30 to 8.30 for the evening warning, they will be sure to get the message. After the distributors have gone through their list a few times, the growers will know, within a few minutes of the time, when to expect the frost warning message. These people who perform this valuable service receive only a small fee and have to be available all during the spring and frost seasons. If we

cooperate closely with them it will save time and speed up the service.

Plans for the radio frost warning service have been completed. This year Radio Station WBZ in Boston is cooperating closely with us. The service rendered by radio to the cranberry industry for several years, and at no cost, is quite considerable. If we paid for the radio time given to frost warnings it would cost the growers approximately \$126 per day. Possibly a note from the growers to the above radio station expressing their appreciation would be in order. Days when frosts are expected, radio warnings will be given out over Station WBZ, 1030 K., at 2.59 p. m. and 8.59 p. m.

Before leaving the subject of frost, it should be clearly understood that the formulas are made to show the minimum temperatures likely to occur over average areas of the bogs in the cooler locations. Growers who have bogs in the warmer places should make the proper allowances. To illustrate this point, frost warnings were sent out in 1948 approximately 20 days in the spring and 15 days in the fall. However, many bogs were flowed only a few times because the growers knew their property, used the frost warning as a guide, checked their temperatures carefully, and flowed their bogs only when necessary.

Now for a timely suggestion from the Cranberry Experiment Station. Doctors H. J. Franklin and C. E. Cross point out that this is the time to combat root grubs, poison ivy, chokeberry, and wild bean, using P. D. B. Crystals as outlined in the new Insect and Weed Charts. Be sure to follow directions very carefully.

All roads lead to the Wareham Town Hall, Wednesday, April 27,

for the regular Spring Meeting of the Cape Cod Cranberry Growers' Association. This is an all-day meeting, featuring equipment displays, and the latest cranberry information as presented by members of the Cranberry Experiment Station staff. A light lunch will be served at noontime. Why not make this a family affair! See the Editor's write-up of the details of this meeting.

Just a final word—a new cranberry season is here, and with the increased activity around our bogs comes the possibility of many accidents to personnel and equipment. Wouldn't it be in order to use all available safety precaution measures? It may take a little more time and a little planning, but accidents are costly.

Urann and Group Return From West Coast Visitation

NCA President M. L. Urann, accompanied by his nephew, Marcus M. Urann, Mrs. Urann, and Miss Ellen Stillman, advertising director of the National, have returned to Hanson from an extended trip to the West Coast, during which they conferred with Ocean Spray brokers in several major cities and attended meetings of Washington and Oregon cranberry growers.

West Coast members look forward to Mr. Urann's annual western trip, for the meetings held at that time give them an opportunity to bring themselves up to date on the affairs of their cooperative, whose headquarters are 3,000 miles away. At the meetings Mr. Urann reviewed the business of the Association for the past year, outlined prospects for the months to come, and answered the growers' many questions. Miss Stillman showed a group of slides explaining what the National has been doing in the way of advertising and publicity to move the carry-over.

Growers' meetings were held during February and March at Long Beach and Grayland in Washington, and Bandon in Oregon. At the meetings growers discussed their own local problems of growing, harvesting, and delivering

(Continued on Page 27)

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

March Warmer Than Normal

Temperatures for the month of March were somewhat higher than desirable, although the total of sunshine hours was 227 as compared to a normal 221. The excess of temperature would not be a favorable factor in the keeping quality. Rainfall was a little on the scanty side, there being 3.88 inches and of snow, 8 $\frac{3}{4}$ inches.

Mostly Uncomfortable Month

March roared in like the proverbial lion with a severe snow-storm, and the month until near the end had frequent storms and was raw and uncomfortable. The coldest day was the 20th with a low of 8 above, the warmest the 29th, with 69.

With the previous months of rain above normal, there is excellent water supply for spring frosts. Some bogs were let off late in the month for "breathers", to be re-flowed for late-water fruit, while others were taken off for the season. There will probably be quite a lot of late water holding, which should tend to "up" the quality. The excessively warm winter months has caused plenty of "scum" on many bogs.

No ice sanding was possible during the winter, although the open weather permitted growers ample opportunity for work around the bog shores. That much work will be done this spring, more than is seasonably necessary, is doubtful. There will be little new building.

NEW JERSEY

Temperatures Above Normal

The winter portion of March was rather cold and disagreeable,

(Continued on Page 6)

Marketing Agreement Reached April 5

Final plans for the co-ordinated marketing arrangement between American Cranberry Exchange, National Cranberry Association and such independents as wish to join, were completed by a meeting of cranberry growers from all producing areas April 5 at the Hotel New Yorker, New York. The growers, acting as an organizing committee, approved incorporation papers for the Cranberry Growers Council, and a proposed cooperative marketing contract by which all growers who participate will market their fresh berries through the American Cranberry Exchange, and market their processing berries through the National Cranberry Association.

Growers not members of either American Cranberry Exchange or National Cranberry Association may also become members of the newly organized Cranberry Growers Council; and may market their

cranberries as members of the Growers Council, thereby using the cooperative marketing facilities of the Exchange and the National, respectively. Each of those marketing agencies will conduct an intensive advertising campaign on a national scale under their respective trademarks, "EATMOR" and "OCEAN SPRAY".

The certificate of incorporation for the new organization was executed and will be filed promptly. The incorporators were the following well-known cranberry growers: Arthur D. Benson, Middleboro, George R. Briggs, Plymouth, Theodore H. Budd, Pemberton, N. J., Charles L. Lewis, Shell Lake, Wis., John C. Makepeace, Wareham, Marcus L. Urann, Hanson.

The incorporators will meet for their final organization meeting on April 26. Preparations for marketing under the plan consummated are proceeding immediately.

CAPE ASSOCIATION EXHIBIT APRIL 27

Cape Cod Cranberry Growers' Association Spring meeting, with exhibition of cranberry equipment and supplies, which proved so successful last year, is to be repeated, the date being Wednesday, April 27. This will be at Wareham Memorial Town Hall.

Exhibition will open at 9 a. m., the displays being in the basement and at rear of the building for heavier equipment not suitable for inside. A total of 21 display spaces is available. The exhibition is in charge of a committee consisting of Raymond F. Morse, West Wareham, and Ferris C. Waite, Plymouth.

At 11 there will be the business meeting of the association, one of the matters to be discussed being a proposal for different classes of would be to raise funds from "sus-membership. One purpose of this taining" members, to be used for the expenses of the Public Relations and the Educational Program committees. At 12.30 there will be a light lunch.

The speaking program opens at 2 p. m., in charge of Dr. H. J. Franklin, who with members of the Experiment Station staff, will be speakers. A principal speaker will be Prof. William Esselin, University of Massachusetts. He will dis-

cuss cranberries in cellophane, keeping quality in different types of cellophane, mold, etc. With a large proportion of the total crop now being packed in this container, it will be a topic of much interest to the growers. Adjournment is at 4 p. m.

Fresh From the Fields

(Continued from page 5)

with temperatures running several degrees below normal. The first full day of spring brought a change with temperatures averaging several degrees above normal for the remainder of the month. This brought the temperature back up to normal or slightly above for the month. The average daily mean temperature at Pemberton was 43.7°, which is 1.5° above normal. The lowest temperature in the shelter at Pemberton was 14° on the morning of the 20th and the highest was 79° on the 27th.

Rainfall Under

Rainfall was deficient at Pemberton for the first time since last October. With a superabundance throughout the winter months, however, there is no lack of moisture in the soil. Total rainfall for the month was 2.53 inches, which is almost exactly an inch below normal.

Season Way Ahead

The warm winter has pushed the season way ahead of normal. Development of blueberry buds is fully a month ahead of last season, with some of the early varieties such as Cabot and Weymouth starting to come into bloom during the closing days of the month in some fields.

WISCONSIN

Still Lack Water

Snow was failing on April first, snow which was still needed to bring up water supplies. The State as a whole is very short this spring, creating a threatening situation in regard to spring frosts. Most of the marshes had open water, and if the weather came on favorably the water would soon be going off.

WCSCO Packing Improved

Wisconsin Cranberry Sales Company was in the process of re-equipping its warehouses and

“streamlining” packaging equipment. When finished the company will be able to pack and ship rapidly in any type of container desired by the trade. D. C. Hammond, Jr., estimates there will be 30-35 cellophane packing machines in the Company. It is hoped to be able to pack 2,000-2,500 barrels a day, using one 9-hour shift.

WASHINGTON

Bad Winter Injury

Excellent weather was prevailing in March as the winter color was starting to change on the bogs, but D. J. Crowley reports, the evidence of winter injury was showing up more clearly. Mr. Crowley thought it was safe to say that practically every bog has some injury, although in most cases it did not appear (in March) to have been serious. On some bogs, however, there were patches where the uprights were killed right to the ground. Yet if the growing season turns out to be favorable, he does not believe the injury will cut the crop too excessively.

New Plantings

Spring bog work was going on as usual. Chabot and Newkirk were planting about 10 acres, all the planting being by hand. John Sacks planted 4 acres, this being put in by machine. Chester Matson planted a couple of acres by machine, the two being planted in about six hours, and it apparently was a first-class job. Carl Brateng and son, Norman, have built a small planter that handles about an acre a day, and they have set out about two acres. Arthur Duclos has been sanding some acreage he hopes to set before May 1. Joe Alexson and the Wisoner Brothers are adding to their acreage.

OREGON

Fertilizer Tests

Experimental fertilizer plots have been put out at the bogs of Mr. and Mrs. L. M. Kranick and of Harry Jackman, these tests being run by Dr. W. L. Powers, soil scientist in charge agronomy, Oregon State College, L. C. Warner, soil conservation specialist, State College, assisted by Coos County Ag-

(Continued on Page 28)

New Plymouth County Agent For Cranberries

L. F. Norwood, Jr., Former Athlete, to Devote Much of Time to This Crop. Ex Army Officer—Interested in Art, Photography.

Plymouth County growers, starting with the active spring season will have 6 ft. 3 inches and a trifle over 200 pounds of county agricultural agent to assist them in their problems. This is Lewis F. Norwood, Jr., former football and basketball star, yet a young man who is appreciative of art and good photography.

Associate County Agent Norwood, who came to Plymouth County a year ago this month (April has been assigned by Director “Joe” T. Brown of Plymouth County Extension Service to devote considerable part of his time to cranberries, the most important crop of that foremost cranberry county.

The Plymouth County Extension Service now, besides Director Brown, has two associate county agents, two 4-H Club agents, and two Home Demonstration agents. Brown has divided the work of his staff largely into specialized activities. Norwood has set his aim high to reach the objectives achieved in Plymouth County Extension cranberry work by his immediate successors, J. Richard Beattie, now Massachusetts Cranberry Specialist, and “Joe” Brown himself.

“Lew” Norwood is already well known to many growers, as he has arranged and been present at a number of cranberry club meetings.

Norwood was born in Rockport which is located on Massachusetts north shore. After being graduated from Rockport High School he was graduated from Essex Agricultural School, Danvers, in 1936 and then went on to the University of Massachusetts at Amherst, where in 1940 he received his degree of Bachelor of Science in Agriculture. After graduation, he taught agriculture at the Norfolk

County Agricultural School in Walpole.

Saw Army Service

Came the war, and he went into the Army as a private in August 1914, coming out a first lieutenant in November 1916. While in the service he attended Infantry officers' training school in Georgia and was then assigned to the Pacific Theatre, serving in the Philippines. Following the war, he returned to Walpole, where he resumed his position as vocational instructor in agriculture, and then to Plymouth County.

Norwood's father is chief engineer at the Rockport water works, but Norwood's interests have always been in an out-of-door life and he "likes to make things grow". He is finding his initiation into cranberry work extremely interesting and is particularly interested in the use of new spray materials for cranberries.

"I know I am going to like cranberry work", he asserted, "and I feel I am coming in at an especially interesting time. There is a great field here with the growing use of insecticides, especially the newer ones, the chemical control of weeds, and the new ideas in mechanization of so many of the cranberry practices".

Norwood is married to the former Emma Gassett of Whitman, in which town he makes his home on Beal Avenue. He has two children, Lewis, the 3rd, aged 4, and a daughter, Judith, aged 1. At his home he has a large garden, both vegetable and flower. He is a director of the Whitman Men's Garden Club, and is also secretary of the finance board of that town, which has a population of 9,000.

Broadcasts Weekly

One of the duties of Norwood has been to make a weekly broadcast on "Horticultural Day" program over Station WBKA (1450 k. w.) Brockton, this program being from 12 noon to 12.30. Norwood usually comes on about 12.15. His voice has already become familiar to many cranberry men, and soon his "athletic form" will be familiar on the bogs of Plymouth County.

THE RISING SUN OF CRANBERRY CULTURE TOUCHED LIFE TO INDUSTRY IN NEW JERSEY NEARLY AS SOON AS ON CAPE COD

There, Too, Beginnings Were at a Propitious Time—Benjamin Thomas Probably Began as Early as 1836, Followed by "John Webb", a Most Colorful Cranberry Pioneer.

by CLARENCE J. HALL

(Editor's Note —This is the fifth in the series of articles upon the history of the cranberry industry).

Following the first faltering steps at Dennis, which proved to be not so faltering after all, cranberry cultivation began elsewhere. Perhaps a better way to put it would be that while some, certainly many on Cape Cod and others in Massachusetts were unquestionably inspired by the Dennis successes, there were also spontaneous outbreaks at more distant points. The bright morning sun of cranberry culture was rising, and its rays touched and brought to life the dormant bud which had lain neglected since long before the advent of the white man to America.

In New Jersey this sun of cranberry culture arose almost as early as on Cape Cod. There attempts to develop cranberry growing date apparently from about 1835.

Very material progress was being made in New Jersey after the War of 1812. A railroad and two canals helped in this. The first rails were laid years before Cape Cod was to have steam service, this line being the Camden & Amboy, given a charter in 1830 by the Jersey legislature. The following year the first engine arrived at Philadelphia from England and was shipped to Bordentown, that old

and historic town being today the location of National Cranberry Association's New Jersey cannery. Nicknamed the "John Bull", engine No. 1 made a gala run, drawing several carriages, which really were carriages, being merely stage coaches fitted with new wheels and coupled together. Members of the legislature from nearby Trenton came down for a free ride and there were other notables among the

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passengers, including Madam Murat, wife of Prince Lucian Murat. The Delaware & Raritan Canal was chartered on the same day as the C. & A. railroad and Bordentown became its first terminus. The Morris was the other canal. Cranberry growing in South Jersey started at a propitious time.

"The Pines" of New Jersey

Cultivation was then, and still is confined chiefly to three counties, Burlington, Ocean and Atlantic. These three include much of what is known as "The Pines" of South Jersey, an area famed in history and story. It is a region of about 1,200,000 acres of pine forests on the uplands, cedar in the swamps, flat, but with swift-running, amber-colored, but clear streams. The soil is light and sandy.

"The Pines", and in fact much of South Jersey is counterpart to Southeastern Massachusetts in more ways than one. "Plymouth Woods" in Plymouth county, where there is a great concentration of bogs today, with its light sand and pine trees is similar. Again, as in Plymouth County, bog iron was mined and manufactured. In pre-Revolutionary days "The Pines" hummed with activity, but the little communities around the forges and furnaces turned to ghost towns (as did the Plymouth iron sites become all but forgotten locations). There was even glass blowing, as there was at Sandwich on Cape Cod. There were paper manufactories. There were the lumber industries, the white cedar and the pine. Many ships were built and launched along the Mullica, Wading, Little Egg Harbor rivers and other streams. There was some salt made from the

sea, as on Cape Cod.

The peoples of the Pines, living in this unbelievably isolated district, only 40 miles from Philadelphia and 80 from New York when cranberry bogs were being built in the swamps and mill ponds furnished the water power for the mills and founderies, were descendants of the first settlers. These had been bog ore miners, lumber workers, glass blowers, soldiers and sailors of Washington's time, Hessians who preferred the isolated life of "The Pines" to going back to their own country.

Quaker Influence Strong

South Jersey as a whole was colonized in the earliest days by immigrants from Holland, Sweden, Germany. There were the Scotch-Irish, New Englanders from Cape Cod, Nantucket, Connecticut, from Long Island, and there were the Friends, or the Quakers, but the Quaker influence was strongest—it is also strong today. Many early growers were of the faith of the Friends. South Jersey is also quite English in many respects. There are the Georgian houses; the names of many of the towns are English, Gloucester, Chesterfield, Weymouth, Springfield. There was a type of manor life, but not as sumptuous as that of Tide-water Virginia. These mansions contrast sharply with the more humble houses made of the white cedar clapboards which were never painted and are today darkened by age, but practically impervious to the elements.

Much use was made of brick, and in many of the towns these houses are cheek to jowl, city fashion, streets and sidewalks are often of brick, they are small cities, without

the open squares at the center of many a New England village. There is an air of antiquity strong in New Jersey, with a touch of the south, there is some iron work on balconies and iron gates and fences.

But it was in the Pines, in the area of most unusual names such as Ong's Hst, Hospitality, Mt. Miery, Penny Pot, Batsto, Tabernacl Mizpah, Oriental, Calico, Friendship, Retreat, Double Trouble are near by Good Luck, many of these places now closely associated with cranberry growing, that the industry began to make its great headway. What these "Pines" were like in isolation, desolate and probably eeriness in appearance in the 1830s and 40s it would be hard to imagine. Certainly they were not Times Square! But with the coming of the cranberry industry in later years and still much later the coming of the Model T and the splendid highway system over the level country, their isolation has to a considerable extent been given way.

Cranberries Native to "Pines"

These inhabitants of the "Pineys" as they have been referred to, as a Cape Codder has been designated as a "Swamp Yankee", or a native Floridian a "Cracker" were no strangers to the wild cranberry. They had gathered them since first times, sometimes before ripening, when they were spread out and left to color under a covering of green boughs and leaves excluding the rays of the sun.

As a matter of fact, as long ago as 1789 an act was passed by the New Jersey legislature to prevent their early picking. This law imposed a penalty of ten shillings

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for the picking on the unreclaimed swamps before the 10th of October, the intent being, of course, to give the fruit a chance to ripen. There were many famous natural cranberry beds in the region.

One of the most famous of the natural cranberry beds of "The Pines" was known as "Buffin's Meadow," which finally became a part of the Whitesbog properties (J. J. White, Inc.) James A. Fenwick, founder of Whitesbog, and of whom more will be heard later, told this story of the gathering of the wild fruit:

For years these (Buffin's Meadows) have been known to all the farmers for miles away from them as a resort (after the busy season) for picking huckleberries and also cranberries for the winter supply of their tables. As many as 60 covered wagons have been there at a time, with horses tethered to trees around the edge.

Besides there were many poor people of the Pines, putting up in crude cabins and turf huts beside the bogs, picking cranberries for sale.

Another source of wild cranberries was around the northern end of Barnegat Bay. There William Downey, great-grandfather of James D. Holman, present prominent New Jersey grower, collected the fruit, carted it by wagon to Red Bank, and sent it from there to New York City by boat. Mr. Downey, who died in 1866, was reputedly very successful in these annual cranberry ventures.

First Growers

But to get on with the story of cranberry cultivation. The generally-accepted account of the beginnings is a rather tenuous one, at least as to the first cultivator. This is to be found in the "Proceedings of the 64th annual meeting of the American Cranberry Growers' Association", 1934, when Theodore H. Budd, Sr., read a paper his grandfather, Theodore, had given before the same association some 30 years before. This paper said:

"I think the credit of being the first cultivator of cranberries in New Jersey belongs to either Benjamin Thomas, John Webb or William R. Braddock, and probably the position these gentlemen held to each other as pioneers would be as I have named them.

"I visited Mr. Thomas' little patch in the fall of 1855, and was

very much interested in the quantity that would grow on a single rod, and the size and color compared with the wild berries. He told me then that he commenced to grow cranberries in a small way about twenty years before, which would make the time of his commencement date back to 1835. This small patch was located on the edge of Burr's mill pond. . . .

"This cranberry meadow had no conveniences in the way of dams or streams to flow or irrigate, but they looked fine and remained healthy for many years until they were destroyed by the fireworm, which I think was near the close of the 60s".

This statement by the Hon. Mr. Budd, long a leader in the earlier New Jersey cranberry industry in placing this order of beginning has been recognized as in all probability being accurate. The Rev. Mr. F. H. Durell, president of the association at its 50th annual convention August 23, 1919 when several historical papers were read, quotes Mr. Budd's speech. Research appears to bear this out also. It might be noted there is no reference to sanding in the remarks by Mr. Budd, and it is extremely unlikely that Thomas had ever heard of Henry Hall or the "Cape Cod method", and may have considered himself as striking out in a brand new form of fruit cultivation.

J. J. White wrote in his "Cran-

berry Culture", 1870:

"It was not until the year 1845 that the first vines were planted in New Jersey; and for several years the history of the Cape Cod pioneers was repeated in the numerous failures that followed. Although the Jerseymen had heard something of the success of cranberry culture in New England, but they knew little or nothing of the methods of cultivation by which this success was achieved. Having nothing to guide them in their early attempts at cranberry culture, it is not surprising that the New Jersey growers found it unprofitable. Indeed, it is estimated that until the year 1860, nine-tenths of those who undertook it failed.

"John Webb of Ocean County was perhaps one of the earliest experimenters in this State. He commenced by removing some sods from a neighboring swamp and placing them in a damp spot that proved to be adaptable to their growth; in this they flourished, and in the course of time the ground was covered with vines yielding paying crops."

Concerning Mr. Thomas it is impossible to learn much. His grandson, Carlton Thomas, manager of J. G. Montgomery Company, lumber dealers of Pemberton, can only say that his grandfather has been given the credit of pioneering. Benjamin Thomas was a wood sawer and his son after him.

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Rotary circle, and it has all but lapsed into oblivion, as has the first bog. There is a tumbling-down and abandoned old house, a few small sheds, and a newer house in which lives the bog foreman for Vinton Thompson, who operates bogs there owned by Mrs. Edith Haines.

"Peg-Leg" John Webb

Getting to the rather amazing story of the man who unquestionably must be called New Jersey's pioneer cultivator of the cranberry in any true sense of the word brings into focus John I. Webb of Cassville, which is in Jackson Township in Ocean County. "Peg-Leg John", so-called, because most of his life he had a wooden leg, was one of the most colorful and remarkable characters of the early industry. He built a bog, as had Henry Hall, using sand, because, being observing, he noted that where sand covered wild vines the berries were better and bigger.

And, as in the case of Mr. Benjamin, it is extremely unlikely that he had ever heard of Henry or the Cape Cod experimenters. Also, as in the case of Henry, the date of his first preparing bog is conjectural, varying from "about 1835" into the 1840s, or even a little later. Unlike Henry, he made considerable sums in his cranberry culture, only to lose this fortune.

John Webb was born May 8, 1808, the youngest of seven brothers, in a large, long house, the son of a well-to-do farmer of the region. On his farm he had a fine orchard. The vicinity is about seven miles west of Lakewood, three miles north of the U. S. Naval (diggible) Base at Lakehurst and about seven miles from the sea-coast.

One reason, although a rather fragile one, given for a date of beginning as early as 1835 or a few years after, is that he kept his money in a bag and when he married at the age of 42, his wife being named Elizabeth Lane, was that he said the money for his wedding came from his "cranberry bog".

John incurred the name of "Peg-Leg" in this way. When he was a boy his leg was injured by a falling tree. In this unfortunate occurrence cranberries played a part. The story is told that folk-lore medical advice of the neighborhood urged a hot poultice made of cranberries to clear up the ulcer which had formed on his leg. Possibly gangrene set in and he was sent to Keyport on muleback. There he took a sailing vessel to New York where at a hospital his leg was amputated just above the knee.

However, this early mishap did not stop him from starting in on a useful career. As a young man

he was a school teacher, walking five miles a day to and from the school-house. Mr. Webb lived on at the Webb homestead.

Wild cranberries grew in the region. One day he was draining a bog for a meadow and all around the edge native cranberries grew in profusion. He could see no reason, the story goes, why the treatment of the entire area could not be followed with good results. The next season he began his bog. He pulled stumps and other foreign substances, levelled the peaty bottom, drained by ditches which divided it into oblong beds, and over the plots spread sand. Then he is reputed to have set the vines, using his peg-leg as a huge dibble. The area of his original bog is not known. It is said to have eventually reached many acres.

Had Great Success

For a time he had astonishing success with growing cranberries. His bogs were at their best during the Civil War "boom" and he sold berries for \$50.00 a barrel. At one time he sold 42 barrels at the bog for \$40.00 to a Philadelphia buyer which saved him the expense of transportation to the Friendly City. The highest sale price he received is said to have been \$60. Others were selling cranberries at \$40 and \$50 a barrel at that time, so the story is not hard to believe. Probably not many barrels, however, were sold at these fantastic prices.

A good cranberry grower, Mr. Webb was apparently not a good business man. With the money coming in from his bog he speculated heavily in woodland, during the war anticipating a rise in real estate values. He developed his farm into one of the best in that part of New Jersey. He had large apple and pear orchards; barns full of hay and corn. He had a dozen or more cows and a piggery. He is reputed to have given land and built a school for the children of his region, his own being among the 30 or 40 there to receive their education.

People of the neighborhood came to depend upon "Peg-Leg" John and those who worked on his bog he permitted to run up grocery bills at the store to his credit.

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Misfortune Came

But the price of woodland in his area did not go up. As the woods were cut back, a stream which supplied water to his bog dried up. The bogs were injured by frosts. Finally he was presented with a bill from the grocery which is said to have amounted to several thousand dollars. He mortgaged his house to pay off this debt.

Although Mr. Webb married relatively late in life he had 11 children, the youngest of whom was Mrs. Harriet Clifford of New York, from whom a large part of this information was obtained before her death about a year ago. She vividly remembered the hard times which fell upon her father during the "Cleveland" depression. She helped with the farm work and came to be known as "John Webb's boy". When apples which she had prepared for market fell to ten cents a bushel they were fed to the pigs.

Mr. Webb is described as always a staunch Democrat. He was a large man, impressive-looking in spite of his wooden leg.

At the time of his death, March 17, 1893, his achievements as a cranberry grower were recognized in the New York press.

Achieved Fame as Cranberry Pioneer

At the time of his death, the Toms River (N. J.) Courier said: "John Webb, whom Ocean County, and not only Ocean County alone, but all the South Jersey seashore,

Cape Cod and Wisconsin, owes a debt of gratitude as the originator of cranberry cultivation, died at his home. . . ."

This was not quite accurate, as he did not precede, but as for being Jersey's real pioneer, there seems to be no doubt of that.

Even the Yarmouth Register of Yarmouth, Cape Cod, of October 16, 1886, had an article (apparently clipped from some unnamed New Jersey newspaper) giving this "Peg-Leg" John credit as the originator of cranberry cultivation, although it would have seemed the "Register", being in the heart of Cape Cod cranberry land, might have been a little more careful in its editing.

Bounced Berries Downstairs

Honored though he was and should be for his contribution to the cranberry industry, as cultivator he contributed in still another way. This was due to the fact that his berries were stored in a second story at his barn. He could not carry them down, so he poured them down the steps. As said before, being an observant man, he noted only the sound ones reached the bottom. The rest remained on the steps.

Webb is believed to have mentioned this fact, and it reached the ears of D. T. Staniford of New Brunswick, also in Ocean County and not far away. Mr. Staniford was a man of mechanical leaning, and the story has come down and generally given wide acceptance

that he was inspired by this observation of Webb to develop the first cranberry separator, basing it upon this "bounce" principle, the same principle upon which berries are sorted today.

Cassville today, although about the exact center of Jackson Township, is a country crossroads, with a small group of houses, a church, and a grocery store. All that remains of Webb's bogs, located off the road to Lakehurst, are a few vines and remains of dikes.

However, a few still remember "Peg-Leg" John and one of these is Arthur Burke, who runs the crossroads store. Mr. Burke is himself a cranberry grower, owning since 1928 about 10 acres near Freehold in neighboring and historical Monmouth County.

This bog, Mr. Burke believes, dates from 1863-64, and is planted to native Jerseys. Mr. Burke is a director of Independent New Jersey Cranberry Company.

Mr. Burke, who was pretty young in Mr. Webb's last years, can recall him slightly, but, more interestingly still, he does recall picking cranberries by hand on the Webb bogs when they were owned by John Webb's widow.

William Braddock

Of the cranberry operations of William Braddock, probably New Jersey's third grower, not much information is obtainable, as in the case of Thomas, except that Mr. Braddock is reputed to have set "improved" varieties and that his

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Western Pickers, Inc., Asks About the Ideal Cranberry Picker

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Most growers who have expressed themselves say that getting the berries picked at low cost without damage to the bog would probably be the first consideration. If a machine would do this the first price of the picker would be a minor item.

Then the next important thing would be how clean the bog is picked and whether the berries are damaged. Following this the speed of the picking would be important, so that the Grower would not be dependent on large numbers of short-time employees whose first interest is naturally in themselves. Then after these most vital things have been taken care of the Grower would like his picker to be easily serviced, have a long life expectancy, be easily moved, easily stored and easily operated.

During the 1948 picking season in Massachusetts it was demonstrated over and over again that the Western Picker can pick efficiently over a wide variety of bogs; that the vines and bogs are definitely improved, that the berries are not bruised, that the costs are definitely much lower than with any other method of picking, that it is also much faster and cheaper, that any average High School boy can operate the Western Picker after a minimum amount of practice, and that it will pick any measured acre of bog in one or two days, depending on how fast the operator wants to run it. In short, the Western Picker approaches the ideal cranberry picker in its actual performance.

Many Growers who first see the Western Picker in action say that it greatly resembles a picker they have had in mind. Some think it should be wider so it will cover more ground in a certain time, but if the ground is uneven the machine would not be nearly so flexible. Some think the machine should weigh more—others say it should weigh less. Western thinks that the best weight is that which uses the full horsepower of the right-sized engine so that the driving wheels will not skid, or the machine tear through the bog like a bulldozer, but still heavy enough so the picker does not have to be pushed through a mass of vines. In other words, traction is a function of the weight, and the weight should be kept low enough to permit easy handling on turns, over ditches, and moving from bog to bog.

Still others think that picking and pruning are two distinct operations and both cannot be done best in one combined operation. The 1949 Western Picker is designed to work with or without pruning. Let the Grower decide which is best for his conditions. This model is a durable, substantial machine and will give a minimum amount of trouble. Western Pickers Inc. will maintain experienced technicians to advise and instruct in its efficient operation.

This coming season, attention will be primarily directed to the fresh berry market and the time between picking and shipping will be a vital consideration. If you can pick and dispose of all the berries on 10 acres in 20 days with one Western Picker, you can't afford to be without one. This is what the Western Picker can do for you, and waiting in line next year for a Western Picker is not going to solve this year's problem when your fixed costs will still remain fairly high and the price of berries will probably remain fairly low. You should pay for a machine in two years picking. Why not mechanize your picking now? Western Pickers Inc. will still take your order for this year's delivery. Address communications to Coos Bay, Oregon.

(Advt.)

bogs were near Medford in Burlington County. Of the three Jersey growers, he would have had the most opportunity to have heard of the Massachusetts experiment.

William Braddock was born October 19, 1779 and died December 12, 1853, so it would seem he must have begun his cranberry cultivation in the 40's. His son, Job (June 13, 1823-January 31, 1889), his son, Edmund (born Dec. 3, 1844, died Feb. 10, 1914), all had large acreages of uplands and bogs; Job had William, several hundred acres in all. Job and Edmund owned saw mills and started in the cranberry business as young men and continued growing cranberries until the deaths.

Edmund's son, Job (born March 23, 1884) and today in the real estate and insurance business in Medford, helped his father in cranberries for several years. The bogs were sold in 1915. At the time of Edmund's death he owned Braddock's Mills, Buzby's Mill, Popular Grove, Kettle Run and Hoses Run.

His Bogs Now Lakes

The Braddock bogs are no longer in existence as bogs. As a matter of fact, they made a rather peculiar circuit, as did some other bogs in the Medford area. Originally bog iron was mined in the olden days from their location; these being known as "deep water mines. Long after the mining activities had ceased and when cranberry culture came in, these locations were dammed and the were turned into bogs, Braddock probably being the first of such.

At best some of these bogs have proved to be only marginal in quality and in about the 1880's were diverted to still another activity. They were turned into picturesque lakes for summer resorts. Beaches were bulldozed and the shores today are lined with attractive summer cottages. These include the well-known Medford Lakes with their many rustic log cabins, often far more luxurious than mere cabins. Other old bogs now become summer resorts are the Taunton Lakes, Pine Lakes and Lake Ockanickon, with its WYCA camp, which was one of the Braddock bogs.

(Continued on Page 28)

CONFIDENCE—A "GUEST" EDITORIAL

Confidence was the key word at the Cranberry Marketing Conference of March 7th at the Wareham Town Hall. Confidence from the grower all the way through to the consumer was stressed as being an essential factor to the success of our cranberry business.

Now let us emphasize confidence from the very heart of our industry. Confidence among we cranberry growers in each other. For if there is a lack of confidence among we growers it will reflect right back through the various groups who handle our berries on to the consumer, as it has these past couple of years.

This trend towards closer cooperation from within the industry is being considered with much enthusiasm among all growers, regardless of what organization they may be associated with. For we growers are looking forward to this movement to cure the critical ills of our industry and put it on a firm foundation for the future.

The final goal most growers have in mind is worthy of the utmost of confidence of all. Let us hope that the larger and influential growers who influence the course of our industry plan and act in a way that will justify and encourage a feeling of confidence among us.

Lawrence Cole
North Carver, Mass.

Emphasis in many industries, including the agricultural, is being placed upon marketing. It now appears beyond a shadow of a doubt that the post-war commodity peaks in prices and business activities have been reached. Business and prices have declined somewhat, but to date the recession has been relatively modest. The business index has fallen off, unemployment has been rising. How far this recession will go none of the "experts" seem inclined to predict, except there is hope, backed by some favorable factors, there will be no real depression.

However, the sellers' buggy-ride is over—the buyer is now in the driver's seat. The cranberry is not the only product of the soil which is feeling the pinch—citrus is pointed out as in much tougher shape. Nobody even seems to want to buy stocks any more, even at present levels, which some financial economists describe as bargains. The

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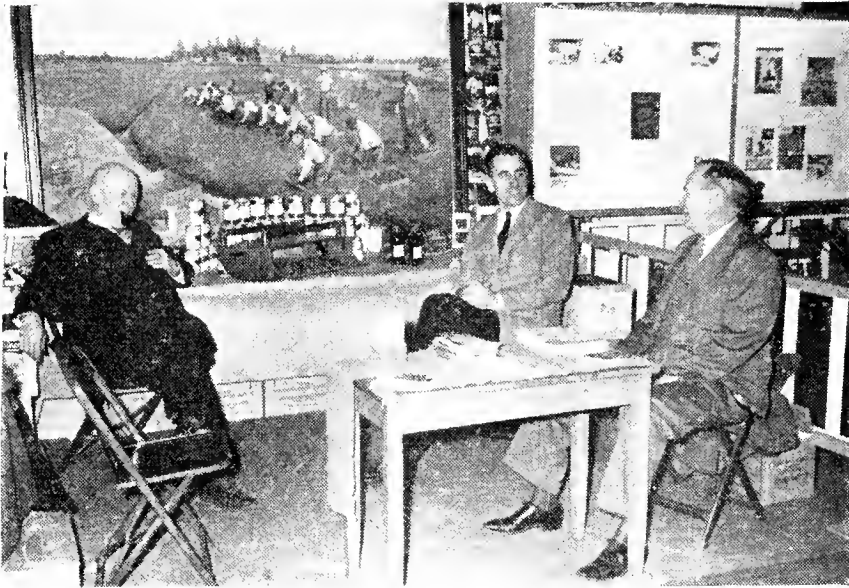
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only business which shows no prospect of a slump is that of taxation—federal, state and local.

As dubious as returns were from last fall's crop, this is not the first time the cranberry men have been up against a bad year. What other agricultural industry can show a record of almost uninterrupted good or satisfactory years for the past quarter century or so? The industry as a whole will surmount the present obstacles—there already seems to be better cheer, as note the unsolicited guest editorial above.



Showing Cranberry display at Union Agricultural meeting, Worcester, Mass., arranged under direction of Publicity Committee, Cape Cod Cranberry Growers' Association, "Bill" Wyeth, chairman, and Cranberry Specialist "Dick" Beattie. The latter is seated between "Ed" L. Bartholomew, NECSO, left, and Ferris Waite, NCA, right.



Group on stage at the "Marketing Conference", Wareham Memorial Town Hall, March 17:—left to right, Prof. Fred H. Cole, Extension Marketing Specialist and former State Commissioner of Agriculture and panel on "From Screenhouse to Consumer"; seated, Raymond Morse, NECSO; Lawrence Bailey, NCA; E. Clyde McGrew, ACE; Kenneth Atwill, NCA; Melville C. Beaton, Beaton's Distributing Agency, Wareham (Independent); David Nathan, Warren & Son, wholesalers, Providence; seated at "consumers' table", Miss Louise Day and Ferris Waite, NCA, although only the feet of Mr. Waite show in the picture. (CRANBERRIES Photo)



NEW JERSEY'S FIRST BOG—
 Benjamin Thomas (May 21, 1788-
 January 23, 1871, built a bog near
 the above site at Burr's Mills, only
 relic now standing this ancient
 house (above) or possibly near
 Sooy Place (left). Both locations
 are close together. Historic Sooy
 Place was a large grant of land,
 and records trace a structure there
 back at least as far as 1700, this
 having been an inn on a stage
 coach highway from Philadelphia
 to the coast at Tuckahoe. A por-
 tion of this burned Feb. 19 of this
 year, and the section remaining,
 shown in the photo (left) made
 of the native white cedar, as sound
 as ever, dates from 1801. It has
 been said Thomas's very first
 start was on the south side of the
 road from Retreat to Sooy Place,
 and by old-timers is still known
 as the "Ben Thomas Bog", and
 traces still remain.

(CRANBERRIES Photo)



CASSVILLE, N. J.—
Where John Webb had
his bogs. Upper shows
Methodist church, more
than 100 years old.
Right, Arthur Burke,
who picked berries on
the Webb bog, stands in
front of his cross-roads
grocery store.

(CRANBERRIES Photo)



"CRANBERRY-BOG" LAKES, New Jersey—Upper shows beach at beautiful Medford Lakes; lower Lake Okanickon, which was Braddocks Mills. (CRANBERRIES Photos)

Cutting Costs

How costs might be lowered in the future by improved mechanical bog operations, and how insecticide control costs might be cut this season were principal topics at meetings of the Southeastern Cranberry Club, Rochester, March 22, and South Shore Club, Plympton, March 24. Election of officers was also held at these final sessions of the Plymouth County groups.

At South Shore, Orrin G. Colley, who has served three years as

president and, with the other officers who, highly commended by Cranberry Specialist J. Richard Beattie for excellent co-operation with Extension work, said he had rather not serve further, feeling someone else should have the privilege. In the election he was succeeded by Stanley Benson, Middleboro, NECSCO, who had served for three years as secretary-treasurer. William Stearn, Plympton, succeeded Mr. Benson, while Louis Billings became vice president, and the advisory committee was Russell Trufant and George Crowell.

Southeastern re-elected Emil C. St. Jacques, president, this being his second term; vice president, Russell Makepeace; secretary-treasurer, G. T. Beaton; advisory committee, Frank Crandon, Ray Morse, and auditor, M. C. Beaton, all re-elections.

Clubs Not to Unite

There was consideration at both meeting of the thought of combining the meetings of the two clubs in the future, but this action was tabled indefinitely, as it was felt the purposes of the organizations

were best served by smaller, local and more "intimate" gatherings and a large body might be felt to be in conflict with Cape Cod Cranberry Growers' Association. Rather small attendances were present at each. Supper was served at Rochester, none at Plympton.

Prof. Earl Cox, Agricultural Engineering Department, University of Massachusetts, substituting for H. N. Stapleton at both meetings spoke of "Mechanizing Cranberry Operations", saying it was planned to do some test work, with cost studies, whereby cheaper operations could be introduced into various factors of mechanical operations. There are frequently ways of cutting costs, he declared.

He said it might be possible to get out a lighter weight sprayer which would get onto the bogs, and avoid a crew of 6 or 8 men dragging hose and tramping over the vines. He said there would be studies upon improved methods of spreading fertilizer.

He contrasted dry scooping with wet raking, as is generally practiced in Wisconsin. An experiment

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Photo Courtesy Bell Aircraft Corp.

as made along this line at the State Bog last fall. He referred to the experiments of "The Western Picker" last year.

Electric-Eye Separator

As to injuries caused by "bouncing" berries in the present-type separator, he touched upon an electric eye device. That might have some advantages in preventing the present bruising, but he said the "eye" would not pick out rotten berries, as the soft spot would be the same color as the sound part of the berry. It would, however, distinguish between the green or white berry, and could cull these out for holding.

Discussing cellophane pack, he asserted experiments were being made with "films" or waxes to eliminate the carbon dioxide, which cranberries could not stand (as for instance, apples could for ripening) when packed in this container for the retail trade. He told of the storage of Howes and also Early Blacks at 35 degrees in experiment at the State Bog and these showed little difference in degree of spoil-

age, whether they had been machine or hand picked and hand sorted or dry scooped or water raked. Berries which were of excellent quality last fall did not, however, offer a "fair" test, he said, and in any event tests would have to be continued for five or six years before any definite recommendations could be reached.

Franklin Urges Use of Insect Net and Hand Lens

Dr. H. J. Franklin said, as everybody knows, financial conditions in the cranberry industry are not the same in 1949 as they have been in past years. Since this is the case, "we must find some ways to produce cranberries at lesser costs. We must learn to economize in our bog operations."

One of the best ways of economizing, he said, was in greater use of water in insect control. "I have in mind, as a means of saving costs in insecticides, particularly greater and more careful use of the insect net and the hand lens. There is no doubt that in past years we have wasted a great deal of money in

the needless use of insecticides. We have sprayed and dusted whether we knew we had to or not."

After stressing these items of more intense sweeping and the learning of the use of the hand lens for smaller insects and especially fruitworm egg count, he discussed the 1949 insect control chart and the new insect bulletins issued, or to be issued.

Dr. Chester E. Cross spoke on "Weed Control This Year", Mr. Beattie substituting, reading his paper at the Rochester session. There was a movie, "Good Neighbor Family".

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"From Screenhouse to Consumer" Program Teaches Even Older Growers Some Things They Didn't Realize.

A "Cranberry Marketing Conference", to present in a simple and comprehensive manner the fundamentals of the successful marketing of cranberries at Wareham Memorial Town Hall, March 17th, more than lived up to its announced intention, covering comprehensively all the steps from production, cleaning, sorting, sizing, bagging, storage, processing, warehousing, advertising, distributing, brokerage, wholesaling, retailing, to consuming. An attendance of nearly 200, many of them cranberry growers of many years experience, admitted at the close of the all-day session they had learned many things about their own business they had not realized before.

Morning session opened at 10, Emil C. St. Jacques, president of the Southeastern Cranberry Club,

presiding. He introduced as the first speaker, Sumner Parker, chairman of the Massachusetts Agricultural Program Board. Former State Commissioner of Agriculture and now Extension Marketing Specialist, U. of M. Fred Cole acted in the capacity of master of ceremonies in the opening discussion, keeping the meeting moving at a fast pace.

Mr. Parker explained that the board of which he is chairman is made up of 12 units, from the Bureau of Agricultural Economics to Extension Service, and its purpose was to coordinate and bring together these state services. He welcomed the growers and pledged the service of this board in the solution of their problems.

J. Richard Beattie, Massachusetts Cranberry Specialist, who was "manager" of this important meeting, thanked all who had assisted in the program and getting together and arranging a comprehensive cranberry display. He announced to the growers the purpose of the meeting. It was, he

said, "to get at the fundamentals of marketing. I feel sure the growers can be made more conscious of some of the very exacting problems of your marketing agents, and with better understanding improvements can be made."

Cole Led Discussion

Mr. Cole led the discussion of "Cranberries from the Screenhouse to the Consumer." He said: "Our job is to explain the progress of cranberries from your bogs to the table of the consumer. "No agricultural product is worth much until it is consumed—the growing of cranberries means little to you unless your berries are eaten. Now how do these berries get on table in New York, Kansas City, San Francisco, etc? This is what we are going to try to explain this morning all the way through starting with the screenhouse.

Screening—Ray Morse

Ray Morse of New England Cranberry Sales Company was the speaker for this topic. "We have come a long way", he said, "from the old-fashioned method when the



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grower took a separator down to the bog, winnowed his fruit, poured it in a barrel, headed the barrel and carted it away to the depot that same day. We in the NECSCO want at least 36 hours of cooling before separation. We've come from the barrel to the half-barrel, the quarter-barrel box, to the cellophane.

"We have come to more centralized packing. Fewer growers are doing their own, and, we believe, rightly so. Your organizations are doing it for you efficiently and economically. Increasing costs make it hard for the individual to operate his own screenhouse."

He said studies showed screening costs varied from 25 cents a barrel to \$2.50, most from 30 cents to 70, but he believed a fair average might be 70 cents. Demand is getting more particular in a quality pack and central packing houses getting more efficient, but he hoped "some day we will have a machine which will not have to bounce cranberries all over the lot in screening". He left the growers with the statement that there must today be a quality pack of quality berries, particularly with cello-

phane. He said, in answer to a question by Mr. Cole, that packers were usually more fussy in quality for cellophane, but this was "debatable", and if it was true should not be so, as all fresh fruit should be of quality pack.

Processing—Lawrence Bailey
Lawrence Bailey of National Cranberry Association spoke from the processing angle, beginning by saying there was a time when the grower thought "any old kind" of cranberry was suitable for the pro-

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ALL ITEMS TO COMPLETE A COMMERCIAL BOG ROTARY SPRINKLER IRRIGATION AND FROST PROTECTION SYSTEM

Write or Phone for FREE Descriptive Literature with Prices on the following:

GORMAN RUPP PUMPING UNITS—all sizes.

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FLEX-O-SEAL LIGHT WEIGHT IRRIGATION PIPE.

"**TEXTOLITE**" high-pressure, non-corroding tubing for surface use, permanent installations or buried lines.

SPRINKLER HEADS in all sizes, 4 q. P M

(All items in stock at our Cape Cod Location)

Layouts and Estimates at no obligation. All equipment delivered to the bog and put into operation with our assistance. (Mass. bogs). Our "know how" is based on hundreds of installations on farms and bogs, as well as operation of this type equipment to water 200 acres of our own.

VEG-ACRE FARMS, IRRIGATION DIV.

Forestdale, Cape Cod, Mass., off Route 130, at Snake Pond Road by car
Tel. Osterville 719

Peter A. L_e Sage

"Keep Smiling"

PLYMOUTH
Tel. 740

YARMOUTH
Tel. Barnstable 107

Distributor of Cape Cod Cranberries

cessor, but this was changed.

"We are now processing berries under three heads, jelled sauce, whole sauce, and cranberry juice cocktail. Each of these requires a different berry, and these should be selected in advance for the purpose. The grower should determine in his own mind which cranberries of his crop are going for which purpose."

Distribution—E. C. McGrew

E. Clyde McGrew, assistant general manager of American Cranberry Exchange, declared the next step after packing and making ready for marketing was to decide how the berries are to be distributed. "This is our job.

"First", he said, "we must know what size crop we have to distribute, and then, knowing that, we must fit it into the demand—what part fresh and what processed.

All summer we have studied economic conditions, labor conditions in various areas over the country. Our job is to put the volume we have into markets of greatest potential demand.

"We try to send more berries to areas where economic conditions are better, where there is better purchasing power. We analyze these potential markets and we also make studies of means of transportation. We decide which berries to send long distances, which short. It is most economical to send berries short distances, such as New Jersey berries to the southeastern states, Wisconsin berries to the central states, but this is not always possible, although we try to "spot" the fruit with the shortest haul possible and in greatest quantity to the best markets."

Brokers—Kenneth Atwill

Kenneth Atwill, sales department, NCA, took up the discussion, telling of the work of brokers. The broker, he told the growers, is an expert in the markets, he is intelligent, alert, and must be a pusher, and he has to know his own market area. He becomes your agent, he is paid by you.

"I try to find the best broker in each area. One method I use is to ask wholesalers 'who do you want for a broker of cranberries in this area?' This method usually narrows the field down to one, or sometimes two in larger market areas. When I have selected our broker or two brokers in each market, I tell him what the situation is as to the cranberry market. When the crop is ready the broker goes out to the wholesaler and jobber and tries to sell cranberries. If he doesn't, we find out why.

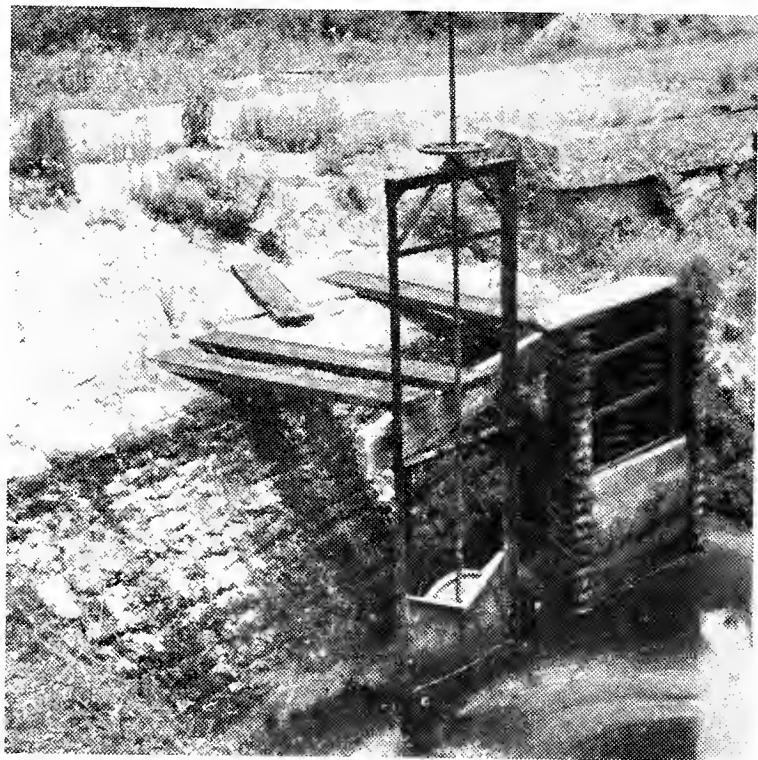
"The broker acts as our agent—he is absolutely indispensable. He is our eyes, ears and mouth in his area. He knows general and local marketing conditions. You pay him, but he is as anxious to sell as you are. The more he sells the more you both make."

Melville C. Beaton

Melville C. Beaton, Beaton's Distributing Agency (Independent), Wareham, carried the brokerage discussion further. He asked "Just what does a broker do?" He answered by saying the broker was the grower's employe for the cranberry season. "He is your direct distributor. It is not possible for your co-operative or your distributor to be in every market area, every day in the season, but your broker is."

He continued, there are some who do not buy through brokers but from the distributor directly. These include the chain stores, particularly, although some wholesalers and some jobbers buy direct. Brokers sell other products than cranberries, all kinds of fresh fruits and vegetables. This constant touch with their market makes them conscious of what the demand is from day to day. "The broker is the contact between the manufacturer of a product and the retail seller."

Mr. Beaton said he knew of no



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R. A. TRUFANT

Hydraulic Consultant — Bog Railroads For Sale or Rent

Tel. Carver 64-11

NORTH CARVER, MASS.

broker who sold cranberries exclusive of other products and neither did Mr. Atwill. Beaton said he preferred "F. O. B." shipping as against consignment because in the former you make a sale and know, at least in theory, what you are going to get. Mr. Atwill said that as a rule a broker of fresh fruit was not a good broker of processed fruit, and a broker of processed fruit was not good at fresh fruit, as each required a different type of knowledge. The broker of processed fruit was a different type of fellow, more conservative, as his product is more stable in price, he said, while the broker of fresh fruit is up against a market which may fluctuate.

A Wholesaler—David Warren

Next speaker was a wholesaler, David Warren of Nathan Warren & Son, Providence, R. I. He explained how a wholesaler operated. He began by giving a little background of his own firm, which, he said, was small as many wholesalers go. His father came from Russia 30 years ago, with scarcely soles to his shoes, not speaking or

writing a word of English. He settled in Fall River and started peddling fruit from a wagon. From that he branched into wholesaling fruit and moved to Providence.

"The wholesaler", he said, "has

produce, including cranberries, in season from all over the country. We have to move this produce. We try to anticipate the needs of our buyers—small jobbers and retailers. We feel it obligatory to give

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**NOW is Your Opportunity to Become Affiliated with
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Through a membership in the New England Cranberry Sales Co., the local cooperative with a pooling method which distributes proceeds of all sales equitably to all members.

This Company welcomes inquiries concerning its operations and extends a cordial invitation to every cranberry grower to join.

New England Cranberry Sales Company

9 Station Street

Middleboro, Mass.

the trade what it wants. We have to give them quality." He stressed the great importance of confidence of the trade. The wholesaler must have confidence in the broker and the jobber or retailer must have confidence in the quality of the produce of the wholesaler.

Mr. Cole summed up that confidence was the keynote of the whole process of cranberries or any other fruit. There must be confidence in the quality pack of the producer, in the broker, in the wholesaler, in the jobber, in the retailer, until the product reaches its end result—the table of the consumer.

He gave some details to retailing, saying that 65 per cent of a grocery store business is done on the last two days of the week, Friday and Saturday, Monday and Tuesday using only 8 per cent.

He turned to pricing, saying there is an awful lot of difference in sales between an article marked 18 cents and one marked 19c—usually the one marked 19c sold better. The six most popular prices today, as proven by study, are 25c, 29c, 19c, 39c, 49c, 59c, there are some 5, 7, 3 and 1, but that even numbers are seldom, if ever, used. "Impulse" buying is now going out—this is most prevalent when the housewife has plenty of money in her pocketbook. Now most consumers are budgeting, and she weighs the value of each item she purchases.

The Consumer's Table

Concluding the morning program, which had taken the cranberry from the packing house to the retailer, explaining the interlocking steps, the final demonstration showed "Mr. and Mrs. Consumer" (impersonated by Ferris C. Waite and Miss Lois Day of NCA) seated at a breakfast table, having the opening meal of the day, which included cranberry cocktail and cranberry sauce spread on their toast.

The afternoon program was conducted by Robert S. Handy, president of Upper Cape Cranberry Club.

Advertising Fresh—Miss McNally
First speaker was Miss Elizabeth McNally of the New York

office of ACE, who explained how the advertising program was carried out to move the crop once it is in the hands of the retailer. Elaborate plans were made to "ready" the market for the crop, and that ads were "spotted" in the various markets, more advertising for the larger, less where demand potential would be less, for economic or other reasons. She pointed out it was necessary to keep "educating" the housewife to use cranberries "over and over again"; they forget, and new, young housewives are constantly coming in. A standby was the advertising of tried and true recipes. "We intersperse these familiar recipes which we know are good, with newer ones to stimulate interest."

She especially pointed out that consumers are getting away from bulk buying. "The housewife wants everything in packages. She wants to go into a store, pick up a package, put it in her cart, and go to the check-out gate. Whether we like it or not, this is an unfightable trend—at least at present."

She told of the advertising mediums used, magazines, newspapers, store displays, recipes to home economic groups. "We have done a lot, but there is more to be done, this educating of the public to demand cranberries is an endless proceeding".

Processed Advertising—Mann

H. Gordon Mann, of NCA, speaking in the absence of Miss Ellen Stillman, advertising director for NCA, said about \$500,000 will be spent in advertising between Sept. 1948 and Sept. 1949. He told of full-color spreads and smaller ads in women's "service" magazines, such as "Ladies' Home Journal", "Good Housekeeping", "Woman's Day", put out through a chain, to arouse consumer demand, black and white ads in newspapers to directly aid the retailer, one radio program, featuring Marjorie Mills. He went at some length into obtaining publicity which cost little, an excellent example of this being "National Cranberry Week" held last fall, and particularly the wedding of the "Little Red Cranberry and the Little White Hen", which obtained publicity in every corner of the country. This was not just

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Save Cost On Your Weeding

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Willow St. Garage

BASS RIVER, MASS.

Save Priceless Water

**BUY
PORTABLE OVERHEAD SYSTEMS
for
IRRIGATION AND FROST CONTROL**

**STEEL or ALUMINUM PIPE
Equipped with
McDOWELL STEEL COUPLINGS**

**There is no other similar or equal equipment
NO LATCHES NO HOOKS**

Write or phone. Our local representative will call.
No charge for Design and Blueprints to suit your particular bog.

LUNDQUIST COMPANY, Inc.

TEL. PUTNAM (CONN.) 1917

WEST WOODSTOCK, CONN.

"stunt", he added, but a careful man to get the greatest amount of publicity possible.

Retail—Edward Stillwell

Edward Stillwell, consultant to the National Association of Chain Stores, gave an excellent talk upon marketing, saying retail pricing is not mathematics, it is not the science of physiology, but a combination of both. "The most exact definition I have ever heard, I think, is that the best selling price is apt to be a compromise between a price just plus which the producer wants, and what the consumer wants to pay."

The quantity of buying is also of utmost importance. He "personalized" this by showing two packages of cranberries, one fresh and one processed, saying that if this represented the entire supply of a season and each of those in the room bought one of each the supply would be taken care of. "However, if there are now three packages and you only continue to buy two, we must either induce you to buy one more each or go outside of this room and make someone else buy the third, or there will be surplus."

He pointed out that staples, such as potatoes and bread almost always moved without too much regard to price, as people had to have these, but when it came to luxury or semi-luxuries then price is important, as the buyer has the opportunity to pass this luxury up. He told of the success of united effort on the part of an entire industry to move a surplus crop, citing the example of the avocado growers, who built up a market for this fruit through advertising, and in a year of surplus all got to-

gether and put on an intensive campaign—and moved the crop. He mentioned "complementary" sales—such as at the mention of bacon the buyer always thought of eggs, corn beef and cabbage, cranberries and turkey.

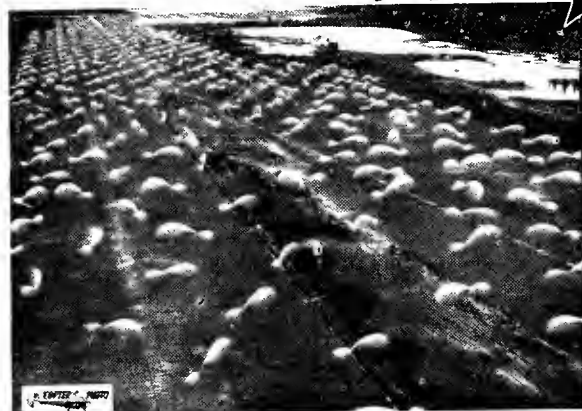
Last year, he said, he honestly believed the fact that turkeys were sky-high in price and scarce had a great effect upon the sale of cranberries. He mentioned competing products, that tomato sauce is usually associated with veal. He suggested advocating cranberry sauce instead. He tore 12 ads out of a current issue of a magazine,

displaying them, and all were alcoholic ads, representing a cost to the advertisers of \$54,000, he said. He mentioned \$14,000 in tobacco ads in the same issue, \$19,000 in soft drinks. These are all competing against cranberries, he explained, they were competing for the dollar of the consuming public.

Competent and aggressive selling not only created demand, but even slightly increased prices. In times of lowered income there is "forced" buying—that is, the buyer is forced to forego many items he or she might want, and take only what is necessary. He said it was import-

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SPRINKLERS
LIKE THIS



Provide
Protection from
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of Cranguyma Farms,
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SPREADING out in an impressive acreage in the great Northwest, Cranguyma Farms at Long Beach, Washington, represents an important part of our nation's cranberry production. Standing as dependable guardians against frost and drought 1000 Rainbird sprinklers provide the correct and necessary rainfall whenever it is needed. This outstanding installation is indicative of the dependability of Rainbird Sprinklers. The distributor or dealer listed below will be pleased to furnish additional information upon request.

PACIFIC COAST DISTRIBUTORS

R. M. WADE and CO. ARMCO DRAINAGE & STOUT IRRIGATION INC.
Portland, Oregon METAL PRODUCTS CO. Portland, Oregon

EAST & MIDWEST DISTRIBUTORS

L. R. NELSON MFG. CO.
Peoria, Illinois

MASSACHUSETTS DEALERS

JOSEPH BRECK & SONS IRRIGATION DIVISION VEGACRE FARM
85 State St., Boston, Mass. Forestdale (Cape Cod), Mass.

RAIN BIRD SPRINKLER MFG. CORP.

GLENDORA

CALIFORNIA

COLLEY CRANBERRY CO.

SHIPPERS OF
CAPE COD CRANBERRIES

"Suitsus Brand"

Plymouth, Mass.

Office 17 Court St. Tel. Plymouth 1622

ant that "the trade" was able to make a reasonable profit in handling a certain commodity.

Present Situation—McGrew

Mr. McGrew, next speaker, whose topic was "Fresh Fruit Sales to Date", opened by saying he had received far more out of the meeting than he had put into it. He said the keynote of this meeting had really been "confidence"—confidence in a product from the hands of the producer to the hands of the retailer.

CUT TALL GRASS... WEEDS... BRUSH
Faster and Easier

Mows fast and clean around buildings, fields, under trees, fences, along road-sides, and in light corners.



Cuts 4 to 6 acres in 8 hrs.
Easy to handle on rough ground or steep slopes. Cuts 1 1/2" from ground. Rugged. Economical. Dependable.

BETTER IRRIGATION
With **LESS WATER**
A Model For Every Pressure
PATENTED

For Farm, Orchard or Truck Garden. Easily and quickly mounted on any irrigation pipe. Heavy duty brass and bronze construction for long service. Sand and dirt proof. Water lubricated bearings—no oil or grease required. No fast moving parts to rapidly wear out. Maximum coverage—even distribution.

BUCKNER MANUFACTURING CO. (C)
1815 Blackstone Ave., Fresno, California

BUCKNER SPRINKLERS

THE *Clapper* CO.
1121 WASHINGTON STREET
WEST NEWTON 65, MASS.

He said he believed a total of 475,000 barrels had been sold on the fresh fruit market. This seemed large, but he went on to show that as far back as 1907 427,000 barrels had been sold fresh, but in 1934 processing had begun to cut into the market and in recent years more processed had been sold than fresh.

However, he felt strongly that the fresh fruit market could be brought back to 50 or 60 per cent or more of all cranberry sales. He said processing was originally intended as a form of "insurance" for surpluses and that it was bad merchandising when one outlet "starved" the other.

He told the growers the need today was for quality fruit and there had to be quality fruit before there could be quality pack. This was true in apples, tomatoes and every other product. "The retailer doesn't want poor quality fruit, the consumer won't take it." He concluded he felt certain the fresh fruit market could be built back again "without plowing under every third grower."

Processing—Gordon Mann

H. Gordon Mann, sales manager of NCA, said it was difficult to get the actual sales figures of processed fruit to date, because of the amounts in freezers and in hands of wholesalers and retailers, but he felt 1948 processed sales had been 4,750,000 cases, increasing from 3,960,000 in '46 and 3,720,000 in '46. The best estimate of present carry-over, he felt, was 490,000 barrels, this being by all the industry.

While he admitted this appeared bad, it was really not as bad as it seemed—NCA normally carried over 100,000 barrels to get an early

start in fall processing and hope to move a large part of its carry-over with intensive spring and summer selling campaigns. "This surplus must be moved before we get back to a normal business, but I believe this can be done. The cranberry industry and our methods are fundamentally sound."

The Normal Crop—Dr. Franklin

Dr. H. J. Franklin gave a much anticipated answer as to what might be considered a normal crop. He said that although he had been asked to make a forecast for next season he felt it would be "foolish if not downright dangerous" to do this and so would give what he considered a normal crop. This figure would not be a potential normal crop, but an average normal crop and was in no wise to be considered as an "estimate" for 1949.

His studies showed that Massachusetts might be normally expected now to produce 500,000 barrels which is less than last year's production, while the total for the country might normally be 800,000 barrels, also less than last year. He said if this proves to be the case he feels the industry can make some progress in reducing the carry-over and get back to a normal basis.

Growers Council—Benson

Mr. Benson, author of the plan for more coordinated marketing between ACE and its respective state companies and NCA and the independents who desire to operate under the Cranberry Growers Council, explained this plan. He gave a history of the work done and urged independents, particularly the smaller ones (as being more beneficial to them) to join one camp or the other.

CRANBERRY REAL ESTATE APPRAISING	BOG MANAGEMENT
17 Court St. Plymouth, Mass.	Tels: Plymouth 1622 Kingston 319
<p>If you are buying or selling Cranberry Property it will pay you to see us.</p> <p>A number of properties available, more wanted.</p>	

He felt confident the industry can be brought back to a satisfactory condition, but that a five-year plan of the Growers Council is necessary, two to "get back to normal", and three more to give it good tryout. He said it was not only the privilege, but the duty of every grower of cranberries in the United States to come in under this plan of more orderly marketing.

Confidence, Quality—Munson
 Concluding speaker was Willard Munson, Massachusetts Extension Service. Mr. Munson said he had seldom attended a conference with such an intelligent program that he had heard that day. He said that learning about one's business was not a one year job, but an endless one, as conditions and situations are always changing. The population of the country is now up to 148,000 and growing at the rate of a million a year, and "your industry is keeping up in production with this growth." He said there are only two ways for each individual to chart his course—one is to plan to go ahead, or he would go backward. "I will forecast this industry is going ahead, and I say this more particularly after what I have heard today. I will say this, the degree of success attained by any industry is the sum of the efforts and the teamwork of each individual.

"Everything that any member does which is harmful harms all. Everything he does which is progressive and good benefits all. You must produce quality first."

For the meeting the stage of the auditorium had been set with a very interesting display which included cranberry products, fresh and processed, an old-fashioned cranberry barrel, which object many growers had not seen in years, present day containers, maps, photographs, advertising posters and drawings showing the progress of the cranberry from picking to the consumer. At noon a buffet lunch was served by ladies at the Wareham Methodist church.

Urann and Group

(Continued from Page 4)


berries to the canneries, as well as the general marketing conditions of the cranberry industry as a

whole. The following Advisory Committee members were elected for the coming year: for the Grayland area, Edwin Warness, David Pryde, and William Huovila; for the Long Beach-Clatsop area, Rolla Parrish, Robert Ostgard, Mrs. Gertrude Dellinger, and Dr. J. Harold Clarke; and for the Bandon area, Sumner Fish, James Olson and Lewis McGeorge. The growers nominated Edwin Warness of Grayland for membership on the Board of Directors of the National, representing the Grayland area, to replace Einar Waara, also of Grayland, whose term expires at the annual meeting in June. The term of Leonard Morris of Long Beach, representing Long Beach and Bandon growers, has one more year to run.

Following the growers' meetings on the West Coast, Mr. Urann and his party stopped at Chicago for conferences with some 150 Ocean Spray brokers and their representatives, who were attending the annual convention of the National Food Brokers' Association. As at the canners' convention in Atlantic City in January, NCA invited all its brokers present to attend an Ocean Spray Breakfast on Tuesday, March 22, at which time officials of the National spoke before the group as a whole.

The center of all discussions at the Chicago gathering was the new cooperative merchandising plan which is now operating in full swing. That the plan is producing results is evidenced by Ocean Spray sales, which are running

A Cordial Invitation to Visit Our
 Display



INDUSTRIAL ENGINES

Spring Meeting — Cape Cod Cranberry Growers
 Town Hall, Wareham April 27, 1949

H. A. SUDDARD Inc. Wareham, Mass.

Cranberry Growers...

You value the sound, proven recommendations of the East Wareham Cranberry Experiment Station in growing your crops successfully.

Equally invaluable to you is sound, properly written Insurance fitted specially to the needs of Cranberry Growers.

E. A. Thacher of this firm will be happy to discuss your requirements, and without charge or obligation, prepare a survey of your property and needs.

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ahead of last year. Brokers reported that retail stores in their areas are making good use of the advertising funds available to them and are cooperating in building large Ocean Spray displays to tie in with their newspaper and handbill advertising. They are enthusiastic about the plan and feel it will help to increase Ocean Spray sales all over the nation.

Cranberry History

(Continued from Page 12)

In the next chapter this chronicle will return to Massachusetts, to Middlesex and Essex counties, where the culture also began early—and hopefully.

(Note—The author repeats once more that he would appreciate any readers finding errors of fact or important omissions would send them in. This is an attempt to tell the story of the cranberry industry in its broad outline in chronological order, and it is hoped an accurate account may be set down).

Fresh From the Fields

(Continued from Page 6)

ent J. H. Wood. The main purpose is to study the possible benefits from minor elements such as Boron, copper, manganese and magnesium. These minors were added to a blanket fertilizer such as 5-10-10 of 3-10-10.

Season Late

The weather has been of much interest because of its unusual nature. Winter began in November, December, January and February bringing snow, which remained on the ground longer than most old-timers can remember. Then came drizzling rain and a few storms which kept growers from making much headway in spring work, delaying the spraying program. Price of "paint thinner" has gone up and the old method of hand weeding may be resorted to more than in the past few years.

New Planting

In spite of the low prices for the crop last fall many growers are making some effort to continue to expand their acreage. Vines have been brought in from Washington

to supplement the short Oregon supply.

LONG BEACH CRANBERRY CLUB MEETS

The Long Beach Peninsula (Washington) Cranberry Club met at its usual meeting place, Friday, March 11th. D. J. Crowley notified the growers that the 1949

spray chart was in print and would be distributed shortly. William Johnson, Agricultural Engineer from the State College at Pullman was present and showed some slides of various methods of cranberry harvesting. Frank Glenn of Cranguyma Farms also showed several reels of film, including cranberry scenes, and a travelogue of Glacier National Park.

Beaton's Distributing Agency

NATIONAL DISTRIBUTORS

of

Cape Cod Cranberries

for over a quarter century
in United States and Canada

Wareham, Mass.

Tel. Wareham 130 or 970

APRIL AND SPRING IS HERE AGAIN!

We all feel better with the return
of better weather

WE ALL FEEL BETTER WHEN WE HAVE
DEPENDABLE, ECONOMICAL

ELECTRICITY

At the Press of a Button
in Bog and Screenhouse Operation
and in the Home

Plymouth County Electric Co.

WAREHAM

PLYMOUTH

Tel. 200

Tel. 1300

ARIENS TILLER THE ONLY TILLER WITH...

- Full horsepower motor
- Standard two speeds—forward and reverse.
- Positive action, multiple disc clutch.
- Full sized 3/4" electric alloy steel lines.



ARIENS COMPANY • BRILLION, WIS.

Scoops and Screenings

The famed or "infamous" New Jersey mosquito is not so numerous by 90 per cent as he used to be, it was said at the 36th annual meeting of the N. J. Mosquito Extermination Association. "In the past three decades", declared A. Paul King, Toms River, director Ocean County Board, "New Jersey has pioneered and performed an outstanding job of mosquito extermination and control. Energetic county commissions have given the lie to Noah Webster's late 19th century definition of New Jersey as the "mosquito state". But 36 cases of malaria were reported in the state in '48 and all but one were acquired from infections outside of New Jersey.

.....

When John Smith and Miles Standish came to America, according to the University of Massachusetts the top soil averaged about nine inches in depth. Today the national average is six, all lost due to the ripping and wearing action of water and wind on unprotected land and to the removal of organic matter. Without top soil we don't eat.

.....

Airline hitch-hiking by insect pests has become a serious problem among airlines reaching foreign countries, says the U. S. Department of Agriculture. Federal entomologists are active in devising and testing ways of "disinsectizing" aircraft.

ADS can be news, too AN AD IN CRANBERRIES Magazine

IS AN ADVERTISER'S
BEST METHOD OF
GETTING HIS "NEWS"
BEFORE THE INDUSTRY

CONTROL

Cranberry Root Grubs
White Grubs • Chokeberry
White Violets • Loosestrife
Poison Ivy • Small Bramble
Three Square Grass • Wild Bean

use

SOLVAY



TRADE-MARK REG. U. S. PAT. OFF.

PARA-DICHLOROBENZENE

The Massachusetts Cranberry Experiment Station Charts recommend Para-dichlorobenzene for treating Root Grubs, White Grubs, Chokeberry, Poison Ivy and Wild Bean. For best results, bogs should be treated in April or early May. Write for details.

SOLVAY PARA-DICHLOROBENZENE
FOR TREATING CRANBERRY BOGS
is distributed by

THE CRANBERRY TRADING POST

- Plymouth, Mass.
- Onset, Mass.
- North Harwich, Mass.
- Bordentown, New Jersey

SOLVAY SALES DIVISION ALLIED CHEMICAL & DYE CORPORATION
45 MILK STREET, BOSTON 9, MASS.

Preparing for Big Increase in Fresh Sales

During the coming season the American Cranberry Exchange hopes to sell more fresh cranberries than have been sold in any year since well before the war.

Long hours of work are already going into sales and advertising plans. Everyone from dealer to retailer to consumer will be stirred up by the biggest fresh cranberry promotion in the history of the industry.

The growers' part of the big post-war push is to raise the soundest, best-keeping berries they know how.

This is the year to shove fresh fruit sales back to the pre-war high.

The American Cranberry Exchange, Inc.

"The Cranberry Growers' Cooperative for 42 Years"

Marketers of

**Eatmor
Cranberries**

Chicago

New York

JUL

1971

