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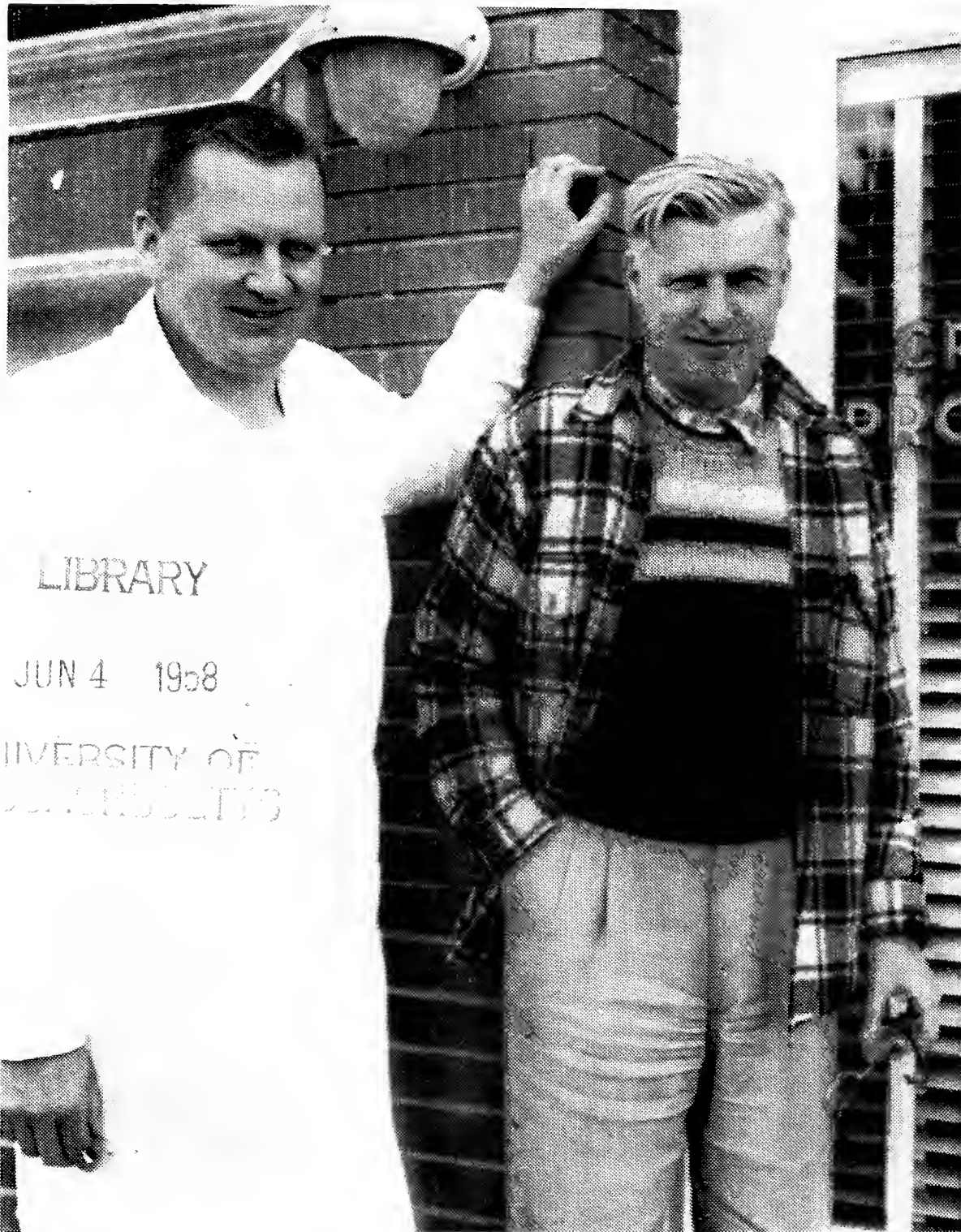












WISCONSIN'S VERNON GOLDSWORTHY (right) with Ralph Sampson  
Story page 7. (CRANBERRIES Photo)

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## New Motion In Berry Suit

A motion was filed in May 7 Federal District Court, Boston, in a suit by Morris April Brothers of Bridgeton, N.J., to have Maurice B. Makepeace substituted for the late John C. Makepeace as a defendant in a monopoly suit. Mr. Makepeace is executor of the John C. Makepeace estate. National Cranberry Association is a main defendant in the April suit which was filed in July 1956.

### CAPE CLUBS ELECT 1958 OFFICERS

Officers of Massachusetts Cranberry clubs elected at final meetings were: Upper Cape, president, Victor F. Adams, Osterville; vice-president, F. Maynard Gifford, Osterville; secretary-treasurer Alvan Crocker, Forestdale;

Lower Cape, president, Ernest Crowell, Dennis; secretary-treasurer, George Nickerson, Chatham.

South Shore, president Louis Sherman, Plymouth; vice-president, Alvin Reid, Hanson; secretary-treasurer, Earl Ricker; Southeastern; Oscar Norton, Rochester; vice-president, Howard Hiller; secretary-treasurer, Gilbert T. Beaton, Wareham.

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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



## 29.73 Inches of Rain

A record of 11.06 inches of rainfall was recorded in April by George Rounsville. This figure exceeds by over 3 inches any previous total for April and was easily the second wettest month since 1887, topped only by a tremendous 13.69 inches measured for September 1933. This information was gleaned from Dr. Franklin's bulletin No. 433 entitled "Weather and Water as Factors in Cranberry Production". Growers will note that the rainfall information found on page 30 of this publication is given in terms of the averages for Middleboro, Plymouth and Hyannis. Incidentally, 29.73 inches of rainfall has been measured at our station from January 1 through May 15, leaving a balance of only 14.68 inches necessary to reach the yearly average of 44.31 inches.

## Fungicides Called For

Temperatures for the month averaged approximately  $1\frac{1}{2}^{\circ}$  per day above normal. Apparently, our season is following a trend of relatively warm and wet weather. Such a pattern does not favor good keeping quality. It would seem at this time (May 15) that fungicide treatments will be needed on many bogs (both "early and late water") if all marketing agencies are to be assured of a good supply of sound fruit.

## Frost Season Normal

Frost activity has been about normal with 8 general warnings being released by mid-May, compared with 7 in 1957, 1 in 1956, and none in 1955. These include both the afternoon and evening warnings. The coldest night during this period occurred May 2

when temperatures dropped to  $16^{\circ}$  on one bog while temperatures of  $18-20^{\circ}$  were common on the cooler than average bogs. Damage apparently has been negligible. Before leaving the subject of frosts, we would like to urge growers who subscribe to the frost warning service sponsored by the Cape Cod Cranberry Growers Association to have their frost forms and pencils near their telephones. A careful check with our telephone distributors indicates that the new system is requiring a little more time to send out the message due to the time lost on the part of some growers in getting properly organized for these reports. In general, the new system is well received.

## Bog Vandalism

The Cape Cod Cranberry Growers Association has appointed a committee to determine if anything can be done to curb the wanton vandalism around bog properties. Reports of destruction of buildings, occasional fires, tampering with flumes, and thefts of equipment is almost a daily occurrence. Damages in terms of the cost involved of repairing of buildings, replacement of equipment, and the constant checking of bogs are reaching alarming proportions.

No estimate is available on damage to the crop because of the tampering of flumes, resulting in the loss of water for frost, irrigation and winter protection purposes, or flooding bogs at critical stages in their development. The committee mentioned above met recently with Sheriff Donald P. Tullock of Barnstable County to ask his counsel and advice. Several approaches to the problem were discussed. It is obvious that there is no quick or easy solution.

There was agreement that a strong educational program was needed to point out the serious-



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ness of the problem and its effect on our industry. Organized groups, such as the P. T. A., scouts, churches and other organizations, should be contacted and their cooperation requested. The press could perform a real service by printing special articles dealing with the seriousness of the situation. However, in order to be effective, the educational approach would have to be supported by strict law enforcement. With this thought in mind, the Southeastern Massachusetts Police Chiefs' Association was addressed May 14 by a member of this committee and its advise, support were requested. It was apparent that local authorities have received very few complaints in many areas. The committee, therefore, strongly urges that all growers report each and every case of vandalism to their local police headquarters. The reasons are obvious.

#### Spring Pests

Early spring pests will soon be with us. We are referring to *Sparganothis* fruitworm, weevils, false armyworms, blossom worms, spanworms, leafhoppers, and fireworms. If these pests are controlled in May and June particularly those that have a new or second brood, such as weevils and fireworms, they seldom create a problem later in the season.

#### Upland Work

May is a good month to treat brush around the uplands, using one of the brush killers. The low volatile esters of brush killers are reasonably safe for use on shores and uplands for poison ivy, brambles, and woody weeds if greatly diluted—one part in 250 parts of water. Brush killers should not be used with oil on dikes or shores next to the bog at this time of year because of damage to the turf. For those who will be using Stoddard Solvent after "late water", it is strongly suggested that such work be completed within 5 days after the flood has been withdrawn and within 8 days if kerosene is to be used. Less damage will occur

to vines if these treatments are made when temperatures are below 65°.

#### FIRST MASS. SPRING CRANBERRY CLINICS

First cranberry clinics of the season were held in Massachusetts May 27 and 28. Plymouth County groups met at NCA warehouse Hanson in the afternoon and at State Bog in early evening.

Features of the latter meeting were demonstrations of a new low-gallonage sprayer developed by the Station staff and of a newly-installed irrigation system on an acre of the bog. In the set-up plastic pipe was laid underground, with only the risers and spray nozzles to disturb normal bog operations.

Second day meetings were at A. D. Makepeace Company screenhouse, West Barnstable and NCA screenhouse, North Harwich. At all sessions there was discussion of early spring insects and weeds and their control and uses of fertilizers.

#### MORE CRANBERRY AID FROM U. OF WISCONSIN

Wisconsin growers are receiving increasing active assistance in cranberry growing from the University of Wisconsin. Dr. Malcolm N. Dana and Dr. Roberts are working on weed problems, Professors Albert and Corey investigation nutrition, Professor Weckel and his group on utiliza-

tion of the crop; Professors Boone and Mitchell of the Plant Pathology Department are initiating a program on disease control, and it is possible Professor Wright in entomology will also start some work.

### Cranberry Show At Tabor Library

A cranberry exhibit at the new Tabor Academy library in Marion, Mass. has been arousing much interest. It was set up through the cooperation of Miss Phyllis Sprague, librarian, and a group from Cranberry Experiment Station, East Wareham.

Dr. F. B. Chandler contributed a number of cranberry barrel and box labels, many of these old and now curiosities. He also displayed new labels. Dr. Bert Zuckerman, pathologist at the Station placed some cultures in the show and Prof. William E. Tomlinson, entomologist, a display of cranberry insects.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of May 1958 — Vol. 23 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, 1878

## FRESH FROM THE FIELDS

Compiled by C. J. H.

### MASSACHUSETTS

#### April Breaks All Rain Records

All local rain records were shattered for April—or any other month—when that 30-day period ended for 1958. A total of 11.06 inches was recorded at Cranberry Station, East Wareham. April precipitation normally is 3.35 inches.

A severe storm the last week of the month added 2.75 inches to the score.

A search of records at the Station failed to show any very near approach to this record. There was a total of 7.34 inches in April of 1940 and 7.75 inches in 1933, previous high April record.

Total precipitation in some winter months, which would include snow, had reached the 9-inch mark. Month of greatest rain previously was May 1901 with 8.58.

The first four months of 1958 brought a grand total of 29.67 inches which is well over half of a normal year's precipitation which is 44.31.

#### Warmer Than Normal

April was a month warmer than normal by about 45 degrees, or approximately a degree and a half a day.

Dr. Cross, director of the Station, stated that so much rain and the warmth was not conducive to a quality crop, although good for quantity. Bogs looked very good, with a bud for plenty of set. Vines were vigorous and there was a happy lack of leafdrop.

Full reservoirs almost assured ample frost protection for bogs

which could be flowed. Through April and into the first of May, bogs had not advanced rapidly and were keeping "well behind the frost hazard."

#### First Frost

The first frost warning of the season went out on April 26th. Afternoon forecast was for 18 degrees, evening 15 to 16. However, there was some wind and cloud and lowest points reached were 18-19. Most bogs were put under and there was probably no damage. Another warning went out a week later, with forecast for 19-20, both afternoon and evening. The temperature did drop to be-

tween 17 and 22 and there was a general, heavy, white frost. This included the Cape proper and all the cranberry area. Checks by workers at the State Bog later failed to find any appreciable damage.

### NEW JERSEY

#### April Normal In Temperature

Despite some dry and balmy weather throughout the middle portion of the month, April averaged out just about normal in temperature but considerably wetter than normal. The average temperature was 52.7°F., about

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.8° warmer than normal. This was achieved by two 80 degree days and 10 in the seventies. Low temperatures of concern occurred on the nights of April 26 and 27, when cranberry bog temperatures dropped to the vicinity of 25°. However, no damage was done to the few bogs which were not still under water at this time.

#### Rainfall Heavy

The rainfall in April exceeded the normal for the sixth straight month. There was a total of 4.99 inches on 11 rainy days, 1.58 inches more than is usually recorded in this month. Through the first four months of 1958 a total of 23.33 inches of rain occurred. This is 10 inches more than normal for this period and represents about 54% of the usual annual total. There is a superabundance of water available for spring frosts.

#### Much Late Holding

Most New Jersey cranberry growers as of May 6 still had water on their bogs. Many were holding until May 10. This is a practice being pursued by a greater number of growers each year. It is the experience of these cranberry men that in the long run less frost and insect damage results from this comparatively late holding.

## OREGON

Some western Oregon cranberry growers lost sleep for about the last ten nights of April when the temperatures were playing around 29° and sprinkling systems were kept going. It certainly is creating a problem here at the time of the year when the ground should begin to warm up but is still wet and cold due to sprinkling against frost threat.

R. G. Rosenstiel, Entomologist, Oregon State College has outlined a control program for certain cranberry insect pests in the 1958 Oregon Insect Control Handbook which is on sale at Oregon State College. A circular listing some of the more important of these and their control measures

will be made up and sent to all southwestern Oregon growers within two from this date from the Coos County Extension office.

## WISCONSIN

#### Water Deficient

April was slightly above normal in both temperature and precipitation on a state wide average. Mean temperature for the month was 46.8 degrees compared to an average of 42.9 degrees. Maximum for the month was 82 degrees and minimum was eight above. The first three weeks were above normal in temperature and the last week was below normal. Total precipitation was 2.73 inches compared to the average of 2.59 inches. Some areas received above normal precipitation, but this was mainly confined to local areas. The May weather outlook is for temperatures expected to average below normal with large fluctuations. Precipitation will average above normal. Normal temperature for the month is 55.2 degrees and normal precipitation is 3.52 ins. Deficiencies in precipitation for the year is 2.86 inches. Water tables remain 1.40 feet below normal. Total

rainfall to date is 3.79 inches compared to a normal of 6.65 inches.

#### Water Pulled

With the early April warm weather, most marshes pulled the winter floods off the end of the first week in April. Vines remained exposed until the last week in April when temperatures dropped very low on the 27th and 28th. Cooler weather the latter part of the month curtailed vine development and no frost protection was necessary up to the first of May.

#### Frost Service May 1

The Wisconsin Frost Warning Service begin operations on May 1. James George is again in charge of this project, which originates from the U.S. Weather Station at Truax Field, Madison under the overall direction of Mr. Joe Rigney.

#### 150 New Acres

Growers were busy in April doing combing, pruning and ditch cleaning. Some planting was done the latter part of the month, with most planting scheduled for the first half of May. An estimated one hundred fifty acres are expected to be planted in Wisconsin this spring. Fertilizer

(Continued On Page 20)



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# From A Study Of Inventory Maps There Came Wisconsin Cranberry Developments

The Enterprising Vernon Goldsworthy

Opened Up "Sensational" Virgin Northeastern Counties—Now Home Of Cranberry Products, Inc.

by  
Clarence J. Hall

When the enterprising Vernon Goldsworthy of Wisconsin studied some inventory maps of Northeastern Wisconsin about a decade ago he started something. This, that he began has grown to be not only of importance to the Wisconsin cranberry industry but to the entire cranberry production picture.

He opened up vast, virgin cranberry country with almost limitless growing potential. Today his vision is literally bearing fruit, and we might add, "and how!" At the time he conceived the idea he was living at Wisconsin Rapids. He also envisioned the development of new cranberry products, in which he is now heavily engaged and in opening new sales fields.

"Goldie" (CRANBERRIES July 1944) is certainly one of the best known and most active figures in the Wisconsin field and throughout the whole industry. He has been in every growing area; his activities have been frequently covered in this magazine. A native Wisconsinite, he has been interested in cranberries since 1933. In fact, since he wrote his University of Wisconsin thesis on "False Blossom of Cranberries". As a long-time manager of Wisconsin Cranberry Sales Company, from 1933 to 1944, he operated when that unit of American Cranberry Exchange was at its peak; he constantly traversed all Wisconsin growing areas, at the beck and call of growers day or night. He became a grower himself, operating the Berlin Marsh, near Berlin, this property which he rebuilt being one of the pioneer Wisconsin marshes.

After leaving Wisconsin cranberry Sales Company in 1944, for a time he was manager of a cherry cooperative in upper Wisconsin. Then he returned to get back into cranberry growing at Three Lakes as his Thunder Lake property was beginning to come into production, and to get into processing and distribution of cranberries. He is now located at Eagle River.

In the detailed maps of northern Wisconsin, made during the depression years of the '30s, Goldy was looking primarily for four

things. He thought he would find what he wanted at the top of Wisconsin.

### He Found What He Wanted

What was the kind of soil shown; was it suitable for cranberries, was the covering growth brown bush or leather leaf as the plant is variously known? Was there sand supply? Was there water available and what was the drainage? Finally, were there access roads in the northern woods?

He was searching for waste land that could be utilized, land

in virgin territory for extension of the cranberry industry—land which could be purchased economically, economically made into cranberry marsh and then be efficiently (economically) operated.

Studying over a long period of time he found virtually unlimited land which met the requirements. Cost was from \$1.00 to \$2.50 per acre. He studied the weather maps for these areas over the past fifty years. He found exactly what he wanted in a number of situations. These were mostly in Vilas and Oneida counties. This study opened up the new northeastern cranberry region.

Today seven operators produce about 25,000 barrels annually at "fabulous" Manitowish Waters, which is in Vilas county; five more in Oneida county. Production and acreage are increasing. (The story of Manitowish Waters cultivation around Little Trout Lake and that of the Quarry marsh at One-Stone Lake will be told in following separate articles.

### North Marshes Have Advantages

The foregoing is not to say there was not cranberry growing in northern Wisconsin before Goldie began developing these two

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counties. Eagle River, Vilas county is slightly north of the 46th parallel, but Hayward, Spooner and Shell Lake, where cranberries have been grown for many years are practically as far north; Phillips, where is located Cranberry Lake Development Company, Wisconsin's largest producing property is only slightly more southerly, and central. It is the new northeastern country which Goldy pioneered.

Incidentally the 46th latitude is only slightly north of Kentville, center of Nova Scotia cranberry culture. However, the northerness of such Wisconsin locations have proven not to be, a handicap. In fact they have one advantage; the northness gives slightly more hours of sunshine, so growth receives a higher sunshine factor. Also springs come slightly later which helps growers get more easily by the spring frost season.

The writer had pictured northern Wisconsin as a region of deep, tall woods, isolation and primitiveness. A visit there proved this north country to be a region of countless beautiful lakes, good roads between distant, but rapidly-growing, modern communities; it is a booming resort area,

in this respect not unfamiliar to Cape Cod.

Eagle River, for instance, which is the county seat, has a year-round population of 1500 and a summer census of about 30,000. When the writer was there, the 100th anniversary of its founding was in progress, and the men were sporting huge beards as did the lumber men who first settled there. Even though the streets are bustling and lined with modern homes and business establishments, there is still somehow a frontier atmosphere.

#### Still Frontier Country

These towns, small in population appear more city-like than towns of similar size or bigger in Massachusetts or New Jersey even though the wilderness is all around. There are wolves, occasionally a timber wolf, black bear, deer and bobcats. The virgin forests which at one time made Wisconsin the leading lumber state have long been cut and there is no heavy second growth of pine generally, but hemlock, birch, poplar, tamarack. Pulp wood is an important industry. The lakes have muskies, wall-eyed pike, bass and trout.

There are many pockets or large areas which are as yet to-

tally undeveloped. To reach some of these areas, which his maps showed to be potential cranberry land, Goldy had to drive as far as he could on a dirt road and then often have to break his way through the woods on foot. One such spot which he found on foot, was Little Trout lake.

Well satisfied with a personal survey of various lots of land which had appeared promising on the maps, Goldworthy proceeded to buy up about 5,000 acres in scattered pieces. This was mostly county land, land which had been idle with no one thinking of using it until he brought the thought of growing cranberries. Much of this land could be purchased cheaply for perhaps \$1.25 an acre or \$50.00 a section.

He first planned to build his own bog at Little Trout, Manitowish Waters, but sold after making a start, finally building at Three Lakes in Oneida county. There are probably fewer frosts in these northern counties because of the countless lakes. Winters are severe, temperatures can reach 30 or 40 below zero and there can be three feet of snow on the level from November until April—there is usually a couple of feet of ice on the marshes making for easy and economical sanding.

#### Building To 100 Acres

"Goldy's" present holdings are 85 acres in vines at Thunder Lake in the township of Three Lakes, which is only a short distance from Eagle River. He has planted all to Searls with the exception of one acre to Black Veils, which he obtained from Bernard Shaw of Carver, Massachusetts for experimental purposes. This year he plans to bring his acreage up to an even 100, including some of the hybrid Stevens and Ben Lears.

The marsh is 2½ feet above the level of the lake so that frost floods and winter flood are pumped on through a flooding canal and then back to the lake through drainage canal by gravity. Beds are about 3 acres each and can be flooded individually. Marsh is built on

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peat about 8 feet thick over which access roads have been laid around each bed.

Production last year, Goldsworthy gives as approximately 10,000 barrels. Part of the marsh was cropping for the first time.

#### Cranberry Products, Inc.

As stated, Goldie's interest is by no means limited to cranberry growing. CRANBERRIES' readers will recall how in 1953-54, Cranberry Products, Inc. was formed and its activities have since been frequently reported. The need of an industry in that area was urgent and with the growing interest in cranberries, the sum of \$45,000 was raised for a plant, through the Eagle River Development Committee.

Goldsworthy had obtained for the corporation, right to use a new process developed by Kenneth G. Weckel, University of Wisconsin, and the new plant began to turn out "Cransweet". In the Weckel process cranberries instead of being heated are pierced individually. "Cransweet" made possible many unusual new food combinations in the confectionery and baking fields. Products now include strained cranberry sauce, whole cranberry sauce, spiced cranberries, cranberry-orange relish, cranberry-cherry jam, cranberry-rhubarb jam, cranberry-pineapple jam, whole cransweets, diced cransweets, Cran-vari-ice cream, cranberi-ice cream, cran-puri, gift boxes, cran-apple sauce. These products are finding ready acceptance and there is a special interest in cranberries in candy.

"A goal of Cranberry Products," says Goldy, "is to divert from present cranberry consumption into new products to widen the market."

A description of operations of this plant, which is Eagle River's only industry and which normally employes ten with 30 or 40 in the rush season, is interesting. Plant is completely modern, a single story building, cement block, 60 by 123.

The berries are first hopper-fed

to an inclined flight-conveyor, which discharges them into a 35 foot-long ceiling-suspended stainless steel flume. This is the initial washing stage, following which they continue through a de-watering reel and are collected in a 90-capacity stainless hopper.

From here, the berries drop onto an 18-ft. rubberized canvas conveyor, where they get a thorough inspection. They are then chuted into a sump with overflow water from the flume. Water is pump-recirculated from sump to flume.

A second incline flight-conveyor now elevates the cranberries into a rotary washing reel. Washed berries next go into a small hopper feeding the specially designed punching machine (H. D. Hume Co., Mendota, Ill.) that pierces them at 150-lb.-per-min.

In this operation, berries, drop from the hopper onto a 1/2x2 1/2 ft. conveyor belt that carries them

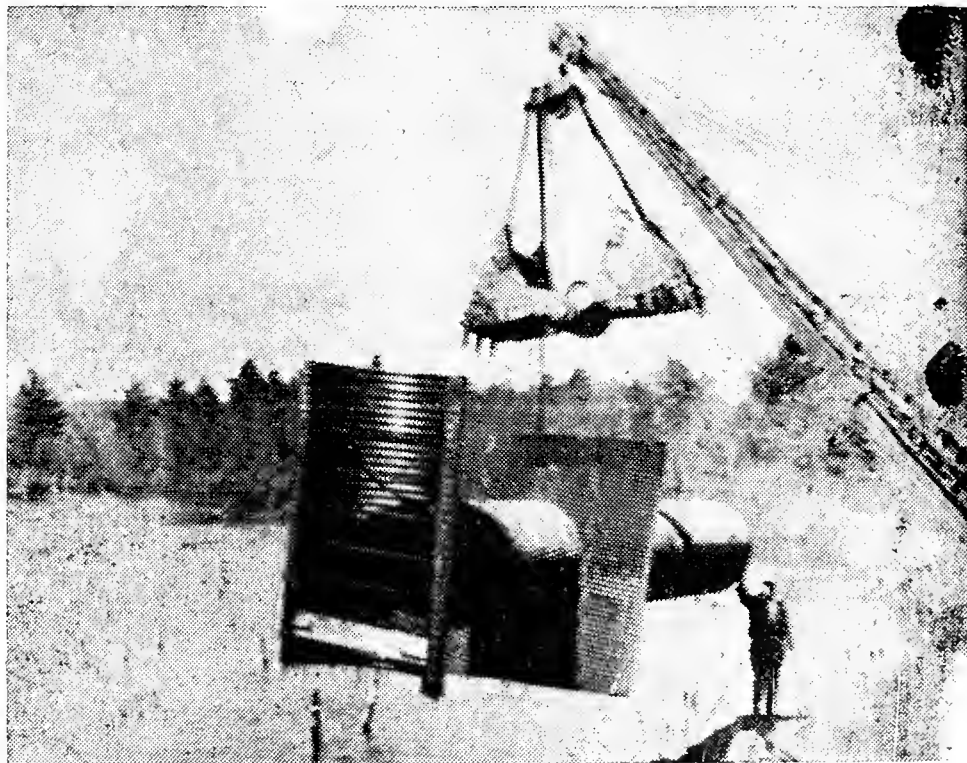
under a rotary stainless steel drum (8x12 in.) containing thousands of stainless spikes spaced 1/4 in. apart. These short spikes pierce the berries, which are then gathered in pans.

About 150 lb. of pierced whole berries are next charged into metal drums half of sugar and corn syrup (varied). A vacuum (20 in.) is pulled and the berries are then held about 30 min. so that they become completely im-

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**North Carver, Mass.**

pregnated with syrup.

Syrup-sweetened berries are dipped out of the drums and, with the acidity adjusted, they are poured into 15 gal. capacity jacketed kettles. Then after the heating in syrup to 180-190F., they are hot-filled into 12 oz. and 1 gal. glass jars. Berry counts can be varied from 1,500 to 3,000 per gallon.

Jars are finally capped, cooled for an hour in an exhaust box with running water, labeled, and packed into shipping cases.

#### Steps For Other Items

For the product used in the confectionary and baking trades, Cransweets coming out of vacuum drums are diced prior to kettle-cooking. Also, the pickled Cransweet product is prepared in a similar manner. Only difference is subjecting drum-charged berries to vacuum for a second time and for full hour in a spiced syrup.

Difference between the Weckel process and others as concerns cranberries is that hithertofore cranberries were ruptured when they were heat processed and for the reason they could only be

made into a limited number of products. In "Cransweet" method each of the tart berries is pierced so that it can be sweetened under vacuum with sugar syrup and without rupturing the fruit. This new "Cransweet" process has received much notice in various publications.

Something like 22,000 barrels of cranberries were processed during the past season and Cranberry Products expects to increase this tonnage materially in 1958. More cooking kettles are being added, also a boiler and other equipment. New, and larger outlets, to be announced later are confidently expected.

#### Local Gift Box Sales

Probably about 12,000 barrels will go into sauce and the balance into various products. There are planned 20,000 gift boxes a phase which is growing in popularity. A considerable quantity is sold to tourists in many eating places of the north country, motels, gift sheps, hotels, even bait stands. This is mostly seasonal and within a hundred mile radius of the plant.

In addition to the processing

and of cranberry sales, Goldsworthy acts as distributor of fresh fruit of the area. This is sold under the Eagle River brand. Since the demise of Eatmor last spring about ten growers who ship under this brand have been added, according to Goldsworthy.

#### Low Cost Fresh Sales

He reports returns net to growers for the 1957 crop have been \$10 per barrel in cash with all returns not yet in. Fresh fruit sales are handled separately from the processing and he estimates cost of sales as less than two percent per barrel handled fresh. Total costs, he says, run around 10 cents per barrel for fresh, as no large salaries are paid, Goldie taking charge of this along with processed sales himself.

Cranberry Products, Inc. is a member of the Cranberry Institute and Goldsworthy an active participant in the work of that industry-wide body.

#### Ralph Sampson

Going up from Wisconsin Rapids with Goldsworthy was Ralph Sampson. Sampson for many years, under Goldy was an accountant for Wisconsin Cranberry Sales. He is now treasurer and plant manager of the Eagle River corporation. He has developed a marsh of his own with 25 acres in vines which is adjacent to the Goldsworthy marsh. A bachelor, he makes his home at the marsh, which consists of a tract of land 1600 acres in all.

Yield of the Sampson marsh last year was about 150 per acre. He plans to develop five more this year. He is a part owner of Sampson Canning Company at Wisconsin Rapids which is a large packer of beans and peas. This is a family-owned plant.

Sampson has active charge of the Eagle River plant and its operations and is responsible for operation and has charge of equipment and supplies. Goldsworthy's principal work, besides being head of the corporation is sales.

Last year was considered the most successful for Cranberry Products, Inc., in volume of fruit

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handled and sold. For a time the plant ran two shifts a day to keep up with orders. "Goldy" anticipates a doubling of products in 1958. As the new bogs of Vilas and Oneida counties mature and come into full production and are increased more and more fruit will presumably be grown.

Wisconsin growers of other and older areas have spoken of present production and the possible potential of these northern counties almost with awe. It is quite generally admitted that "Goldy" really started a significant development when he opened up this virgin territory in Northeastern Wisconsin.

The new area may be something of a "threat" in potential of future growth to some of the older areas, not only in the Badger State but to all cranberry regions. However, it cannot be denied that new territory where cranberries can be grown in great abundance and economically, is, in the final analysis an asset to the industry considered as a whole.

Even being the inspiration behind this new northern development has not tamed Goldsworthy's interest in extending cranberry growing. Always enthusiastic, he

has still further visions, which may or may not be possible of fulfillment. As reported in December issue, he has been in contact with people in Holland considering entering with a small amount of capital the growing of cranberries there. Also under consideration is the idea of extending the "Cransweet" manufacturing process to that European country.

The indefatigable Mr. Goldsworthy "is working" on this project. He plans to ship some U. S. vines there for planting.

## NCA Names New Advertising Head



Appointment of H. Drew Flagal to a new position as director of advertising and public relations of the National Cranberry Association is announced by Ambrose E. Stevens, executive vice-president and general manager. Flagal replaces Robert D. Henklein.

Flagal has had an extensive career in advertising, sales promotion and public relations in grocery products, Stevens says he was in the advertising department of Standard Brands, Inc., for 10 years and spent another decade in the advertising and sales promotion department of Lever Brothers Company. More recently he was an executive of the Fitzgerald Advertising Agency on the Wesson Oil account.

Stevens also announces Ocean Spray products are up 30 percent over a year ago for the first quarter, reaching an all-time high for that period.

Although still speaking with conservatism, Stevens says he is confident in long-range NCA progress.

"We have developed a new advertising theme 'natural mate for meat,' which is intended to sell cranberries regularly with meat in additions to a long accepted practice of serving them with turkey and chicken," said Stevens.

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This rate will not go into effect until May 31. Any present or non-subscriber may take advantage of present \$3.00 rate until that date.

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Dr. Franklin in a familiar, thoughtful pose at Cranberry Station, as many growers remember him. (CRANBERRIES Photo)

## Tributes to Late Henry J. Franklin

Dr. Franklin, the grand old man of cranberry growing, has died. Those of us who worked with him will feel keenly his absence. It is fitting that those who knew him should try to review the life work and character of this dedicated scientist, to understand in part at least, what Dr. Franklin tried to do with his life and to assess the qualities of character which he brought and applied to the task.

I think one of Dr. Franklin's

first rules for thought and action was: "Take no man's word nor oath". Few men of my acquaintance ever relied so completely on their own thoughts, and so little on the thoughts, ideas and opinions of others, as Dr. Franklin. He was a Yankee individualist throughout, in his personal life as in his professional work. The volume of anecdote relative to Dr. Franklin on Cape Cod is enormous. He cannot be said to have had eating "habits", because he was very likely to reverse the whole order of a meal!—why not try it the

other way round starting with pistachio ice cream? He was not above having two shaves in one afternoon, if the first one did not meet his expectations. Time meant less to Dr. Franklin than to any of his associates, and it must have been very awkward for Mrs. Franklin to plan or schedule meals for a man who spent most of his time thinking and practically none of it looking at a clock.

I mention these traits of Dr. Franklin's character because I think that in them lies the clue to his professional greatness. To any serious problem that came his way, he fastened his mind with a tenacity that excluded all lesser things like time, meals, or the convenience of others. Thus he worked on the frost problems of cranberry growers and developed an excellent system for predicting minimum bog temperatures. It mattered not a whit that his training had been in entomology (where he became the world authority not only on cranberry pests but also on the bumble bees), for he knew that by persistent application day and night, week days and week-ends, that any problem could be solved by one determined to solve it, and he did. The volume of effort required to develop his frost formulas can only be appreciated by those who have seen the work he did, who know all the blind alleys he followed until he proved to himself they were blind alleys, until at last he discovered the chief factors affecting the temperature of our cranberry bogs on clear calm nights in spring and fall.

I can recall how reassuring it was to have Dr. Franklin join his young staff on frost nights after his retirement. Through the years of long study of our weather he had attained an uncanny judgment that stood as a mark to be aimed at by a new generation—and the way there lies in singleness of purpose and long hard work.

Dr. C. E. Cross

What feelings of admiration and appreciation rise within us as we speak his name or even think of the man.

It was my pleasure to spend his first day on Cape Cod with him.

On that day he was thinking of becoming interested in apple growing and we also talked cranberries.

He impressed me then and after years of association it was evident that his aim was to make a contribution to the progress, the happiness, and the security of people engaged in some branch of agriculture. For this ideal in life, he merited and has our sincerest admiration.

His broad contribution to the cranberry industry, his tenacity of purpose, his interest in the welfare and security of the individual cranberry grower won not only our appreciation for a successful expert but our warm and lasting friendship which will rest firmly in our memory for all time.

Cranberry growers, each in his own humble way, can honor the memory of Doctor Franklin by emulating his example.

Marcus L. Urann

#### DR. FRANKLIN

I first met Dr. Franklin in 1910 soon after coming to Amherst as Assistant in the Experiment Station work of the Department and not long after Dr. Franklin had instituted the work of the Cranberry Station, and when he used to spend the winter months in Amherst writing up project reports and laying plans for the coming season. Even then he had begun to lay the broad foundations of that reputation that was destined to become almost legendary in the annals of both systematic and applied entomology.

Getting to really know Ben was something of a stimulating experience but was very rewarding and well worth the effort and once secured it was indeed a really prized possession.

As the years passed and Dr. Franklin's work began to receive an ever widening recognition and his reputation brought him to the forefront in his chosen field, none

of us, who really knew him were ever surprised at any honor that came to be bestowed upon him, and all of us realized that it was only Ben's selfeffacing modesty which stood in the way of his receiving even wider acclamation.

Dr. Franklin had the sturdy physique, rugged individuality and sterling character so often proclaimed to be a feature of the sons of his native state, Vermont. He also had an active and inquiring mind and the persistence and determination to carry through a problem to its successful conclusion. He always stood for as close an approach to perfection as human faculties could attain.

Although Ben would be the last one to believe it, his devotion to duty and his many admirable qualities of mind and character were consciously or unconsciously carried in the minds and hearts of his friends and associates as an ideal for their own attainment.

His passing can be likened to that of one of the "Mighty Cedars on the Mountains of Lebanon, which falls among the lesser trees and leaves a lonely place against the sky."

Arthur I. Bourne  
Emeritus Professor of  
Entomology  
University of Massachusetts

(Editor's Note: the following statement, concerning Dr. Franklin appears in the single volume of "Franklin, Personal Papers, volume one, dated August 19, 1952 and was read at the time of his retirement as director of Massachusetts Cranberry Station. It so aptly sums up the career of Dr. Franklin as many growers knew him that it is being reprinted.)

### Franklin Philosophy

Henry James Franklin was born in Guilford, Vermont, where he lived for eleven years when he moved with his parents from the ancestral farm to Bernardston, Massachusetts. Brief though his residence in the Green Mountain state, he must have absorbed some of the enduring qualities commonly attributed to native Vermonters, for in his rugged character and sturdy physique, there is

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something reminiscent of the rock-ribbed hills whence he came.

Educated in the public schools of Bernardston, he graduated from Powers Institute of that town in 1899, the same year entering Massachusetts Agricultural School (Now University of Massachusetts) with the class of 1903. His habits of thrift and his penchant for truth, uprightness, and industry were early noted by his classmates, and it was but natural they should dub him "Ben" Franklin, a name by which he has been familiarly known for more than half a century.

It may surprise many who have known him on in his maturity that Ben played football on his college team. In those days the game was really rough and tough. With stalwart Ben Franklin at guard, opposing teams customarily came to a dead stop, when they tried to break through his side of the line. But, tower of strength he was, there never was a taint of unsportsmanship in his playing.

Although he participated in extracurricular activities, his college record was chiefly distinguished by high scholarship. His active, inquiring mind assiduously applied to learning landed him at the head of his class at graduation. Continuing on at his Alma Mater for post-graduate study he

came under the stimulating influences of Professor Charles H. Fernald and his son, Doctor Henry T. Fernald, in entomology, and Doctor George E. Stone in Botany, his graduation work was completed and the Doctor of Philosophy degree received in 1908. His thesis, a monograph of "The Bombidae of the New World", is monumental and remains the authoritative publication of this group of insects.

After obtaining his doctorate, he was employed as an entomologist at the Minnesota Experiment Station.

In 1909 Doctor Franklin was called back to Massachusetts to head up and organize the newly established cranberry station at East Wareham. For much more than half his life he has devoted his great industry and rare talents to the work of the Station and through it to the improvement and expansion of the cranberry industry. He and the Cranberry Station have become almost synonymous in the minds of cranberry growers. The high esteem in which they held the Station and its Head are eloquent testimony to his achievements in their behalf. Without attempting a detailed review of his work, it may be stated with no fear of contradiction that the Cranberry Sta-

tion presided over by Doctor Franklin from its inception forty-three years ago is an extraordinarily well organized, highly productive and immeasurably useful branch of the Massachusetts Agricultural Experimental Station, and that the credit belongs in large part to Doctor Franklin.

But his reputation as a scientist extends far beyond the shores of Cape Cod; it is indeed, worldwide. His record and his published contributions to scientific literature attest to his wide and versatile range of thought and activity. He has always shown himself capable of grappling with the many practical problems confronting the growers, and no problem has been too small or too great to engage his thoughtful attention.

Tenacity of purpose is a trait strongly developed in Doctor Franklin. It has been a large factor in the planning and the development of the work at East Wareham and it has helped him to solve many knotty problems. He seldom makes an important decision or takes action on a matter without first thinking it through. But once his mind is made up he is ready to defend his stand, and few have ever argued him down. (One knowing Mrs. Franklin suspects she is among those to whose judgment he has sometimes deferred!)

That through the years he has been deeply devoted to the cause of the cranberry growers is well illustrated by an incident observed by the writer. Ben and his devoted wife, Esther, were in attendance at the 25th reunion of his class during the commencement at State College in 1928. The reunion banquet was held at the old Highland House on Goshen Hill, and a jolly good, but not necessarily convivial, time was being enjoyed by all. The June temperature began to drop, Ben sniffed the air, wet his finger, and tested the wind direction, became restive and thoughtful. From that moment his mind was not with the merrymakers but away down on Cape Cod. He began to write and figure on the back of an envelope, soon left the banquet table, and called Cape Cod by telephone. He had gone into action to apply one of his greatest achievements for cranberry growers, a method of prognosticating the advent of frost on the bogs, he was sending a warning to the growers that their bogs should be flooded to protect their crops. Ben, a loyal alumnus who loved good food and his classmates, did not participate in much of that festive banquet and he took his "rib-

(Continued On Page 16)

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## "DOC" FRANKLIN, A "RARE MAN"

THE name of Henry James Franklin, who passed away last month at 75 as retired director of Massachusetts Cranberry Experiment Station will never be forgotten as long as cranberries are cultivated. His research was so profound, so basic that his works will remain as reference. His imprint will not be forgotten.

Not the first cranberry researcher in the nation, he became the foremost; an entomologist he came in when insects were a vital matter of concern and he turned his keen analytical mind to this and then other cranberry problems, after problem. He changed much of the course of thinking in cranberry cultivation. He came to be looked upon as the father of modern cranberry research. His research, even in the limited field of cranberry research brought his world-wide recognition as a scientist.

When Dr. Franklin began in 1909 he was a solitary worker at East Wareham. He became a man dedicated to cranberries. He laid the foundation for today's dedicated staff of a dozen or so workers. He was an inspiration to everyone with whom he came in contact.

"Doc" Franklin was more than an advisor to cranberry growers. He was their friend. Many who came to the Station to talk cranberries stayed to talk of other things. He was a true philosopher. The writer was among the many who deemed it a privilege to listen to "Doc" Franklin's discourses.

Henry J. Franklin was always a thorough gentleman of the type now often referred to as "old school." A favorite expression of his in speaking of some individual whom he considered of real distinction was to say, "he was a rare man." Dr. Franklin himself was one of "the rarest."

## GROWER'S NET OF FOOD DOLLARS

A RECENT survey showed what the average person did with his 1957 income dollar. After taxes he had about 88 cents to spend or save—the average individual saved six cents of his 100 cents. About 31 cents were spent for services; the biggest share 41 cents went for items of daily living, 25 cents of which was for food and beverages.

When various percentages of this

Editor and Publisher  
CLARENCE J. HALL

EDITH S. HALL—Associate Editor  
Wareham, Massachusetts

## CORRESPONDENTS—ADVISORS

### Wisconsin

LEO A. SORENSON  
Wisconsin Rapids

### Washington—Oregon

CHARLES C. DOUGHTY  
Cranberry Specialist  
Long Beach, Wash.

### Massachusetts

DR. CHESTER E. CROSS  
Director Mass. Cranberry Experiment Station  
East Wareham, Mass.

BERTRAM TOMLINSON  
Barnstable County Agricultural Agent  
Barnstable, Mass.

### New Jersey

CHARLES A. DOEHLERT  
P. E. MARUCCI  
New Jersey Cranberry and Blueberry Station  
Pemberton, New Jersey

were subtracted, including processing and marketing charges it was estimated about 7 to 8 cents were paid to the producer—the grower. Assuming cranberries were average can this net to grower be increased to a larger proportion of the dollar? That is the real problem of the cranberry industry today.

NOT SO VERY gratifying is a report of the National Cannery Association concerning total volume of canned sauce packed in 1957. From reports of all processors the total pack was 5,752,320 actual cases. This is slightly smaller than the report for 1956 which was 6,052,467.

With the trend of fresh fruit sales downward, even if slowly, this, obviously, must be offset by a larger processed pack.

## FRANKLIN

(Continued From Page 14)

bing" from the assembled group. But he must have derived great satisfaction from the thought that once again he had been instrumental in helping his friends, the cranberry growers to safeguard their valuable crops. That little episode is characteristic of Doctor Franklin; thoughtful, whole-hearted, unswerving in devotion to duty as he sees it.

A. Vincent Osmun  
Emeritus Professor of Botany  
University of Massachusetts

## Stevens Impressed By Western "Forward Look"

"I was much impressed by the 'forward look' of the western growers, which, I suppose, is really typical of western life in general", declared Ambrose E. Stevens, executive vice-president and general manager of NCA following a trip of two weeks to the Coast and Wisconsin. Mr. Stevens made the trip alone, his second to Wisconsin and his first to Washington and Oregon in a cranberry capacity.

"I found the growers not discouraged but with a sense of mild optimism as to the future," he

added. "They seemed to me very sound citizens."

He noted a tendency to merge ownerships, mostly among second generation growers and particularly in the Grayland area of Washington. Belief of the growers seemed to be rather strongly, he ascertained, that smaller units were not as economical as larger ones. Major factors in this trend were that greater mechanization and the utilization of labor-saving devices were possible.

He was also impressed by the sincerity and the dedication of the growers to the cranberry industry, their appreciation of the need for quality. He noted that in 1955 5,000 barrels of Washington fruit were sold fresh, 10,000 in 1956, 17,000 last year and there is a goal this year of 25,000.

Mr. Stevens first stopped at Long Beach and held a meeting for member-growers with about 50 present at which Director Leonard Morris presided. He made a tour of the peninsula area. He then visited Grayland where about 200 growers and wives attended, with Director David Pryde in charge.

While in Seattle, Washington and Portland, Oregon, he made appearances on live television and

also spoke over the radio in both cities. He had a published interview with the financial editor of the Oregonian (Portland) with the press at Centralia, Washington and with newspapers at Coquille and Bandon, Oregon.

About 75 growers attended a meeting at Bandon with "Jim" Olsen presiding. He also visited Coquille, where he inspected the NCA plant and visited other cranberry points of interest in the area.

On the way back he stopped at Wisconsin Rapids where there was a growers' meeting lasting all day with about 150 present. This was at the Elk's club, Director John M. Potter presiding. He was asked many questions at this session.

As concerned the whole trip, he said he was more than pleased by the lack of discouragement on the part of the growers as to the future of cranberry growing and marketing.

## Makepeace Shed, Equipment Burned

A spectacular blaze in an A. D. Makepeace Company, Inc. storage shed at Tihonet, Wareham, Mass., May 13 totally destroyed the 60 x 100 foot building. Loss was set at \$10,000, to building and equipment which included various items of equipment, float boats, pickers and cranberry harvest boxes.

Persons in the area were unable to notify firemen early because of burned telephone wires. Flames of the fire were seen from miles away. Little was left of the structure to determine what started the hot fire.

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Your bogs will give you higher yields of cleaner fruit when you use "Fermate." It's available for sprays or dusts. For most effective spray coverage and protection of waxy foliage add Du Pont Spreader-Sticker to the spray mixture.

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## Blueberries In The West

The cultivated blueberry industry of the far west has developed principally in the coastal regions of Washington and Oregon, west of the Cascade Range of mountains. In this area the climate is quite favorable; plenty of rain, enough cold to satisfy winter chilling requirements without excessive cold, favorable summer temperature without excessive heat, and good soil. East of the mountains the rainfall is so light that the region is totally unsuited to fruit crops, except in a few scattered areas where irrigation is possible and practical.

In spite of the favorable conditions, the blueberry industry has been slow in developing. The chief reason given for this is the lack of good markets. It is said that consumers on the west coast are not so accustomed to eating blueberries as those in the northeast are. One sign of this is the kind of pie available in restaurants. One seldom finds blueberry pie. On the other hand, strawberry or "berry"—it may be boysenberry, loganberry or blackberry—are offered in almost every restaurant.

Another difficulty is the scarcity of large markets in the northwest. Population density is far less than in the northeast. Aside from Portland and Seattle, there are few large population centers. This means that for any large volume of berries markets must be found in California or elsewhere. Nevertheless, there are several hundred acres being grown and the industry is expanding slowly.

Because of the heavy rainfall, 80-100 inches, diseases are more important than insects. A Botrytis which causes shoot dieback is one of their worst troubles. On the other hand, mummy berry is unknown.

One grower in the Puyallup, Washington, area has been unusually successful. He had 19 acres set to a considerable number of varieties. The soil and climate

are so favorable that all varieties appear outstandingly vigorous and productive. Even such varieties as Concord and Scammell, which were erratic performers here, are vigorous, heavy producers there.

In California the blueberry situation is quite different. Very few are grown at the present time. The principal reason for this appears to be lack of interest in this fruit. While much of California's soil and climate are not suited to blueberry growing, there are sizeable areas where, with a little help in the way of irrigation and special soil treatments, considerable quantities of blueberries could be grown.

The slow development of the blueberry industry up and down the west coast is at least partly the result of the intense interest in other small fruits. All three coastal states are heavy producers of strawberries. California is also a heavy producer of boysenberries, loganberries, and trailing black berries. Washington and Oregon are heavy producers of raspberries and trailing blackberries. These industries are so large and so well developed that, unless there is some sudden change, blueberry growing will continue to expand slowly. The increased production will probably be consumed in local markets. Therefore, eastern growers will not need to worry about shipments from the far west for quite a number of years.

John S. Bailey

## *NCA Sales Up First Quarter*

April processed sales for NCA, concluding the first quarter went over recent previous years. For the first three months sales were higher than a year ago but less than the budget set. Sales for the first three months were 30 percent higher than in 1957, and the April sales brought the total to 35 percent above for the quarter, General Manager Ambrose E. Stevens, reports. Through March of this year 60 percent of the pool had been moved, compared to 47 percent in 1957.

A top broker in the eastern area reported that for the first four months his sales had increased 26½ percent, while in March and April there had been a 52 percent gain.

## *"Cranberries In Wisconsin"*

Pertinent facts from "Cranberries of Wisconsin", special bulletin No. 70, just issued by Wisconsin State Department of Agriculture, Federal-State Crop Reporting Service and the United States Department of Agriculture:

Searles, McFarlin, Natives and Howe varieties made up 98 percent of the total bearing acreage in 1956. Average yield per acre on the 3,900 acres of bearing marsh in that year with a total production of 358,000 barrels was 91.8.

Searles accounted for 57.7 of acreage and 64.7 of production. Yield of the Searles variety averaged 103 barrels per acre, the highest of any of the varieties.

Howes, representing only 4.1 percent of total acreage of 160 acres had second highest yield with nearly 92 barrels to the acre. McFarlin had third highest yield per acre, averaging 82.1, amounting to 21.8 percent of total bearing acreage. Natives averaged 63.8 barrels per acre and made up 550 acres of 9.6 percent of total. Miscellaneous varieties averaged 74.3 per acre but made up only 2.3 percent of total.

Total acreage of 1957 is given as 4,000 and of these Searles make up 2,250 acres.

There were absolute and relative increases in the acreages in Searles, McFarlins and Howe varieties between 1952 and 1956 and decreases in the Natives and "other" varieties.

Searles bearing acreage of 1952 was 2,020 acres but had increased to 2,250 in 1956. McFarlins from 770 to 850 in the same period. Natives declined from 670 bearing acres to 550. Other miscellaneous varieties declined from 100 to 90.

(Continued On Page 20)





*photo courtesy of the National Cranberry Association*

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Advt.

# SERVING THE WISCONSIN GROWERS

## "CRANBERRIES IN WISCONSIN"

(Continued From Page 18)

In this 1957 survey, growers were asked for their present non-bearing acreage in 1957 in addition to their bearing acreage in 1956 and 1957. They also reported the amount of non-bearing acreage coming into production in the years 1958 through 1961.

Approximately 650 acres of planted marsh was not in bearing in 1957 but will nearly all be in production by 1961 or 1962 if present intentions of growers are realized. By 1961, according to growers' expectations, Wisconsin's bearing acreage should be at the 4,500 level. The forecast takes into consideration anticipated abandonment and replanting of old marsh. By 1964 if growers' expectation of 1958 and 1959 are realized another 200 acres of new marsh should be in production.

## Fresh From The Fields

(Continued From Page 6)

was being applied the last of the month in the southern marshes and the first part of May in the northern marshes.

## LATE MASSACHUSETTS

### May Starts Wet

The record-breaking rains of April continued into the first week of May maintaining the soggy spring season. Precipitation as recorded at Cranberry Station May 8th was 2.50 inches, with normal for May 3.18.

### Also Cold

May to the 15th was a cold period with no really hot, sunny days to push growth along which continued about a week later than

last year. Temperatures to that date were minus the normal, 28, or nearly two a day.

### No Frost Loss


Nights were cold with a series of borderline lows which kept growers on edge. To mid-May Dr. Cross estimated there had been no loss, or at least no serious loss from frost.

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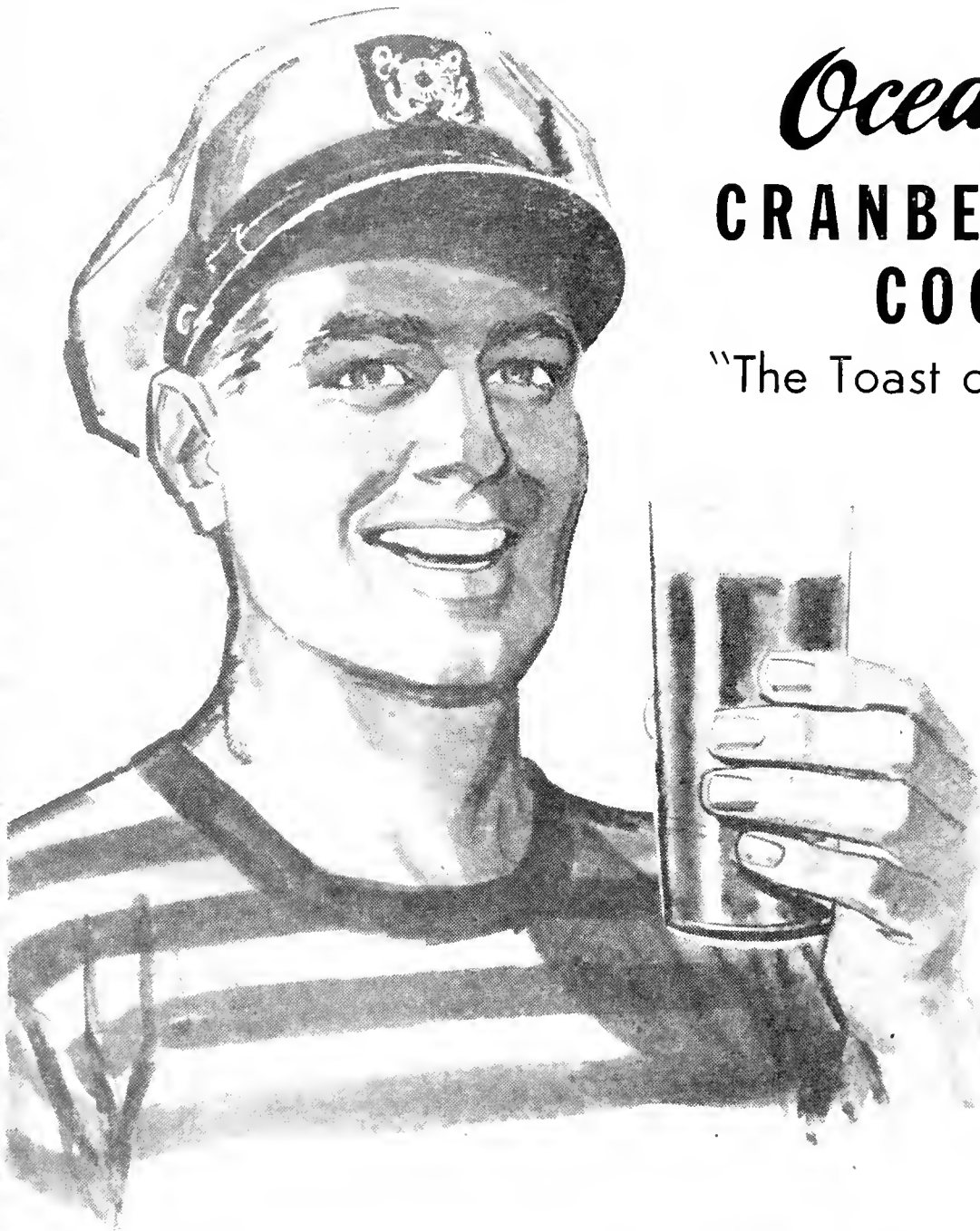
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## NCA Brings '57 Payments To \$7.60

National Cranberry Association members were mailed checks for an additional \$1.00 per barrel on June 6, General Manager and Executive Vice President Ambrose E. Stevens announces. This payment on the 1957 crop brings the advances to date to \$7.60.

Aim of the current marketing program is to complete the 1957 crop sale by November 1. The 1956 pool was closed on October 18.

These actions were voted at the late May meetings of directors.

Next meeting of directors is set for June 27 at the Somoset Hotel in Boston. This meeting will be preparatory to the co-operative's annual meeting of stockholders at Hanson, August 20.

## Mass. Bog Holdings Decline

(From "The Cranberry Industry in Massachusetts," latest bulletin No. 157).

Cultivated cranberry bogs in Massachusetts range in size from half an acre or less to 200 or more.

A cranberry bog for purposes of the survey, is defined as the bog acreage reported as one operation-

al unit by the operator or manager. In many instances, bog ownership or holdings by one party include several bogs. This is clearly illustrated by the fact that survey records were secured for 1,250 bogs which were owned by only 962 parties (individuals or concerns). Ownership of bogs continues to concentrate in fewer holdings of larger average size.

The number of bog holdings has declined steadily from 2,148 in 1924 to 1,215 in 1946 to 962 in 1956. The average size of holdings, on the other hand, has increased steadily from 8.5 acres in 1924 to 12.5 acres in 1946 and 13.7 acres in 1956. Since 1946 most of the decline in number of holdings has occurred in holdings of less than 5 acres.

The number of holdings over 5 acres has remained relatively stable, while the number of small holdings has declined especially in Barnstable County. Holdings of less than 5 acres in 1956 amount to just about 50 percent of total holdings. In 1946 the proportion of holdings of less than 5 acres was 58 percent of the total, while in 1924 the proportion was 73 percent.

## Honeybees

(From the Cranberry Industry in Massachusetts)

Data on the use of honeybees on cranberry bogs was received from:

1,109 of the 1,250 growers in the state or 88 percent. Of 1,109 growers supplying complete data, 403 or 36.5 percent used honeybees and 706, or 63.6 percent, did not. The 405 growers that reported using bees averaged 18.8 acres per grower, whereas the 706 that reported they did not use honeybees averaged 6.2 per grower.

The hives used totalled 2,651 of which 455, or 17.2 percent were owned by the growers and 2,196, or 82.8 percent, were rented from beekeepers. The acres per hive for those reporting on this part of the question averaged 2.6. Growers using bees felt that set was improved by honeybees in a ratio of 39 affirmative to 1 negative.

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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



## Rainfall 33.51 Inches

Temperatures in May averaged 1.7° per day below normal and rainfall was 6.58 inches, which is better than twice the monthly average. Incidentally, rainfall has exceeded the monthly average in 6 of the last 7 months, with March being the exception. We now have a total of 33.51 inches of rain for the first 5 months in 1958, or within approximately 10 inches of our yearly average. Our weather pattern has completely reversed itself as compared to a year ago this spring when temperatures were above normal and rainfall was far below normal. We were already experiencing a serious drought in June of 1957 and the situation became even more critical in July and early August.

## Frosts

The contrast of the two seasons has been most unusual. There is one similarity, however, and that involves the frequency of frost warnings. 17 warnings have been released this spring as of June 12, compared to 19 warnings during the same period in 1957. There appears to be no possibility of approaching the record of 41 warnings released in the spring of 1949. These include, of course, both the afternoon and evening forecasts. The most damage this season occurred May 2, June 4 and June 6. Temperatures dropped to 25° on some bogs June 4 and 6, with many growers reporting temperatures of 28 - 29°. We have placed the frost damage at approximately 2 percent of the Massachusetts crop or possibly 10,000 barrels.

## Keeping Quality

The weather pattern since April 1 has not strengthened the final keeping quality forecast which was released June 4 and is as follows: "FINAL KEEPING QUALITY FORECAST: Examination of the weather records from April through May shows 2 additional points—the only points out of a possible 16 which favor good keeping quality next fall. The prospects, therefore, are far from good for the general keeping quality of the 1958 Massachusetts cranberry crop unless corrective steps are taken. Growers are reminded that we had 4 points in 1957 and experienced very poor keeping quality. Proper control measures for fruit rots are care-

fully outlined in the new charts. The need for good keeping quality fruit is obvious."

## Field Meetings

The county agricultural agents arranged 6 field meetings the last of May and early June to acquaint growers with the latest information on the control of insects, diseases, and weeds, plus the proper use of fertilizers. Live specimens of the early spring pests were used to help growers in their identification. The Station's low gallonage spray rig and a new overhead irrigation system were demonstrated at the meeting held at the State Bog.

## Insects About Normal

Insect activity has been about normal to date (June 12). The first brood of the *Sparganothis* fruitworm has not been too troublesome and only a few bogs have required treatment. **Black-headed fireworms** have been common and those bogs that are usually troubled by this pest have required treatment. Growers have been able to use the 10-hour flood to check this pest on many properties and with excellent results when worms were small, the cool weather has not been conducive to se-



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curing accurate counts of weevils but we have every reason to believe they are plentiful and are causing damage on many bogs. Green spanworms and cutworms have not been too plentiful on "early water" bogs, but "late water" bogs, should be carefully checked for these pests. Blunt-nosed leafhoppers are just beginning to make their appearance and will require control measures.

#### Help Available

Returns to growers are still discouragingly low and every expense item has to be carefully studied before spending any of that limited budget. Wider use of the insect net will help determine the types of insects present and whether they are numerous enough to require treatment. Bogs should be "swept" every 4 or 5 days from mid-May to about mid-July. The county agents and the men at our Station are always willing to teach or demonstrate the proper use of the insect net.

#### Weed Clippers

Greater use of weed clippers is in order, particularly where grasses, sedges and rushes are a problem and chemical treatments have had to be postponed. There is still a place for spot treatments

for such weeds as small brambles, loosestrife, and asters, using Stoddard Solvent. Care should be used to direct a single stream of this chemical to the base of the above weeds. New vine growth will be severely injured if it is sprayed with Stoddard.

Permission to use Amino-triazole before bloom has just been denied by the Food and Drug Administration. Only post harvest treatments have been approved for cranberries.

#### Fertilizers

Wise use of fertilizers will definitely improve many properties and increase the yields per acre. The new fertilizer chart contains the recommendations rates of application. For special problems or more detailed information, growers should contact the men at our station, particularly Dr. Chandler.

### FARM WITH CRANBERRY INCOME

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## Walter E. Piper Passes Away

Walter E. Piper, 67, veteran chief market investigator for the Massachusetts Department of Agriculture, passed away at Quincy City Hospital June 5. Mr. Piper was well known to Massachusetts cranberry growers and had appeared at many cranberry meetings. He frequently mentioned cranberry products and the industry on many radio and television programs.

He lived at 117 Cedar street, Wollaston. He was admitted to the hospital May 18. He first went to work for the department in 1919 as an apple inspector. He later became market investigator and was made chief in 1947. He leaves a wife.

A feature article concerning Mr. Piper appeared in Cranberries Magazine a year ago this month.

## County Agent Taking Leave

Barnstable County (Cape Cod) Agricultural Agent Oscar S. Johnson is to attend Air Defense School at Fort Bliss, Texas for five months in connection with his National Guard service. His duties will be performed by agent-manager Bertram L. Tomlinson. These include cranberry work.

Johnson is to attend the school from June 19 to Nov. 3. At the Texas school, operated by the Army he will take a course in anti-aircraft and guided missiles as part of qualifications for his National Guard post. His family will accompany him to Texas.

Holding the rank of Major, he is executive officer of the 68th Anti-Aircraft Artillery Battalion, Massachusetts National Guard with headquarters at Buzzards Bay.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of June 1958 — Vol. 23 No. 2

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Entered as second-class matter January 26, 1943, at the post-office at Wareham, Massachusetts, under the Act of March 3, 1878

FRESH FROM THE FIELDS

Compiled by C. J. H.

## MASSACHUSETTS

### May Wetter, Cooler

May was another wetter than normal month and a slightly cooler one. Rainfall for the 31 days totaled 6.58 inches as against the normal 3.18. Temperatures averaged 1.7 degrees a day below the normal.

This latter fact gave two points out of the possible 16 toward good keeping quality. Last year there were four.

### No Frost Losses

While there were many frost warnings and borderline nights, frost loss for May (and the entire spring) was chalked up as none at State Experiment Station. On the nights when there could have been damage, notably May 2, 23 and 29, growers apparently protected themselves.

### Lush Weed Growth

An effect of the cold, wet spring has been an unusually heavy growth of weeds of all kinds, and the wetness has not discouraged cranberry insects. Weeds are growing more vigorously than usual because of the more than abundant water supply, and can become a real problem as the season advances. Growers have been alert to spring weeds and control has been practiced through chemicals to a much greater degree than normal.

### Insects Plentiful

While insects may not be much more numerous than in average season there is no difficulty at all in finding blackhead fireworm, cranberry weevils, sparganothis fruitworm, false army worm and green span worm.

### Use of Fungicides

With the keeping quality prospect not favorable for this year it is expected there will be much more use of fungicides than even last year, when such use was recommended because of poor quality prospects. A good deal will depend this season upon such fungicide control before the '58 yield is harvested.

### Heavy Crop Anticipated

With no spring frost losses, good control being practiced on weeds and well-budded, good overwintered vines to start with, Dr. Cross is, as of present writing, holding to his estimate of a very substantial production. Some growers feel the crop may be only moderately heavy. In spite of the excessive spring rainfalls they

caused no excessive damage to bogs, and there were only a few isolated cases where the water could not be removed satisfactorily. Some growers had, however, considerable trouble in getting their properties dried out.

### Bog Work

No new bog building of real consequence is going forward, although there is a reasonable amount of renovation.

## NEW JERSEY

### NEW JERSEY

#### No Serious Freezes

May was 3.2 degrees cooler than normal, having an average temperature of 59.6° as compared to the normal 62.8°. There were no serious cranberry freezes. Neither



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were there any abnormally hot periods. The last day of the month was the hottest with a maximum of 87°.

#### Rainfall Breaks Dams

Rainfall was abundant with a monthly total of 4.39 inches compared to a normal of 3.79 inches. A number of dams were seriously damaged. Francis Sharpless of Medford suffered the greatest loss when two dams upstream of his property broke. The resulting flood burst a long series of dams on his Chairville bogs.

Drawing of the winter flood was later than usual. A considerable number of bogs were not drawn until May 15 or 20.

#### Blueberries Recovering Some

Blueberry fields are making some recovery from the serious drought injuries incurred last summer. It appears that a considerable amount of wood was not strong enough to winter well, so that there has been a serious die-back of tips and whole twigs or a poor development of flowers and foliage on Weymouth and Rancocas especially. The long period of almost continuous rainy and cloudy weather from April 27 to May 11 probably contributed toward increasing the injury. Damage from mummy berry and blossom weevil has been more than usual. As a result, blueberry growers are looking for a reduced crop this year.

## WASHINGTON

#### Severe Frost Loss

A number of frosts, one very severe has been the spring occurrence here. There have been more occasions to use the sprinkler systems for protection than in the past three or four years.

Particularly damaging was one on May 12th with a temperature considerably below freezing from 9:30 p. m. to 5:30 a. m. Amount of damage varies greatly from one bog to another, however, it was concluded, production in the state will be much reduced. Reports of 100% loss on bogs at Grayland and elsewhere were reported. Minimum was 25 degrees.

#### Sumps Low

This freeze came during a period of rather dry weather which did not help the situation any. There was reported to be greater injury in the Grayland area than at Long Beach. Some bogs which did not have sprinkler systems, according to County Agent Ralph Tidrick, were completely wiped out. Other properties which did have systems were short of water and also received some damage. With so much sprinkling, plus dry weather, sumps, especially at Grayland did not replenish as they normally do. In some instances during the latter part of the cold May 12 night, there was not enough water to keep the spray on. On some bogs sprinklers were started too late, after damage had been done.

#### State Bog Injured

Among bogs rather severely

damaged was the Experiment Station bog at Long Beach.

Maximum temperature for May was 84 on the 17th; on the whole, humidity was lower during daylight hours than usual. May 12, the minimum was 58 percent and May 14 the maximum 42 and on May 13 there was a minimum of 16.

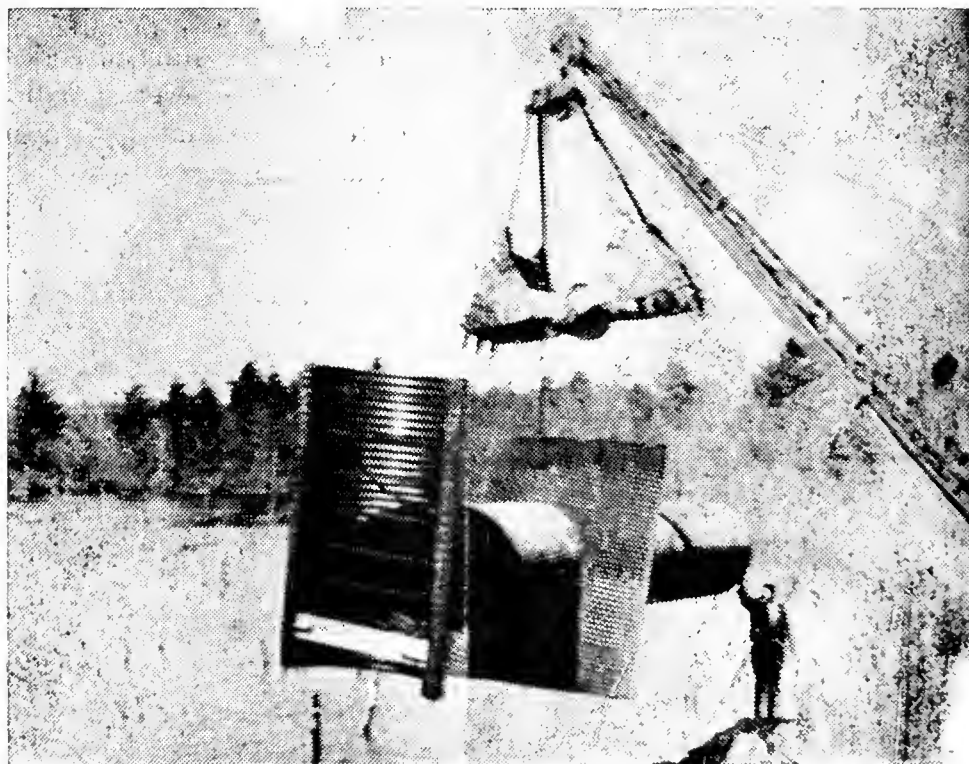
#### Crop Prospects Down

The prospects for the coming crop, at present time do not look encouraging. Owners of bogs badly damaged by the freeze will likely take advantage of the situation and concentrate on weed control with amino triazole if there are not sufficient berries to warrant harvesting.

#### Manzate Approved

Charles C. Doughty, Station superintendent, has been notified

(Continued On Page 16)



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# Howard Querry Built A Marsh Deep In Wisconsin Wilderness

Former Auto Finance Businessman  
"Really Lives" at One-Stone  
Lake Property

by  
Clarence J. Hall

That the marsh site he wanted was four miles from the nearest highway didn't stop Howard Querry from going ahead with building and planting a finely-planned marsh at One Stone Lake near Three Lakes, Wisconsin. Mr. Querry, a former Kenosha (Wisc.) businessman has carved his new development from the heart of the wilderness in the north-central part of the Badger State. One Stone, or Lone Stone, so named by the Indians is almost virgin country to the white man.

On the north shore of this pine and spruce fringed lake the property is in scenic isolation so far, so untamed that there are a few timber wolves, black bear, deer and foxes about it, geese, ducks, other wild fowl and birds in season. The entire region is thinly settled. Mr. Querry loves this beautiful and primitive country. He likes the deep solitude of his marsh location. This is evident from his conversation.

"I really live while I'm at the marsh," Mr. Querry says. He has been coming to the north country for the past 25 years for his vacations. It was while he was on vacation that he bought the property through Vernon Goldsworthy. With a beautiful "town" house on another lake at Three Lakes, his neighbors know him (and Mrs. Querry) as a generous host, and an optimistic fellow, fitted for the lot of a cranberry grower.

To get into his marsh property at all it was necessary to blaze a narrow road through the wilderness, the four miles into the lake. This winding way is lined with poplar, birch and other trees--in the summer, cool, leafed over. There is deep quiet all along the way except for the sounds of wild

life, and at the marsh the sounds incidental to cranberry growing.

This is the third year since Mr. Querry began operations and last fall he got his first small crop. He bought a total of 400 acres of this primitive land in all. The area has a potential of approximately 100 acres of marsh. He has at present 8 acres in vines and plans a total of 34, all in Searls. All ground work for the planned acreage has been completed.

Unwinding in rectangular course are some two miles of flooding and drainage canals, ranging in width from 35 feet for the flooding to 12½ for drainage, with depth of five and three feet respectively.

One Stone Lake, which Querry owns entirely with the exception of one "corner" is a body of water several acres in extent. It is a very deep lake. But even this water supply was not enough to

satisfy Mr. Querry, so he had a ditch dug three quarters of a mile long to a still bigger lake, in this region of countless lakes.

Two Bailey pumps powered by heavy industrial engines have been installed, each pump having a capacity of 14,000 gallons per minute. Concrete and steel have been used throughout in construction of flumes.

Steel prefabricated drop-head inlets have been installed for each individual section. Two-foot diameter being used for the section inlet and four-foot diameter for the flooding canals where bridging was necessary. Roads have been constructed around all the beds--very wide roads--for easy bog operations and dikes are to be planted with grass to hold the soil in place.

Due to irregularity of the bordering highlands there is some variation in the individual bed acreages. However, the average in size is roughly two acres. Bottom is rather shallow peat bog, with considerable sand. Good vine growth since first plantings indicate ideal soil conditions offered for these northern Wisconsin bogs.

Fertilizers, 10-10-10 and 5-20-20 have been applied up to 300

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pounds to the acre. Chemicals have been used to control, wire, bunch and other grasses.

A new warehouse is planned for construction this year.

Mr. Querry is a man with faith in his own opinions and in spite of advice from residents of the north country he began his development in the fall rather than spring, to save a year. He was told the climate was simply too tough for winter work. But he and a crew worked all through a winter, with temperatures of 30 below on many a day. They scalped the leather-leaf, dug ditches and made a general layout despite the cold.

Foreman of the property is cranberry - experienced Walt Goldsworthy, brother of Vernon.

Mr. Querry is a stockholder in Cranberry Products, Inc., and secretary of the business which has headquarters at nearby Eagle River.

Before coming to the picturesque and quietly booming northern region, Mr. Querry's interests were to the south in Kenosha where he was in the auto finance business. Prior to that he was in the automobile business in Chicago. Active business interests other than cranberries he has now disposed of.

There was a lot of hard work involved, with a hope for the future in setting out this marsh, and excellent progress was made in a period of three years. It was a case of starting with nothing but a section corner post in the center of a "wild" forty and building up to the present beautiful layout.

## NCA To Study Voting Stock

NCA directors at the May meeting discussed the desirability of making whatever changes that are necessary to perpetuate the control of the co-op in the hands of patron contract members. This was brought up by John M. Potter, Wisconsin Rapids, chairman of the fact finding committee. Object would be to have ownership of

common stock on as close to a patronage basis as is possible.

General Manager Stevens said there would first have to be a study made of the facts, and then to set up procedure methods if it was decided desirable to carry the project

through. He characterized this as a study with many ramifications and one of long range. It could not be presented before membership before the 1959 annual meeting.

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# QUALITY—The Second Step

By  
F. B. Chandler

To place the best quality of fruit on the market, it is obvious that as a first step the growers do everything possible to grow the best cranberries. Best berries are produced when the vines are not too dense, the bog surface is as dry as possible and the bog is sprayed at the proper time with a fungicide. Quality berries should be harvested with as little mechanical injury or bruising as possible. But what happens to even the best crop of cranberries after harvest has much to do with the quality of the fruit when it reaches the consumer? This article assumes quality fruit has been produced and harvested, and presents the results of some experiments and some ideas for better handling and storage; in other words, this covers the operations from harvest to screening for shipment. This may be called the second step, or the removal of the field heat as soon as possible followed by storage at a relatively low temperature.

Morse was one of the first to study the storage of cranberries. While most of his studies were on the chemical phases of storage, in the summary of his bulletin published in 1920 he said "Good storage must include control of both ventilation and temperature." The first studies in Massachusetts of refrigerated storage of cranberries were probably made by Guinness in 1936 and again in 1937. On reporting these studies he gave the temperatures in different grower storages which ranged from 70 to 72 degrees the second week in September to the low 40's in January. The keeping quality of four grower storages were compared with commercial refrigeration (30, 35 and 50 degrees F. in 1936, and 35, 40, 45, and 50 degrees in 1937). The best quality was obtained when the berries were stored at a temperature of 35 degrees, and all commercial storage was better than grower storage. When Cox reviewed the results of Guinness' work, he wondered why the growers did not store the berries in a manner such that the outside air could be forced through them to remove the field heat and the berry temperature kept below 50 degrees. Cox prepared a table similar to Table I which showed the number of days the minimum temperature fell below certain levels. This indicated the minimum temperatures in East Wareham would be below the tempera-

ture of the berries with the field heat in them, which the author had observed as high as 110 and 114 degrees F. These temperatures were unusually high but many observations have been made in the 80's and 90's. (Recently Kaufman et al reported loading temperatures in cars of packaged berries of 68 to 72 degrees F.) From Table I it is evident that the field heat could be removed and the berries cooled if the coldest air was blown through them.

## Bulk Storage

In the fall of 1950, bulk storage of cranberries was studied by Earl Cox and the author (Mass.

Bul. 466, page 7). The bins were in the basement of the Cranberry Station in East Wareham. Some bins were filled with berries in bulk while others were filled with field boxes. The bulk berries were 5 feet deep. Air from outside was forced through hardware cloth up through the berries when the temperature of the outside air was lower than the temperature of the berries. This is a very good method of removing the field heat from the berries (the best method is commercial refrigeration but it costs considerably more). One bin was filled with berries, uprights and chaff from a Western picker with no ill effects from the chaff or uprights.

The results of two years study at the Cranberry Station were encouraging enough to have the New England Sales Company put in a bin to cool berries before packaging. The bin was built by the Sales Company on the second floor so the berries would flow into the packaging machines. The bin was 6 feet by 10 feet and 8 feet high with a hardware floor which was pitched toward the outlet. This bin would hold 68 barrels of berries, four feet deep, and 88 barrels if the berries were five feet deep. The ceiling in the room in

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in which the experimental bin was built was high enough to permit one bin to be built on top of the other, thus giving eight to ten cubic feet of storage for every square foot inside the bin. The air was taken from a second story window to the bin. The complete plan for bin storage with conveyor belts and scales would have made it possible for two men to do what seven were doing without bins and conveyors.

#### Field Heat

The idea of bin storage has been to remove field heat, reduce bruising, reduce cost of handling, have more efficient use of space, and reduce the capital investment. Fruit which can have the field heat removed a few hours after harvest keeps better than fruit which is not cooled. It may take two weeks to get the heat out of cranberries stacked in a pile. Some of the methods discussed here will decrease the bruising while others may increase it. Growers should consider this carefully as mechanical injury is associated with the quality the consumer receives. In the first bulk storage the idea was to put the berries in and take the berries out by means of conveyors which would reduce greatly the labor required over handling field boxes or storage boxes. The

field and storage box for cranberries in Massachusetts if filled is only a 69.5 percent efficient use of the volume it occupies. The outside of a field box is 1.98 cubic feet. Bulk or bin storage will reduce the capital eventually for at least the larger growers. The storage or field boxes will cost about a dollar to replace, therefore storage for a hundred barrels in the present boxes would cost (in Massachusetts) about \$300, yet the storage in the bins that have been mentioned or some of the ideas to follow will use less lumber and labor to build, and therefore will be cheaper. In some of the ideas, the cost of handling will be reduced.

#### Many Thoughts

A number of people have been talking about bin storage, some of them for a number of years and some of them for about a year. There have been almost as many ideas as there have been people talking about it. This paper is presented in order that all may benefit by the ideas which have been developed and possibly some new ideas will be forthcoming.

Louis Sherman wanted to use the floor space more efficiently than he could by building bins that would hold only 4½ to 5 feet of berries, so he suggested putting

in shelves so the depth of berries would be only 1½ to 2 feet at any one place, yet the bins would be about 8 feet deep. This is a good idea from the standpoint of efficiency of floor space, convenience of loading and unloading, also the depth of berries. The details which have not been completely worked out are loading and air flow (air will follow the path of least resistance or will go through the least depth of berries).

Someone in Wisconsin, probably Bain or Dana (Lawrence), told me about the drawer. This seems good, a real idea of the future, so much in the future that it may be difficult for people to imagine it. The drawers would be about a foot deep and about four feet wide, while the length would be twenty-five to fifty feet. This drawer would have a front and a back but no sides, and a bottom of hardware cloth. When empty, the drawer will be rolled up and when it is filled will be pulled off the roll and into the storage.

Bob Gottschalk, Wisconsin, would like to have large flat boxes 4 feet by 8 feet and one foot high, the flats to be stacked ten high. These flats would have a wire bottom and have 2 x 4 supports on the bottom, and would be handled with a fork lift. This could be handled on trailers for dry picking and taken from the bog directly to the storage.

Lawrence Dana suggested a bin or box 4 x 4 feet and 6 feet high. The bottom would be hardware cloth and pitched so the berries would roll out when it was unloaded. This box would be handled with a fork lift. These last two methods permit the storage unit to be moved by a lift tractor and would have no extensive conveyor belts. On the other hand, those considered first are fixed and call for an extension conveyor system to get the berries into them or out of them. Fixed storage would or should have tight joints in the air ducts and would be efficient, while the moveable bins would have to be properly placed and some opening such as those for the fork lifts closed

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after the boxes are placed to get an efficient air flow.

**Wirebound Boxes**

The most recent thought is to use wirebound boxes which might be discussed, as the small box, used experimentally as a master container and a large one holding 600 to 800 pounds. The small ones could be used for dry picking like a field box, then moved right to the storage. After the field heat has been removed, these packages could be used to ship the berries, with the chaff, to the distant markets to be screened and packaged near the retail markets. This has been done with many other fruits and vegetables, and would place much better quality in the hands of the consumer. The small wirebound box used to ship the berries before screening would be used as a master container for the one-pound packages. In car lot shipments berries in wirebound containers have cooled quicker and remained cooler throughout shipment than berries in corrugated containers. These packages may be purchased with the covers separate which would probably be more convenient. The large wirebound box could be used by growers who at present harvest into bags and could transfer to boxes. The full boxes could be left on the shore to be picked up by a truck with a hoist. Another possible use would be to have two, three, or four of the small dry picking machines operated together and convey all of the berries to a trailer which would have a wirebound box. This wirebound box should be chosen so it would have

a resale value in the area to which it was shipped. These wirebound boxes would have to be handled by hoist and fork-lifts, but they would greatly reduce the labor cost of handling. The large wirebound box might be used to receive the berries from the dryers.

**Suggestions Requested**

The cranberry industry has had considerable mechanization, but the field box and the storage box still go back to the days of hand picking. In view of that, this article has been written with the hope that all of the readers would think, and out of the thinking, some progressive ideas on the removal of field heat and storage of cranberries would develop. The author would be pleased to receive comments, suggestions and new ideas.

**Stevens Visits New Jersey**

Ambrose E. Stevens general manager of the National Cranberry Association, made his first trip to New Jersey in a cranberry capacity, holding a meeting at the Bordentown plant June 11. This was attended by about 100, including growers and wives, the number being cut down somewhat, perhaps, by the fact that a near cloudburst occurred just before the meeting.

Stevens says he found a mild optimism among the growers and was much impressed by the Bordentown plant. He later was taken on a tour of some of the bogs and to meet some growers by Eddy Lipman, New Jersey manager of NCA. At the local USDA and state agricultural department at Trenton, Stevens cut two tapes for local radio recording. One was on sauce, requiring five minutes, and the other on juice, three minutes.

**"Cranberries In Wisconsin"**

(Cont. from last month)

Pertinent facts from "Cranberries of Wisconsin", special bulletin No. 70, just issued by Wisconsin State Department of Agriculture, Federal-State Crop Reporting Service and the United States Department of Agriculture.

Further, growers reported they could potentially double the state's total cranberry acreage by using suitable land available on their own holdings. It is possible to further expand production by increasing the productivity of existing bearing acreage with more effective fertilizer use, better cultural practices, and improved insect disease and weed control production. "In fact in many instances it is more economical to expand cranberry production by more intensive cultivation practices than it is by increased plantings."

**Water Supply**

A dependable water supply is essential to successful commercial cranberry production. According to the 1949 survey an average of 17½ acres of pond or reservoir was used for each acre of cranberry marsh in 1948. About 7 acres of reservoir were used for each acre of vines in the Cranmoer district in 1928. The 1949 survey indicated that 44 percent of the growers obtained water from creeks, 28 percent used rivers, 14 percent used lakes and 19 percent secured their water from other sources such as springs, wells, and surface ditches.

The 1952 survey indicated that about 40 percent of the growers reported creeks as their water source. About 15 percent reported rivers and 14 percent reported lakes with about one-fifth indicating other water sources in the in the 1956 survey. About half of these growers used both creeks and rivers with the others employing a variety of different combinations of water sources.

(To Be Continued)

Table 1  
Minimum Temperature by Years and Months Recorded at East Wareham, Mass.

Days at or below the indicated temperature

September

October

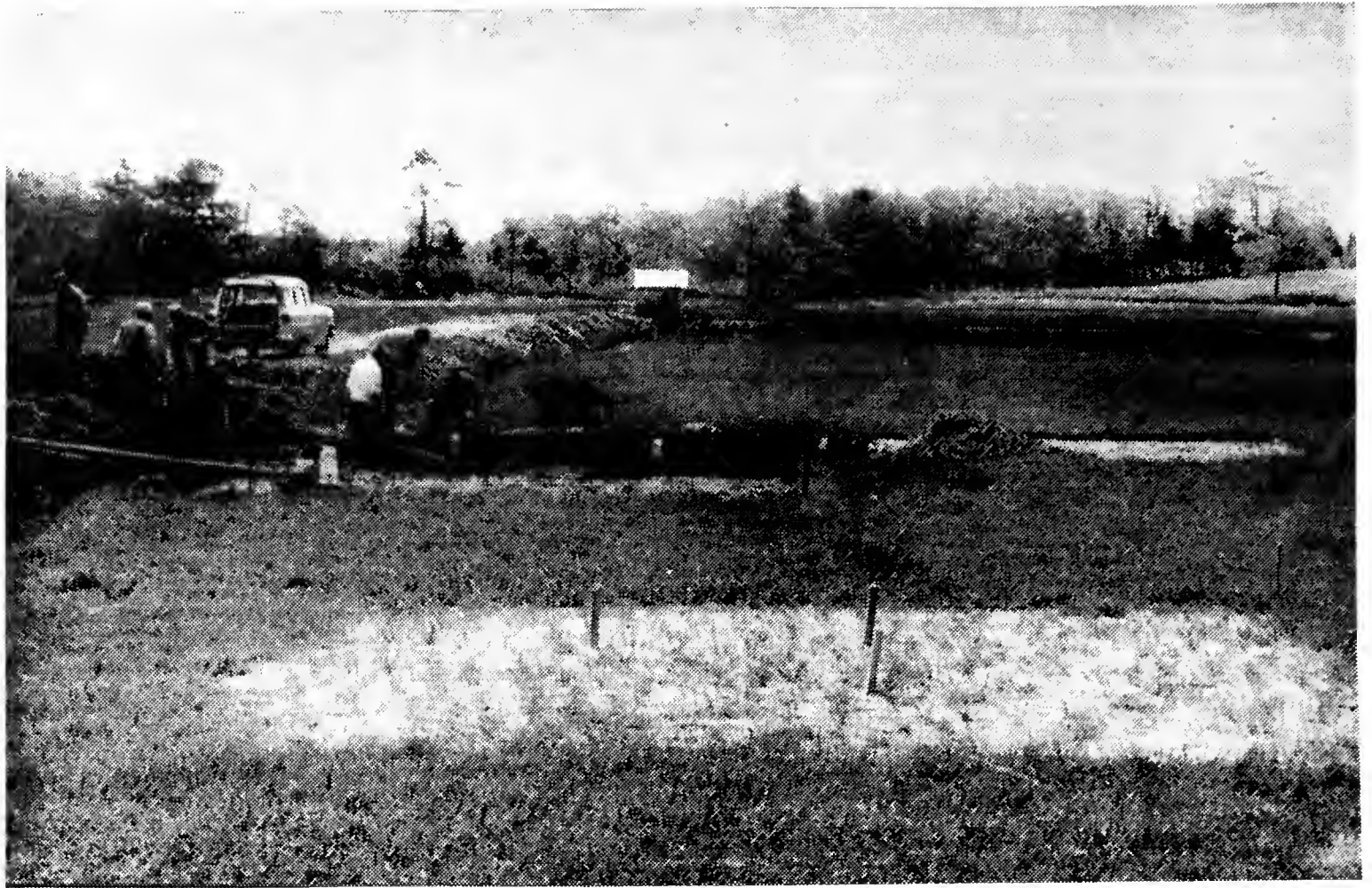
November

Degree	35	45*	55**	35	45*	55**	35	40*	45***
1948	1	10	23	11	19	29	12	16	17
1949	1	9	21	7	17	25	24	27	29
1950	2	7	23	7	14	27	15	18	24
1951	2	5	13	6	16	27	18	18	25
1952	1	7	18	8	22	27	17	24	28
1953	1	7	15	4	17	27	17	22	29
1954	0	5	20	6	14	19	18	23	25
1955	0	9	19	4	14	27	18	22	26
1956	1	7	20	7	19	30	16	21	26
1957	3	6	14	5	20	29	18	23	30

\* Includes 35°

\*\* Includes 45°

\*\*\* Includes 40°



Sprinkled Experimental Acre, showing soil plots, pumphouse in background. (CRANBERRIES Photo)

## Two New Workers, Mass. Station - New Research Acre

Two new workers and a new long-range research project are additions to activities at Massachusetts Cranberry Experiment Station, East Wareham.

Assisting Dr. Bert Zuckerman, Station pathologist is John W. Coughlin, who will study nematoids, mainly in cranberry soils. Walter Kentfield has been assigned to assist Prof. "Stan" Norton, engineering research specialist.

An actual acre of the State Bog has been set aside for many experiments, including overhead sprinkler irrigation, frost control, draining and soil tests. Ditch water level in this acre is to be held at least two and a half feet below the bog floor and water put back through the sprinklers alone.

Dr. F. B. Chandler, soil expert, will conduct tests on drainage and of known cranberry soils. The acre was designed and laid out by Norton.

The irrigation system consists of Carlon plastic pipe, with two-inch mains, 300 feet long and three

quarter inch laterals, 40 feet both ways. An innovation is that the plastic is buried in the bog bed, at a slope to provide for drainage. Risers, 12 inches in height, are from four to ten inches above the bog floor. Installation is designed to be permanent and there is nothing to interfere with ordinary bog operations, as in the layout of many systems with piping above ground.

Heads are Rain Bird, No. 20, and at present total 26. Each head is designed to throw 2¼ gallons a minute, providing for an acre inch of water in about 7½ hours.

Water source is a section ditch, over which a small pumphouse has been constructed with a Myers centrifugal pump powered by a Wisconsin gas engine. Thermo couples have been installed to accurately measure the effect of sprinkling at various temperature ranges; involved would be the size of berries and of size of crop on a basis of better drainage and

water provided by sprinklers as against ditch irrigation.

A principal problem hoped to be solved is the theory that a bog so well drained and comparatively dry will bring about deeper root system of the vines. Another thought is that the drier bog floor will be much firmer than one water soaked, and an all-purpose tractor will be tried out in projects such as sanding, chemical weed control, pruning. The amount of mechanical damage to vines can be determined.

Known cranberry soils have been mixed in plots under direction of Dr. Chandler, one plot having peat over sand and another sand over peat.

Coughlin, 27, who will work under the direction of Dr. Zuckerman arrived June first for the summer only. Born in Stoneham, Massachusetts, he attended and was graduated from Medford High School. He spent two years in the U. S. Army in the field of neuropsychiatric work. He was sta-

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tioned in Texas, Colorado and Kansas.

In 1950 he entered Steckbridge School of Agriculture, a division of the University of Massachusetts, where he majored in forestry. He holds a B. S. degree in that subject from the University and has also had one year in entomology.

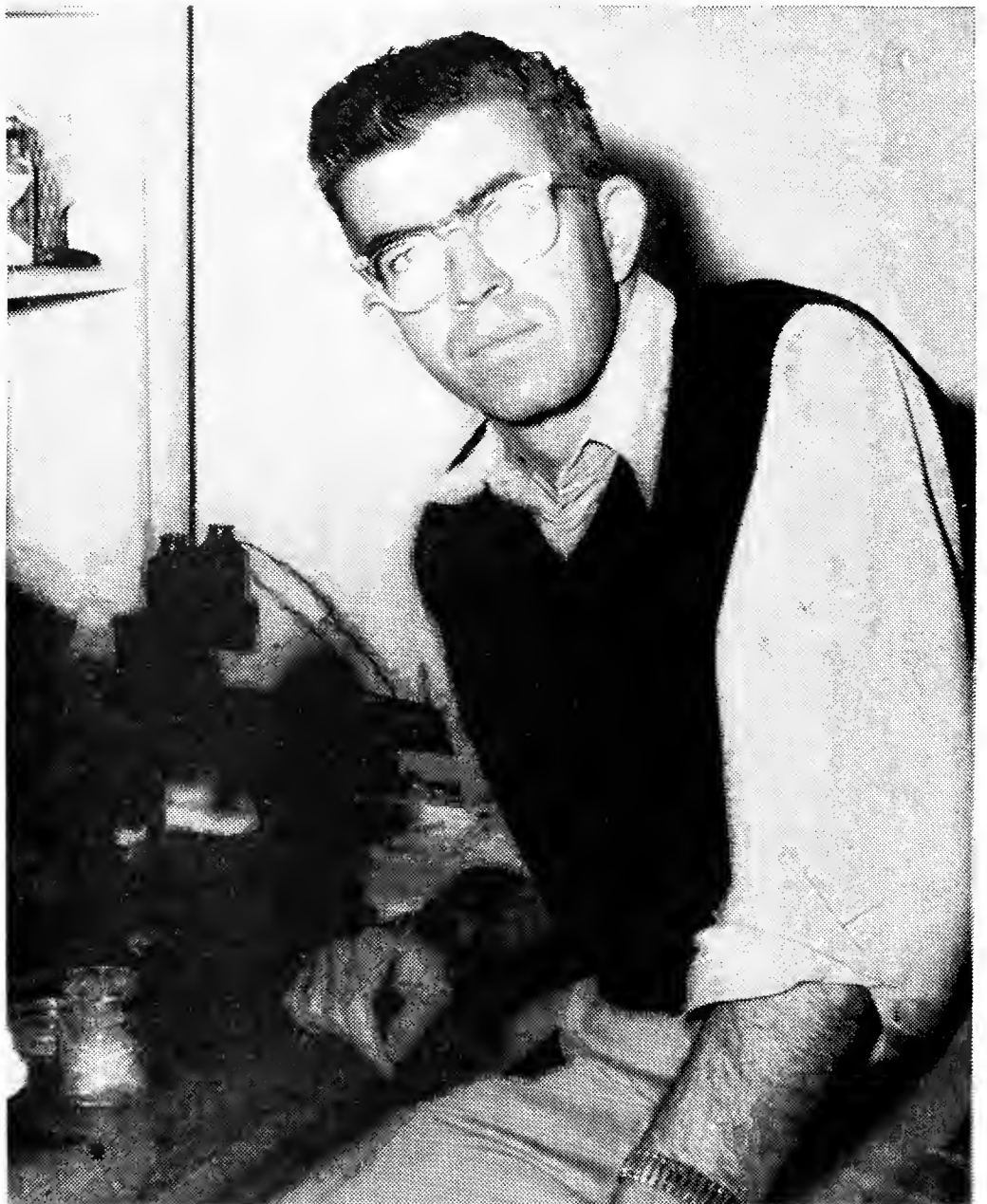
His work will be mainly in research in nematoids, a microscopic parasitic worm. The studies will be largely on nematoids found in cranberry soils, and this, as far as is known, is the first venture into this field as concerns soils of the cranberry. He expects to return to the University in the fall, where his studies will continue toward a master's degree, probably in the field of nematoids, which is a growing area of agricultural research. It is hoped he will be able to continue research prob-

lems for the cranberry station during the winter and possibly return next season.

He is single and living at East Wareham during the working week. This project is made possible by federal funds.

Kentfield is a native of North Dartmouth, Massachusetts, but he is more recently of East Dover, Vermont. There he operated a farm of his own for the past seven years. He was concerned mostly with maple tree and dairy farming.

He spent some time in the West, but has been near or on a farm all his life and has had much experience in both mechanical and manual farm work. He will assist in machine shop work under Norton, doing various machine jobs such as welding and anything else which comes under the engineering



John W. Coughlin Will Study Nematoids in Cranberry Soils.  
(CRANBERRIES Photo)



research work of Prof. Norton.

This is a new, permanent position among the Station workers. Kentfield is married, has three children and is living on the property of Ruel S. Gibbs at South Carver.

## New Jersey Frost Loss

The frost which did some damage in Massachusetts on night of June 6th and morning of the 7th also hit New Jersey. The dew-point was very low and it was a "black" frost. Some blueberries were hurt and some cranberries.

Few reports of serious injury came in to the Experiment Station at Pemberton, and it may not have been too damaging for the state as a whole. Frost was apparently more severe along the Atlantic coast than inland.

## NCA to Test Berry Holding At Onset Plant

A test project to determine if cranberries can be made to hold up in controlled storage so they may be sold in the first four months of a year is getting underway by the National Cranberry Association.

The plan is two-fold, General Manager Ambrose E. Stevens says. The first will be to test the ability of the fruit to remain suitable that long for fresh consumption, and the second, to see if there is demand for fresh cranberries in January, February, March and April.

The matter was brought up by the co-operative's shrinkage committee, Chester Robbins of Onset, chairman, at the May meeting of directors.

Test is to be made at the Onset plant, where a room is being pre-

pared to hold about 7,000 barrels at controlled temperatures and humidity. The temperature will be 38 degrees and the humidity 85, with automatic controls and automatic ventilation. Insulation is to be of fibre glass.

Installation systems with pumps and compressors will be similar to those in a modern super-market refrigerator section and to modern apple coolers. The cost is reported as approximately \$40,000.

Directors voted approval of setting up this facility, thereby providing a test, looking forward to providing more berries from future pools to sell on the fresh market.

## Spiced Berries In New Recipes

Spiced cranberry jellies, from Cransweets furnished by Cranberry Products, Inc. of Eagle River, Wisconsin have been prepared by USDA, Horticultural Research Service at New Orleans. The candies were made in the candy laboratory, as part of the cooperative research project with the National Manufacturers' Association.

Several recipes were developed for use of the spiced cranberries in the confectionary field.

## New Picker To Massachusetts

Visiting Massachusetts in late May was Lawrence Dana, Dana Machine & Supply Company, Wisconsin Rapids, Wisconsin bringing with him a new model of the Getsinger Picker. This is a machine on which the operator rides.

Mr. Dana, while in Massachusetts, visited Mr. and Mrs. Raymond Morse. The picker remains for vine training and use in the fall.

## BANDON (ORE.) PLANS FOR 12TH FESTIVAL

Bandon, Oregon is already starting on its plans for the 12th annual cranberry festival. This is to be October 10, 11. The first "princesses" to appear were Linda Sutherland, sponsored by Bandon Junior Chamber of Commerce and Carlleen Metzger by the American Legion.



Walter Kentfield Assists in Engineering Department.

(CRANBERRIES Photo)

## PROLONGING FRESH SALES

AN EXPERIMENT WHICH could have long-range and important effects upon the marketing situation is to be conducted by National Cranberry Association. This is the setting up of a storage room at the Onset plant in which berries will be kept at controlled temperature and humidity until after the first of the year following harvest.

It would test how well berries can stand up for a long period for consumption as fresh fruit. These berries placed in the market would also test whether there is demand for fresh cranberries after the holidays, through the winter months and into spring.

If this preliminary small-scale project works out it would be a means of placing more berries into fresh sales and at the opposite end taking fruit out of the processed fruit pool, thus relieving it.

In some years, at least, there is demand for cranberries after the big buying for the holidays. As markets would otherwise be bare of fresh cranberries there might develop an active demand and possibly at higher prices than when cranberries are common in the market.

It could be a means of extending the period of fresh cranberry sales and could work out to a betterment in cranberry marketing. At least, we think the experiment is a step in the right direction. Any step is, which if not too costly and has reasonable possibilities of improving the current demand-price situation.

## GOV. RESEARCH HELP

VERNON GOLDSWORTHY, president of Wisconsin's Cranberry Products, Inc. (as shown by a brief item in this issue) takes advantage of Federal Research in new products. The Southern Utilization Research and Development Division developed several samples and recipes for new spiced cranberry candy jellies.

He reports he has received quite a bit of help in developing formulas. The whole cranberry industry could be benefited, very

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Pemberton, New Jersey

likely, in this way. Particularly if the Cranberry Institute, currently not doing much should become active in seeking such assistance on a nation-wide basis in finding new outlets for cranberries.

FROM that newly-arranged and experimental sprinkled acre at Massachusetts State Bog there may come some developments of much interest to the industry. More should certainly be known about cranberry soils and more about overhead irrigation and frost control.



Betty Buchan, National Cranberry Association, is shown speaking at a membership clinic attended by representatives of farmer cooperatives and the U. S. Department of Agriculture, held in Hershey, Pennsylvania, recently. At right is Gardner Norcross, United Cooperative Farmers, and left, J. K. Stern, president, American Institute of Cooperation.

Betty has also been invited to serve as toastmistress at the women's luncheon at AIC's annual meeting in August. — Photo from News For Farmer Cooperatives published by the U. S. D. A. published by th U. S. D. A.

### *Rudy Hillstrom In Massachusetts*

Rudy Hillstrom of Western Pickers, Coos Bay, Oregon, is in Massachusetts, making arrangements for the machine sales and service this year. He arrived by plane June 12th and will remain until about July 4th.

Machines are to be manufactured in Massachusetts by J. E. Braley & Son, machine shop in Wareham, with Louis Sherman of Plymouth as general sales agent.

During 1957, machines were made on the West Coast, with trials in both Oregon and Washington on a new model which is now announced as the 1958 Western Picker.

### **Fresh From The Fields**

(Continued From Page 6)

#### **WASHINGTON**

that Manzate has been approved for use on cranberries in his area. Up to the present this material had been registered for use in other areas, not in Pacific Northwest.

#### **WISCONSIN**

##### **May Deficient**

May was slightly below normal in both precipitation and temperature in the cranberry areas of the state. Mean temperatures for the

(Continued On Page 18)





photo courtesy of the National Cranberry Association

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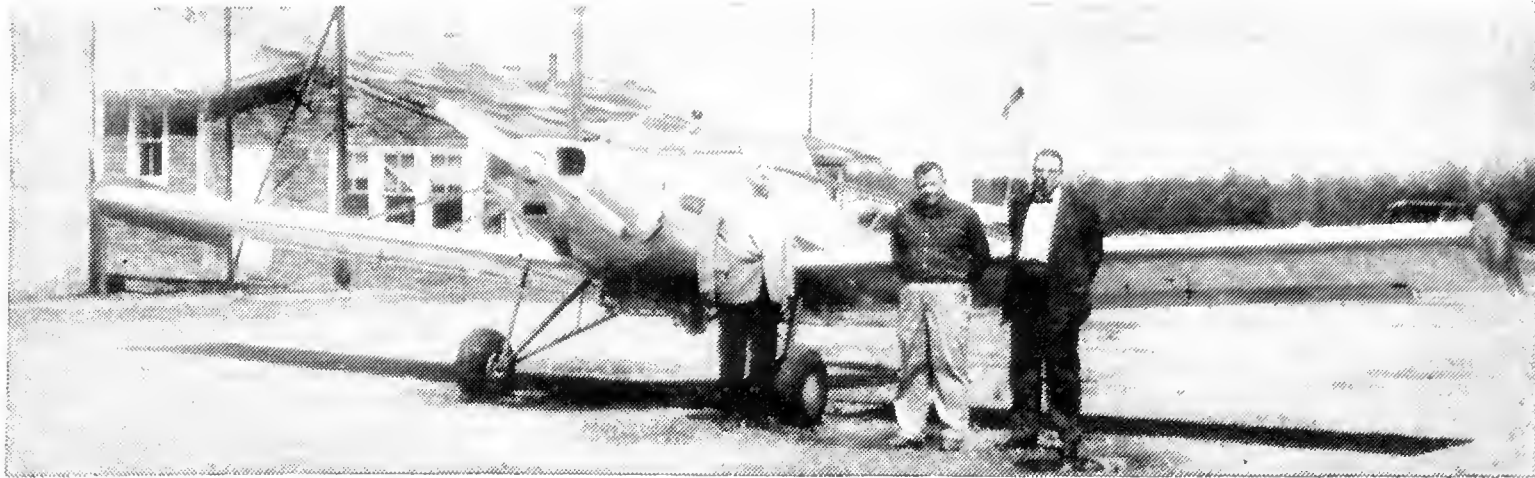
Malathion's fast disappearing residues allow application on cranberries up to 72 hours before harvest.

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Advt.



The new Call Air Agricultural Plane at Hanover, with (left to right) Marcus L. Urann, Pilot Ben Atwood and Garland Brooks of United Cape Cod Cranberry Company. (CRANBERRIES Photo)

## New Type Plane In Mass. Use

A type of airplane for spraying and dusting new to the cranberry industry, at least in Massachusetts, has been placed in service this season by the Ben W. Atwood Aerial Spraying Service, Hanson. This is a Call Air, manufactured in Afton, Wyoming and is extensively used in the West in all forms

of agriculture.

The machine is especially designed for agriculture dusting, spraying, fertilizing, sowing of seed. It has a high safety factor, and a rate of climb of 500 feet per minute. It carries a pay load approximately its own weight.

Powered with a 150 h.p. Wycoming, the plane has a gross weight of 2150 pounds. Wing span is 35 ft. 5½ inches, length 23 ft. and

9½ inches, height 7 ft, 10 inches. It can operate over a 250 mile radius with maximum pay load. Ceiling is 17,500 feet and it cruises at 82 miles per hour.

Mr. Atwood has operated for United Cape Cod Cranberry Co. of Hanson and others for several years and this firm, which has two air strips will be a principal user of the new plane.

## Fresh From The Fields

(Continued From Page 16)

month was 54.6 degrees compared to an average of 55.2 degrees. Maximum for the month was 90 degrees on the 14th and minimum was 18 degrees on the 6th. The first week of the month was cold and rainy, the middle two weeks warm and dry and the latter part of the month was cool and rainy. Precipitation varied considerably with the northern half of the state receiving above normal and the southern half well below normal. Overall deficiency was from .75 to 1.34 inches below the normal of 2.52 inches. Ground water table was reported 1.60 feet below normal. Deficiencies in precipitation for the year now average above 3.50 inches. The June weather outlook is for warm weather and above normal precipitation. Normal temperature for June is 65.0 and normal precipitation is 4.63 inches.

### Retarded

The cool weather in May retarded vine development along with

frequent frost flooding. Fertilizing operations were held up by the wet condition of the marshes. First brood fireworm control started the last of the month, which was about one week late. Except for isolated cases the worms are in good control. Cool damp weather the last week in May hampered dust applications.

### Spring Chemicals

Stoddard solvent and kerosene was being spot sprayed the latter part of the month, along with some under vine boom spraying with solvent. Growers were getting their swabbing booms ready to apply dalapon on various grasses over the top vines in early June. Experimental work was continuing with dalapon, amino triazole and meleic hydrzide. It appears that the use of the systemic herbicides will be greatly increased as soon as pre-harvest clearance has been given them. Dr. Dana is continuing his experimental work trying some of the later herbicides.

### Varieties Planted

A check on the varieties planted by Wisconsin growers this spring still showed preference to

Searles with Pure Bain McFarlins second and scattered plantings of Ben Lears, Stevens and Black Veils. More Bain McFarlins are expected to be planted in the future. Most planting was completed by the first of June and growers had a good cool wet planting season. They now are hoping for some warm weather.

### Cattle Outnumber People

A recent survey in Wood County, which is the leading county in Wisconsin for cranberry acreage and production, showed that cattle outnumber people in the county roughly 40,000 to 30,000.

## Washington Bulletin

Estimates a month later of the bad freeze in Washington on May 12 is that about half the buds were killed, although this will be determined with more accuracy after blossoming time. Charles C. Doughty, superintendent of the Cranberry Experiment Station at

(Continued On Page 20)

## READ

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Magazine

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# SERVING THE WISCONSIN GROWERS

## Fresh From The Fields

(Continued From Page 18)

Long Beach, says he does not now expect more than 30,000 to 35,000 barrels.

Last year, with 83,000 barrels, Washington was third producing state. Present estimate of Long Beach production is 12,000, last year 21,000; Grayland, including North Shore area, 20,000, last year 62,000.

All bogs suffered some damage, this varying from about 20 percent to 95 or total loss.

## LATE WISCONSIN

Reports from sources in Wisconsin say that although it has been a late, cold season, vines seem to be coming along very well. There was presumably some water damage because of frost floods, and because, with water scarce, some growers left water on.

A larger crop than in 1957 may be expected if things go well from now on, possibly 325,000 barrels or better it is now being estimated. Rains were better in early June. But water table is 4 inches below normal.

## LATE MASSACHUSETTS

Two June frosts occurred in Massachusetts, one on the night of June 4 and the second on the night of June 6. Both caused loss-

es on dry bogs and on high edges of bogs flooded, the first real loss of the current season. A check by experiment Station staff has placed the damage as possibly two percent, maybe 10,000 barrels of the crop now estimated in prospect.

Frost of June 4 was the most severe, coming before midnight. Bog temperatures varied from 22 to 30 with the evening forecast being 28-29. Twenty-nine and a half was about the tolerance. Second frost brought readings from 24½ to 27. There was some wind

during the night.

Both frosts were general, over Cape Cod proper and in all sections of Plymouth County.

First twelve days of June were rainy, gloomy and colder than normal, temperatures being approximately two degrees a day below the average. Bogs continue about a week behind normal in development.

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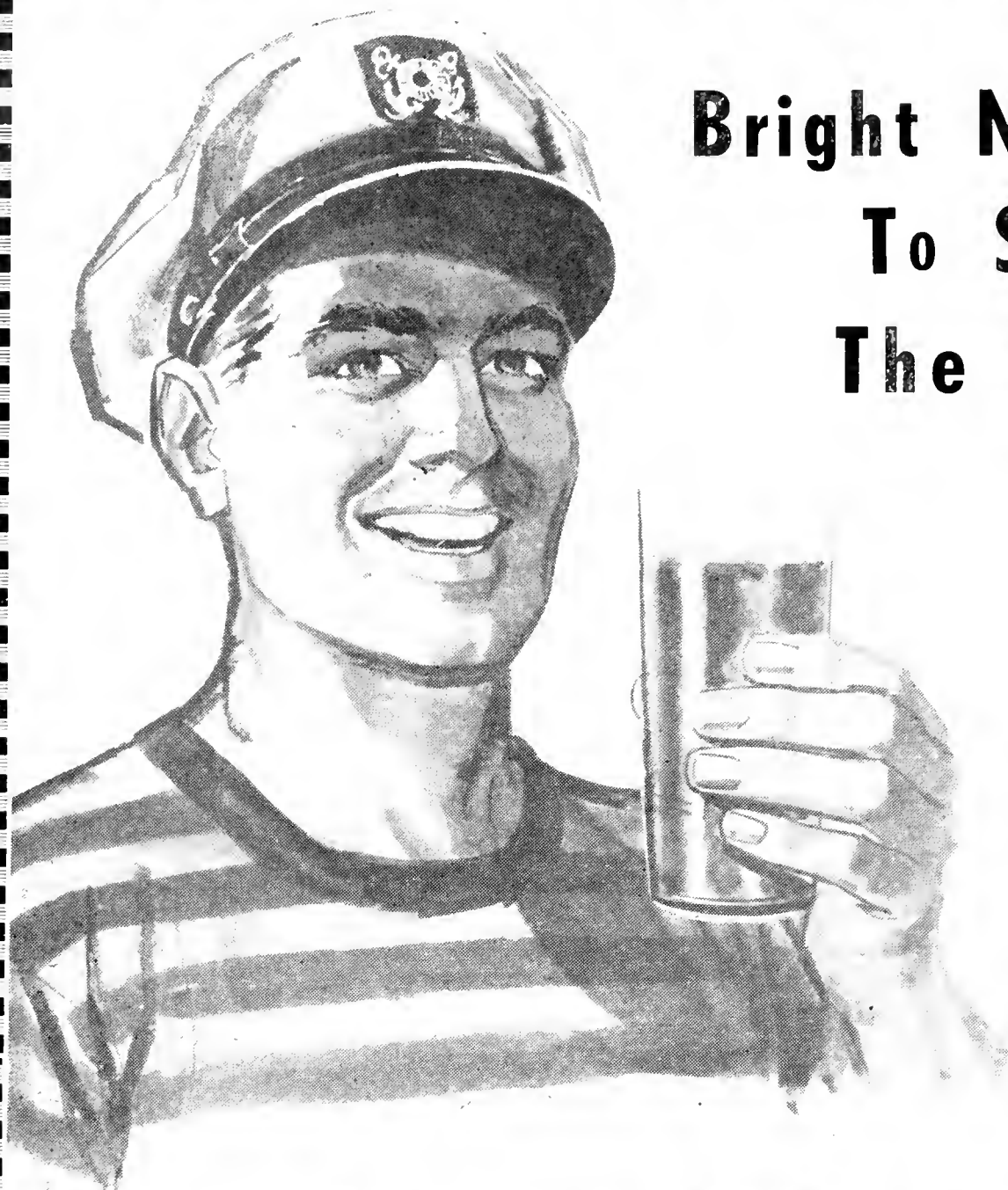
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(CRANBERRIES, Photo)

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## Cape Growers To Meet August 19

Annual meeting of the Cape Cod Cranberry Growers' Association will be an all-day affair at the Cranberry Experiment Station, East Wareham, Tuesday, August 19. Directors, meeting at the station drew up preliminary plans.

There was no spring meeting of the organization this year and it is planned to make the annual event an outstanding one. Program is still in planning.

Events, however, will include the usual business meeting, elec-

tion of officers, probably an exhibit of cranberry equipment and a tour of new research developments at the bog, preliminary crop estimate from C. D. Stevens, chief New England statistician and several speakers.

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## COMMUNICATION

(Editor's Note: In view of the harvest season now approaching, and the mounting interest in efficient harvesting methods, the following letter is published. It also gives some pertinent reasons from an experienced grower as to why Washington is progressing rapidly in production and production per acre. The writer has been averaging better than 100 barrels to the acre.)

Mr. Clarence J. Hall  
Editor, CRANBERRIES  
Wareham, Massachusetts  
Dear Sir:

I observed your comments and also those of "Chuck" Doughty of the Washington State Experiment Station at Long Beach, on the exceptional crop in Grayland in the past year, which were printed in the recent issues of CRANBERRIES magazine.

It brought to my mind the thought that perhaps the Western Picker has been a bit responsible for this higher production per acre, too, certainly not all because God and this weather is all powerful. But perhaps a small portion, as I shall attempt to point out.

Since 1950 I have sold over 100 Western Pickers in the Grayland area. They have been doing a very good job of harvesting the crops here, and all of them are still being used. In this time, I have heard men complain that this Western would ruin the Grayland area, and the same men came back a few years later and bought a machine of their own and are still getting crops and better crops than before.

The reason for this is, I think, that the machine combs out the vines, thinning and pruning in a manner which very few growers were practicing before. This has been told to me by top men in cranberry growing in this area many times.

My personal experience with the machine is such that I know it takes practice to pick a field of cranberries properly with it. And

a man improves his technique season after season. If he is on the ball, he gets busy and irons out the bumps and hollows and makes the job a lot simpler. He adopts his fertilizer program to the machine by increasing the phosphate to improve the root strength and structure. He also adopts a pat-

tern to pick by making sure first that it is the most efficient toward getting the berries from the field, and then he sticks to it year after year. And prior to commencing the harvest and twice a day during harvest, he makes

CONTINUED ON PAGE 4

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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



The spring frost season gave Massachusetts cranberry growers a parting shot on June 17. A number of bogs dropped below 30° on that date and one bog temperature of 26.5° was reported. Frost damage this spring has been wide spread throughout the cranberry area and severe on some bogs. "Umbrella blooms" have been common. However, in terms of possible crop reduction, we have placed the damage at approximately 3 percent of a normal crop, or possibly 16,000 to 17,000 barrels.

A total of 19 frost warnings were released this spring, equalling the same number issued last spring. George Rounsville handled the frost forecasting work in his usual capable manner. We are also indebted to the weather observers, telephone distributors, telephone operators, and the four radio stations for the important part they played in this service. Our new system for receiving the frost message, including the explanation of terms used in the warnings, has been well received by growers and will be continued this fall.

Temperatures in June averaged approximately 3° per day below normal and rainfall was also below normal. Incidentally, June and March are the only months out of the last eight when rainfall has been less than normal. We now have a total of 36.39 inches of rain for the first six months in 1958, or within 8 inches of our yearly average. The low temperatures experienced in June did add 2 points to our final keeping quality forecast, making a total of 4 points out of a possible 18 which favor good keeping quality next fall—the same total as last year when conditions were far from

satisfactory. It is apparent that the odds this year do not favor good keeping quality unless corrective steps are taken. Reference is made of course to the proper use of fungicides. We are happy to report that at least 2000 acres of bog in Massachusetts are being treated with fungicides this year, which is a tremendous accomplishment and a very tangible indication of the growers interest in sound fruit.

Insect activity in general has been the lightest in years, at least up to the fruitworm season. It is too soon to know the extent of damage that may result from the **fruitworm**, **second brood of fireworm**, **new brood of weevil**, and **Sparganthis fruitworm** but early reports (July 16) do not appear to indicate an extensive infestation of these pests. However, bogs should be checked every 3 or 4 days for the above insects. We want to emphasize again the importance of using the hand lens in making egg counts of the fruitworm and urge growers to use the insect net to determine the types and numbers of insects present so that proper control measures can be taken. A little extra effort with these tools will enable growers to properly time their pesticide treatments and often saves the expense of extra spray and dust applications. Before leaving this subject of pest control, we would like to again stress the importance of heeding the warning outlined at the bottom of the insect and disease control chart. Too many growers are still exposing themselves unnecessarily to parathion and related chemicals.

A flash card was mailed to growers in mid-July from their County Extension Service featuring some

timely information on the use of **amino triazole** after harvest. It was pointed out that excellent control of cutgrass, nutgrass, asters, panic grasses, and white violets can be obtained by applications of amino triazole after harvest. The recommended rate is 16 lbs. of 50% amino triazole in 300 gallons of water per acre, as indicated in the weed chart. Less damage to the vines will occur if treatment is delayed until at least 5 days after harvest. For best results these weeds should be green at time of treatment. A second weed note pointed out the value of treating ditch weeds with **fuel oil** and **sodium arsenite** during the summer months. Growers should keep in mind that sodium arsenite is a deadly poison.

The committee appointed by the Cape Cod Cranberry Growers Association to study the vandalism problem around bog properties has been active. As a result of a meeting with the Southeastern Massachusetts Police Chiefs Association when the problem was discussed before their group, a special committee of police chiefs was appointed to work with our group. A meeting was held recently and a number of suggestions were discussed. The police stressed again the importance of growers reporting immediately each case of vandalism. The possibility of initiating special legislation that would result in heavier penalties for those apprehended was suggested. It was felt that equipment like batteries, etc., should be marked by growers so they could be identified if necessary. A report of the committee's work will be given at the August meeting of the Cape Cod Cranberry Growers Association.

The 71st Annual Meeting of the Cape Cod Cranberry Growers Association will be held Tuesday, August 19, at the Cranberry Experiment Station beginning at 10 a.m. The program will feature guided tours of the State Bog to inspect some of the insect, disease, and weed control work, the new seedling plantation, and experiments in water management. There will be a fine equipment display.



The popular chicken-cranberry barbeque will be served at noon. The afternoon program includes a report of Station staff members and will conclude with a crop report by Mr. C. D. Stevens. President Ferris Waite announces that all cranberry growers and their families are cordially invited to attend this annual meeting.

## Communication

Continued from Page 2  
 sure the machine is oiled and adjusted properly.

Many factors are involved in this increased production. Probably No. 1 is the many more sprinkler systems in use today than ten years ago. No. 2 is the better understanding of applying fungicides, and the ever-increasing attention given to this problem by the growers and the state experiment stations to which the growers have been voluntarily contributing toward research on twig blight and rose bloom.

No. 3 is the attention which has been directed toward the insect program in the area by growers and the county agents to the extent that the insects are largely eliminated or isolated on abandoned land.

No. 4 is the much better understanding and use of the fertilizers available on the market today. No. 5 is the increased attention to the drainage problem, and No. 6 is the fact that we have learned to cultivate the bogs toward improving our mechanical picking process and at the same time reduce the amount of drop, or berries left on the ground.

Sincerely,

JOHN R. O'HAGAN

Grayland, Washington

## Eldred S. Mosher

Eldred S. Mosher, 74, cranberry grower, died at his home, Pine Ridge Rd., Buzzards Bay, Massachusetts Sunday, July 20th. He was the operator of the former Nye bogs at Head-of-the-Bay. These are properties of considerable acreage. Prior to that he owned bogs in Carver. He had

lived there for 35 years. As well as growing cranberries he operated a school bus line and did work for the street department.

He was born in New Germany, Nova Scotia. He was a member of the Carver Grange.

He leaves a widow, Harriet G.

(Snow) Mosher; two daughters, Mrs. Doris E. Dunkler of Brockton, Mass., and Mrs. A. Ruth Weston of Carver; two sons, Eldred S. Jr., Carver and John Nealey of Nova Scotia. There are also 11 grandchildren and four great-grandchildren.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of July 1958 - Vol. 23 No. 3

Published monthly at The Courier Print Shop, Main St., Wareham, Massachusetts. Subscription \$3.50 per year.  
Entered as second-class matter January 26, 1943, at the post-office at Wareham, Massachusetts, under the Act of March 3, 1878

## FRESH FROM THE FIELDS

Compiled by C. J. H.

### MASSACHUSETTS

#### June Cold Month

June went down in 1958 weather records as the coldest and gloomiest in at least ten years. Temperatures averaged 3.3 degrees a day below the average. The chilliness of the month and of the entire spring had retarded cranberry growth by about ten days.

#### Adds to Keeping Quality

The cool June did, however, accomplish one thing favorable, that is, it added two points to the keeping quality forecast. This now stands at four out of a possible 16, the same low figure as last season.

#### Rainfall Under Normal

There was a reversal in the rainfall pattern for the first time in many months, total precipitation for 30 days being 2.88 as against the average 3.18. It seemed a much wetter month than it actually was, as a number of days had drizzle, fog or were cloudy.

#### First Heat Wave

June 28 brought the first heat wave of the season, which continued into July. Temperatures averaged mostly in the 80s, with a high of 91 on July 2. There was high humidity, real tropical weather.

### NEW JERSEY

#### Coollest June

Weather records taken at the Cranberry and Blueberry Research Laboratory at New Lisbon show that this was the coolest

June in the 29-year weather recording history at this place. The average temperature was 66.8° F., which is 0.6° cooler than the previous average low for this month in 1955. The average maximum daily temperature was 79.6°, the only time it has been below 80° in June at this locality. The average daily minimum temperature was 53.9°, also a new low. Indicative of the coolness of the month were the 15 days in which the maximum temperature failed to reach 80° and the 23 nights during which the minimum was below 60°.

#### Rainfall Less

After seven consecutive months of above normal rainfall, the June

total of 3.53 inches fell short of normal by 0.32 of an inch. For the first six months of the year the accumulated precipitation was 31.25 inches, 10.46 inches more than normal and only about 12 inches less than the usual amount for an entire year.

#### A Frosty Month

Cranberry growers had frequent sleepless nights throughout the month, as more than the usual number of frost alerts were issued. Several nights were on the margin of doing damage. On the morning of June 7, temperatures dropped to about 24° in some areas and some damage occurred, especially to bogs in the Toms River area.



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Temple 4-7818

### Sparganothis

There is an unusually heavy first generation infestation of Sparganothis fruitworms throughout the State this year. Several growers are attempting airplane applications of Zineb for rot control.

## WISCONSIN

### June Cool, Dry

June was unusually cool and dry. The first three weeks of the month were exceptionally cool and dry. The last week brought warmer temperatures and general rains over the cranberry areas, amounting to about one inch. Mean temperature for the month was 62.5 degrees compared to an average of 65.0 degrees. Maximum for the month was 87 degrees on the 27th and minimum was 22 degrees on the 14th. Precipitation again varied throughout the growing areas, with all areas being below the normal of 4.63 inches. Deficiencies in precipitation for the month was from .50 to 1.25 inches. Deficiencies in precipitation for the year now measure 5.14 inches and ground water table remains 1.75 feet below normal. The July extended outlook is for cool and wet in the north to near normal in the south. Normal temperature for July is 70.4 degrees and normal precipitation is 3.53 inches. A series of tornadoes on the evening of June 4 struck north western Wis. killing 28 persons, injuring 350 and damaging over 500 homes. The storm missed the cranberry areas, but brought much needed rain to the northern marshes. Hail on the 15th in the north west and north east caused some damage to marshes, but losses were light due to late hook development. The cold spring and summer has cut the Wis. cherry crop to an estimated 40% of normal and the apple crop about half of normal. All crops in the state have been retarded by the cool weather. Heavy frosts on the 5th and 14th seriously damaged the potato crop in north east Wis. There was some scattered frosts damage on marshes those nights, but overall damage was light.

### Fireworm

First brood fireworm control measures were completed the end of the first week of June. Control appeared good in spite of adverse weather conditions. Fruitworm millers were delayed in emerging due to the weather. Second brood fireworm were also expected to be late, unless temperatures improved. Little damage was expected from either.

### Vine Development

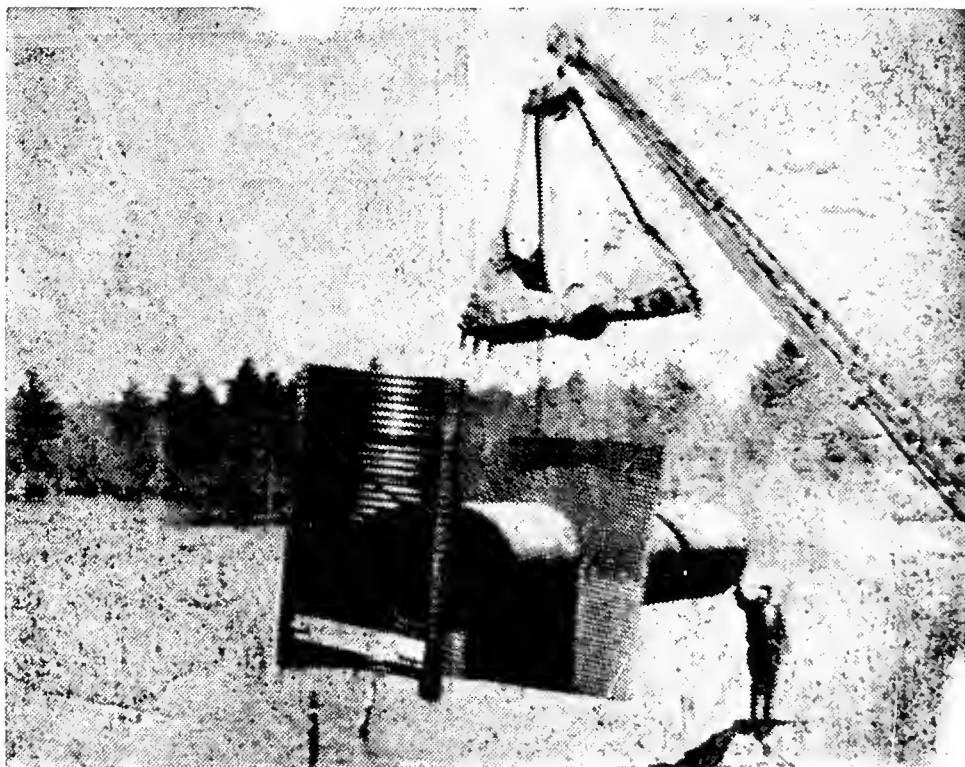
Vine development picked up the last week of June. First blossoms were observed on June 8th. A good scattering of bloom was appearing the latter part of the month on southern marshes, with very little bloom in the north. Full bloom was not expected in the south until July 15 and the north until July 20, or about a week to ten days later than normal. A high population of bumble bees was noted in the south and tame bees were being moved in

to help supplement pollination. New plantings were starting to grow well the latter part of the month. Dalapon and Amino Triazole was being swabbed on a large acreage with apparent good results.

### Crop Prospects Good

Crop prospects look good for Wis. this year based on the following reasons. Budding was from ten to twenty per cent better than the previous year. Most marshes had a fairly light crop last year, following the bumper 1956 crop. Insects are in good control, more fertilizer is being applied and drainage is being continually improved. Marshes are getting cleaner with the better use of chemicals, better drainage and picking machines. Early set looks very good, bumble bee population is up and the weather outlook, while not the best, appears promising. An estimated one hundred fifty

Continued on Page 16



**FOR PREFABRICATED FLUMES**

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**BOG RAILROADS**

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# Meeting Today's Conditions In Cranberry Industry By Mechanization

by  
LOUIS SHERMAN

With the high cost and scarcity of labor, the only way out is mechanization. This is the way I saw the future of the cranberry industry back in the 1940's. The two most costly operations were harvesting and sanding; these required mostly manual labor, which was very scarce.

During the war years in 1942 with labor not available, I built a cranberry picking-machine. It was impossible to get any new material, so it was made up with whatever I found in the junk yard. It worked pretty well, considering the makeshift materials used. I thought it best to wait until after the war, when new materials would again be available, before trying to complete it. In 1947, Mr. Hillstrom brought the first Western Picker from the West Coast, which I tried on a rental basis. It worked fairly well, and I thought it had great possibilities, after a few improvements which I suggested.

For the 1950 harvesting, I bought my first two Western Pickers. Eight scoopers promised to scoop for me, but on picking day, not one of them showed up. I was thankful that I had at least the two machines. With 50 acres of bog ready to pick and no scoopers, I really was in a spot. I kept the machines running continuously by staggering the lunch hour. I ran the machine while each operator would have his lunch. As long as the vines were dry, we worked until dark and managed to get the crop harvested in time, with the help of a few week-end scoopers.

## Got 99% of Crop

The following year I bought my third machine, so that I would never have to depend upon scoopers. There was, also, quite a saving on harvesting costs. Last year I used seven Western Pickers and we picked 99% of our crop, dropping less than 1%. My bogs are now all trained for machine picking. My operators go through a training period before I allow them to go on the bogs. This is why we can pick almost all of the berries with minimum vine damage.

The last year that my bogs were scooped, my cost for harvesting and pruning was \$2.62 per barrel, while in 1957, my cost for the same operation was only 64 cents per barrel. This included picking, wheeling-off, carting to screen-

house, removing vines and chaff, stacking berries in screenhouse, carting vines and chaff to dump, and pruning the bog.

We wheel off with a special jalopy which was made in 1953 for this purpose. It is now used for all types of bog work (Cranberries Magazine—August 1954). It is used for fertilizing, spraying, cleaning ditches, and applying kerosene for weed control. When used for wheeling-off berries at picking time, we use four inter-

changeable 4'x7' plywood bodies on our wheeling-off rig. Roller skate wheels mounted on the bodies mate with channel irons mounted on both the wheeling-off rig and on three of my "Model A" sanding jalopies. At the edge of the bog, the loaded body is shifted to a Model A for the trip to the screenhouse. An empty body is put onto the wheeling-off truck, which then goes back onto the bog. This change takes about three minutes.

At our screenhouse, we have a blower set up outside on a platform at the same height as the truck bodies, for easy handling of the bags of berries. After the chaff has been taken out, the berries are boxed and go into the screenhouse on roller conveyor tracks. The empty boxes are also handled by conveyors.

We also use this special truck for applying our fertilizer. With our 13 foot fertilizer spreader attachment, we can fertilize about 20 acres in a day. This takes six hours for two men.

## New Type Spray Rig

Last year we made a spray rig for concentrated sprays for this same jalopy and it did a beautiful job. It only takes five

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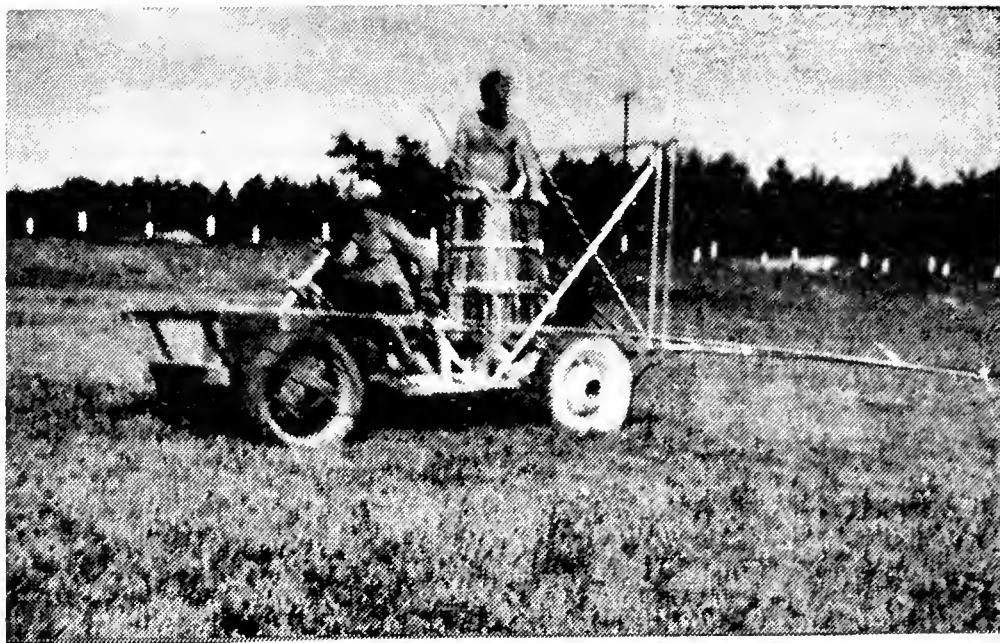
minutes actual spraying time to spray an acre of bog. This requires three men, the driver, and two men to move the plank from section to section and to refill the 50 gal. tank after every two acres.

Most of the sections on our bogs are four rods wide, therefore, we made a folding boom with a thirty-three foot spread, so that a section is completed in one trip around. The boom is in three separately controlled sections with a quick-acting master control valve. We can do a five, fourteen, nineteen or thirty-three foot swath. The sprayer has a nylon roller low-pressure pump, run by a five-horse Briggs and Stratton engine. We use our 200 gal. high pressure sprayer to mix the spray and to supply the smaller sprayer. Last year I put Zineb (fungicide) in two applications over all my bogs. The labor cost was only \$3.24 per acre.

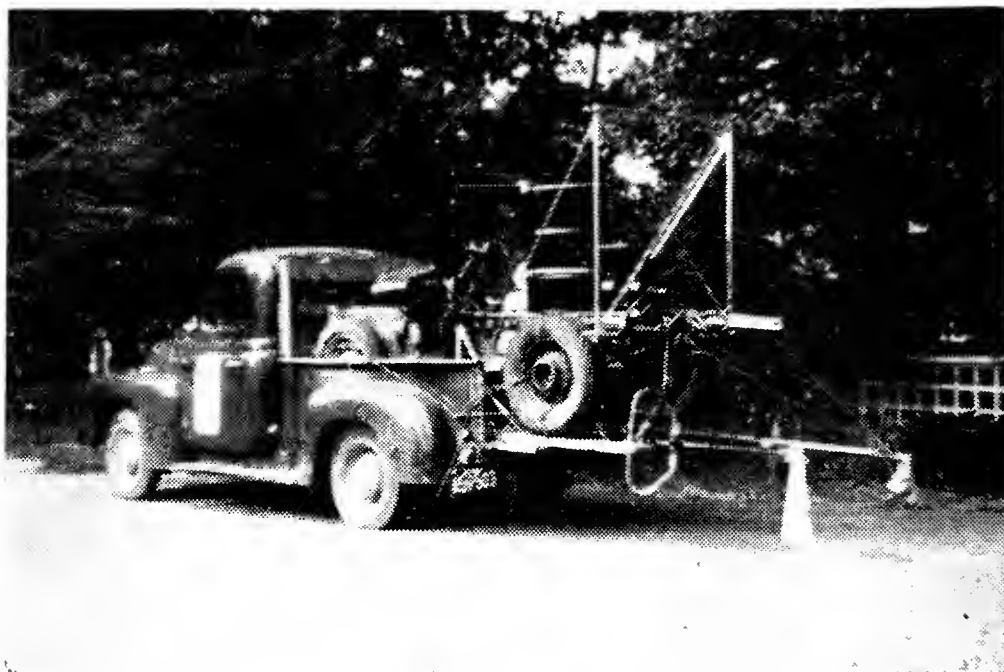
We have a special body that we use when we wheel off in cleaning ditches. This is made of a sheet of plywood with 8 inch sides and one end. It has the same roller skate wheels underneath for easy dumping. Mornings when the bog is wet or on rainy days when there is no picking, my men clean the ditches, putting the dirt in piles on the bog. After it dries, we take it off in the jalopy. All we have to do to dump it is to pull out a pin and roll off the body. Last fall, we cleaned about 2½ miles of ditches by this method at a very reasonable cost. For crossing ditches and going on and off the bog, we use 2-inch oak plank, 12 feet long. We carry loads up to about 1500 lbs. Using this machine on the bog for the past five years has shown that very little damage is done to the vines, as long as you do not go over the same tracks more than twice. When crossing ditches and going off the bog, we move the plank every two or three trips.

#### Full Crop After Sanding

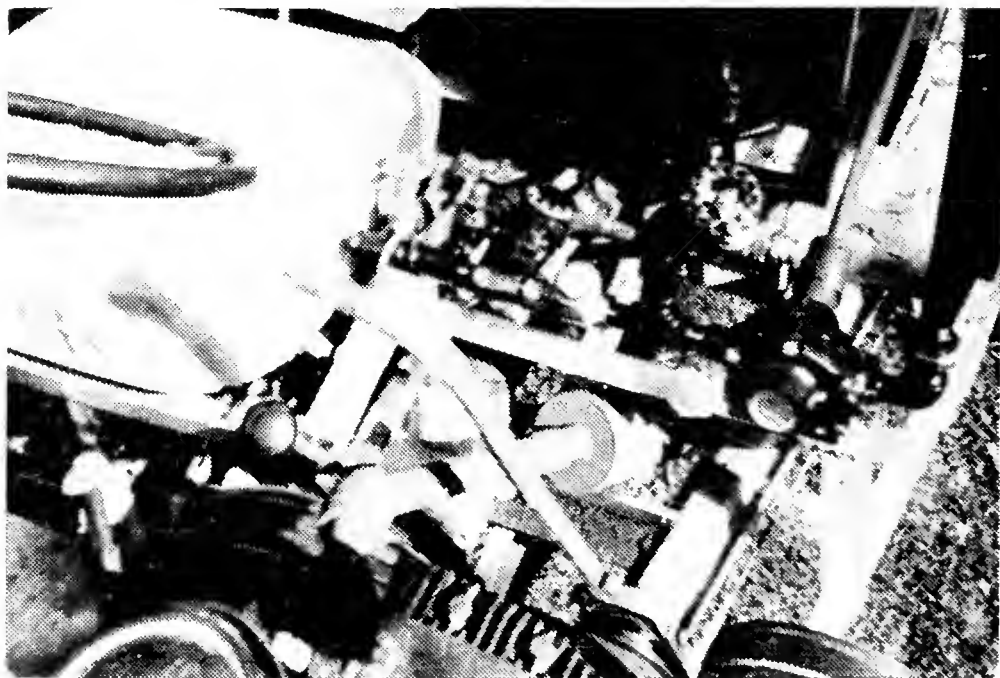
Bog sanding is done by Model A Fords that back out onto the bog, loaded, on 8 inch plank. Trucks



Showing Spray Rig on Bog.



Rig with Nested Boom, Ready for Transporting.



Controls of Rig, with pump assembly.



must stay on the plank, otherwise there is vine injury. After the sand is spread, I have men rake up all the uprights, so that I get a full crop and the picking machines can get all the berries in the same season. Using a small four-tooth rake, which is very light and easy to handle, the vines come right up out of the sand. Last year we sanded in early May and in several sections, I picked over a barrel to a rod, in the fall.

When sanding, we try to fill in all low places and raise the edges near the ditches, so that it will be easier to pick all the berries. Doing a cost study on sanding last fall, I found that it cost \$20 to \$30 per acre extra to raise the edges of ditches and fill the low spots.

I found that the only way that we can economically grow cranberries and maintain our bogs under present conditions is by mechanizing all bog operations.

## Getsinger Picker

Regarding the new Dana-Getsinger ("Wisconsin") Picker, Mr. Dana informs us the thought behind producing a riding model picker was to get away from the large amount of walking required to harvest a crop with the large machine was that it required approximately 3.3 miles walking in the vines to harvest an acre. Then in Wisconsin, the machine has to be returned to the starting end of the bed, either under its own power or by means of a trailer.

In case of its own power, this means another 3.3 miles for the operator. Therefore to harvest 50 acres of berries means walking a minimum of 165 miles to a maximum of 330.

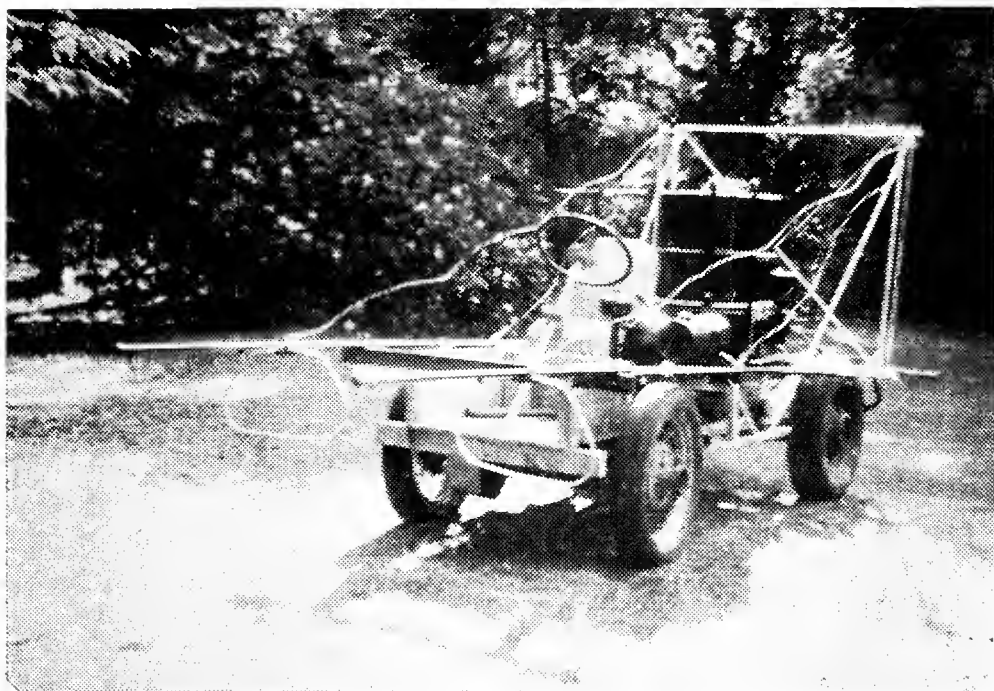
Wisconsin is rapidly retraining the vines so it can harvest both ways and hold walking to a minimum. By doing so this also increases production from a given machine.

Another feature which was incorporated into the machine was the means of raking the ditch edges by offsetting the picking mechanism, either to the right or to the left. Ordinarily the average grower has to leave from six to twelve inches of berries along the ditch edge, and then either harvesting by hand or not harvesting at all. This one feature alone, says Mr. Dana, will pay for the machine in time. A strip twelve inches wide by eight miles long is an acre. Producing 100 barrels per acre more, another 100 barrels may be added to the grower's income from the ditches. It is surprising how many miles of ditches there can be in a bog.

The weight of the machine is 925 pounds carried on 6-570-500-8 tires so the machine is able to go over very soft ground, providing it is well vined over. The machine is very maneuverable in the vines and easily controlled for depth. The same machine will harvest either wet or dry. For some conditions dry there could be installed a smaller vine roller to hold down the vines nearer to the point of raking.



Modified Western Three-Wheeled Western Picker



Close-Up of Spray Rig.

(Photos' Allan Sherman)

# *Believes Massachusetts Cranberries Are In Volume Basically The Best Quality*

by

Clarence J. Hall

## **Alvin R. Reid, Who Produces Better Than 100 BBls. to Acre Has Faith In Industry and Especially His Area**

Meet Alvin R. Reid of Hanson, Massachusetts. He is now president of Cranberry Credit Corporation, subsidiary of National Cranberry Association, succeeding Frank Crandon, president of NCA. He was recently re-elected vice-president of the South Shore Cranberry Club, and as this is his second term in second place he will presumably be president in another year.

He is a realtor, in the insurance business, one of his specialties being cranberry hail insurance, notary public, was one of the organizers of a bank, is active in civic affairs, and finally is one of the better smaller cranberry growers.

By better grower of Massachusetts, we mean he averages around 100 barrels per acre on his bogs which total about ten. They are in Hanson and adjacent Halifax and his plantings consist of Hewes, Blacks, a few odd varieties including a little known old variety, the Silver Lake. This is a large, richly-colored fruit, when fully ripe, solid in content and between the round and oblong in shape. It is not too tart, and this is the berry he sometimes gives away to friends to demonstrate the kind of fine fruit Massachusetts can naturally grow. It gets its name from the fact his Halifax bog is on Silver Lake in that town.

Mr. Reid, although now primarily a businessman is, one who has always been familiar with and is very fond of agriculture and especially cranberry growing. He holds some interesting views on cranberry subjects, including cranberry cultivation. For one thing, he says:

### **Faith In Massachusetts**

"I have faith in the cranberry industry and its future, particularly in Massachusetts."

That, as we all know, is flying to the contrary in the view of many who are pessimistic as to the whole industry outlook and particularly that of Massachusetts. He believes, and seems to be proving that good yields can be produced on bogs of the Bay State. He agrees, of course, that many methods will have to be changed, he fully accepts the now common

conviction that mechanization in as many phases of cultivation as is possible is absolutely necessary. He really places the foundation for his faith in Massachusetts, in the following, even though he is aware that every grower, everywhere believes the berries of his own area the best;

"I am certain that Massachusetts cranberries, as a whole, are by volume basically the best cranberries grown anywhere. I think the Massachusetts crops taken as a whole are fundamentally superior cranberries."

### **Does Much Of Own Work**

Mr. Reid is really a shirt-sleeve grower, who does as much of his own work as he can possibly find time to do. He is often assisted by his son, Raymond, and has to hire some help from time to time. His bogs are harvested mechanically and he has both a Western and a Darlington, but says, "Don't ask me which I like better. With machine harvesting you've got to have an operator who really knows what he is doing."

He does his own frost protection, water for his bog at Silver Lake, which is an old property, being pumped on and then put back into the lake, (which is a municipal water supply) by gravity. His bog in Hanson, he built himself in 1946. On this piece of 2½ acres he has cropped as much as 517 barrels in a year.

The bogs are peat and some hard-pan sand bottoms. He sands light, one third each year. He believes in running his bogs dry and

keeping them well drained.

He says he spends so much time at his bogs, especially at Silver Lake that his family often complains. The bog at the Lake is located some distance off any main road and has a screenhouse. "I won't really say that cranberries is a hobby with me because it isn't. I'm in the business for a profit the same as anybody else. But I enjoy bog work so much it is almost in the nature of a hobby." He is much addicted to agriculture in any form. For a time he commercially grew raspberries at his home in Hanson where he has six acres of land.

### **Should Know Cranberry Soils**

A weakness in cranberry culture, he is firmly convinced, is there has not as yet been enough study of cranberry soils. "A thorough knowledge of the soil is vital, yet is a neglected field in cranberry growing. That's not common sense. Where do cranberries come from? Why, the soil is the base. If we really don't understand the soils how can we expect to grow the maximum barrels per acre? We must know what to feed the soil and when. Furthermore every bog almost presents an individual problem. A grower must know his own bog."

Mr. Reid was born in Hanson and attended schools there—to grammar school. His father died when he was fifteen and he had to go to work. He recalls his first job with the Wheeler Reflector company, or Shell Factory at Hanson. This was during the first World War. His weekly salary for six days a week was \$6.15, "and in those days I felt almost rich on that."

He later worked for the John Foster Lumber Company at Hanson, where his father had been employed until he suffered the loss of a leg. He was with that company for 15 years, finally being credit manager. In that capacity he did considerable travelling in southeastern Massachusetts. As a side line he began to sell insurance.

He then obtained a drawing ac-

count position with a manufacturer of paper products, including drinking cups. He covered a good deal of area in that, one of his main routes being down over the Cape where he sold to golf clubs and schools. He won prizes for salesmanship, but felt he was wearing out himself, his car and his resources and getting nowhere.

He decided to make insurance and real estate his business. This was in the early thirties, not a time of prosperity as those in business will remember. Today he has built up a substantial business. He was an organizer of the Hanson Credit Union, a banking organization, now a branch of the Rockland Trust Company. His office shares a block with the bank on Main street, opposite the National Cranberry Association main office. He said he was told that in such a small community as the Hanson area a banking business could not be built up and sustained. But when taken over by the Rockland trust he said it had deposits of nearly half a million, \$446,000, and was doing a business of a million dollars.

#### Cranberries and Hail

The insurance business is one of personalized services and it has its specialties. One of these which he has developed is hail insurance. He has applied it to cranberries in particular. Hail losses in Massachusetts are perhaps higher than is realized generally.

Cranberries, he pointed out are perhaps the only major crop on which loans can be obtained which are not covered by hail insurance, at the present time. For instance, he said you can't get a loan on a Maine potato crop without this insurance against a sudden crop wipe-out.

In southeastern Massachusetts, he says, charts and experience bear out there is a definite hail belt, extending from about Acushnet, through a portion of Wareham, Carver, Plymouth to Duxbury and Scituate. This belt is somewhat irregular, but it apparently exists.

#### More Hail Storms?

Reluctantly, he is coming to believe, he says, that more hail may be expected than in the past. He is convinced the weather pattern has changed, at least locally in Southeastern Massachusetts. He has noted the sudden, violent and localized rains of the past few years. "You used to be able to trace the pattern of a storm pretty accurately. Of course there would be places where the storm would end abruptly. But we have had an awful lot of freakish local storms—one small area getting rain, another nearby none, and the storms seem to skip around. Such conditions can produce hail."

He referred to the long, extreme drought in Massachusetts of early summer last year. He said it seemed time after time there would be rain, but none came. When it did rain, the precipitation varied a great deal from place to place. One small area got a lot, while another relatively close by got none. "I'm convinced we are entering into a changing weather pattern."

Returning directly to cranberries, Reid places the cost of producing a barrel of cranberries in Massachusetts at \$10.00, "if every expense and the investment is figured in." He feels this "base" cost should first be considered in setting prices for processed or fresh fruit. He feels this should be the basic point from which to start up, allowing a grower his costs and a reasonable profit. Not working from the top, the wholesale price down, the grower getting only what is left after all processing and marketing costs have been deducted.

#### Solution In Juice

He, like many others, feel there can be a solution to the surplus in cranberry juice, if a sufficient quantity is made and marketed. "The demand seems to be there," he says.

Mr. Reid is a Mason, past master of Wampatuck Lodge of Hanson and a member of Aleppo Temple.

He is a member of, and helped organize Hanson Kiwanis club. He is a member of the Old Colony Sportsmen's club and of Massachusetts Horticultural Society. Currently he is chairman of Hanson Industrial Development Commission and a member of the town planning board. He is chairman of Hanson Library trustees and a director trustee of Cobb Library, a privately endowed unit.

He is, of course, a member of South Shore Cranberry Club, of Cape Cod Cranberry Growers' Association and serves or has served on various cranberry committees. His sport is fishing, fresh water, especially salmon and trout.

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#### CRANBERRY PLANT TOURS NOW EVERY WEEK DAY

More than 500 vacationists have visited the Ocean Spray cranberry canning plant on Route 28 in Wareham, (Mass.) each Friday since the guided tours began on July 11th. As a consequence, Ocean Spray has extended its public invitation to every week day, Monday through Friday, from 1:00 to 3:00 p.m. Tours on Fridays will continue from 9:00 to 11:00 a.m. as well as 1:00 to 3:00 p.m.

Ocean Spray's guest list already includes visitors from New England states, New York, New Jersey, Tennessee, Washington, Oregon, Michigan, Virginia, Pennsylvania and California, besides interested residents of the Bay State itself.

Following the tour of the cranberry from freezer to cranberry sauce, special interest is shown in the cooking rooms where large stainless steel kettles cook together in quantity the simple recipe of cranberries, sugar syrup and water in much the same way as the homemaker does in her own kitchen, even to checking its doneness with the spoon test. There the analogy stops, however, as the filling, capping, cooling, labelling and packing for shipment present one continuous automatic production line that takes but 11 minutes from empty can to shipping carton.

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**READ**  
**Cranberries**  
**Magazine**

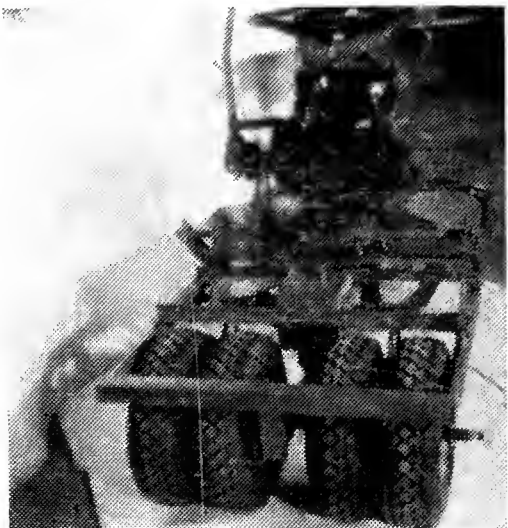
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# A NEW DEVELOPMENT IN CRANBERRY HARVESTING!

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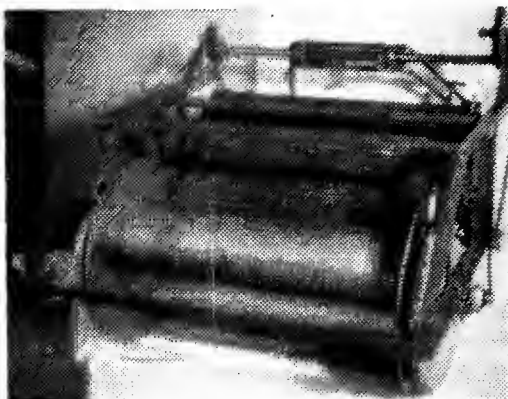


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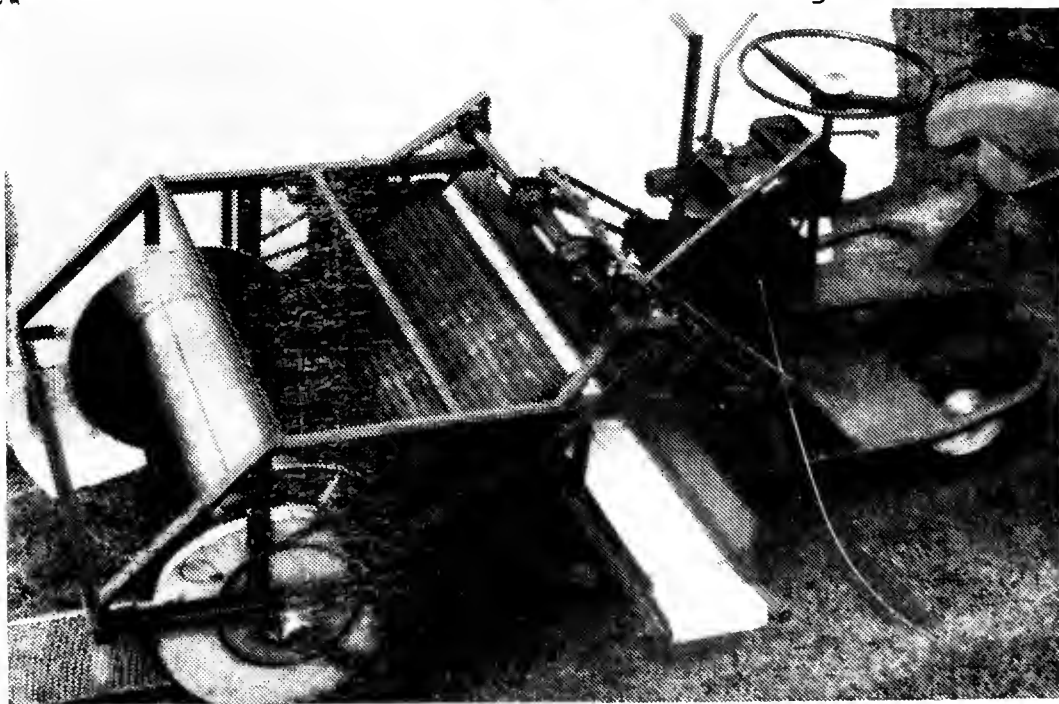
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## ATTEND, JOIN YOUR ASSOCIATION

UNTIL there is an over-all national cranberry growers organization of some kind, or a Cranberry Institute, in which growers are more directly concerned the best common meeting places are the gatherings of the state organizations. Such as the annual meeting of Cape Cod Cranberry Growers' Association which meets at the Experiment Station East Wareham, Tuesday, August 19th.

These meetings are usually fairly well attended, but attendance could be larger. And to the greater advantage of every grower and to the industry itself. Those in charge of the Cape meeting, and the meetings of other areas work hard to provide an interesting, informative program. The grower who attends, gains.

There should be larger paid membership, the dues are not drastic, even for these distressed times. With larger membership such associations could speak with more force on matters pertaining to cranberries, legislation, research or whatever. Important as are the Massachusetts area club (or other clubs) meetings, they do not take the place of a state association.

Attend your state association, and if not a member, join, if at all possible.

## AGRICULTURE, BIG BUSINESS

AGRICULTURE has become big business. Secretary Ezra Taft Benson recently made some statements regarding the importance of agriculture in the nation's economy.

He said: agriculture buys more petroleum than any other industry. Farmers take 6½ million tons of finished steel and enough raw rubber to put tires on nearly 6 million cars a year. Sixteen percent of the gross freight revenue is from agricultural products.

## PRODUCING FOR LESS

THERE are dire and pessimistic predictions that Massachusetts cranberry acreage may become much less than it has been—maybe no more than 7 or 8 thousand acres, rather than the present 13,500. That would be less than in 1900. Should there be fewer acres, as we feel at the present moment is inevitable, there will be fewer growers.

Editor and Publisher  
CLARENCE J. HALL

EDITH S. HALL—Associate Editor  
Wareham, Massachusetts

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Pemberton, New Jersey

We would predict, that all things continuing equal one of the survivor-growers will be Louis Sherman of Massachusetts, who has written an article for us this month. It concerns skilled, foresighted mechanization at which he seems a master.

More mechanization as a must has been talked about for several years now. "Louis" is among those who have done something about it. He is cutting down his costs. He has tackled the problem, successfully from the angle that if the market price of cranberries cannot be made to rise, a grower to stay in business must produce for less.



# Communication

## Open letter to growers from a grower

Let us give serious thought as to whether we are going to lose money again this Fall. This, after all our worry work, money invested and tax bills. We pay for what we buy.

We are in a mess and might as well admit it and do something about this besides talk.

Although most of our carryover is out of the freezers, the pipe lines of distribution are clogged with processed berries and present sales are sluggish.

The coming crop probably will be 1,250,000 barrels. In the near future we face 1,500,000 barrels. The prospect for any year of less than 1,000,000 are remote. The fresh fruit industry is dying, slowly but surely.

The super markets and the "super-super" markets are expanding frozen and processed food sections and contracting fresh fruit and produce space.

Consequently, I will now discuss some of your problems if you intend to sell fresh berries through a Co-op or "independent" selling agent or shipper.

Both you and your selling agency face some tough problems together but they can be licked.

1. About 70% of all fresh berries are eaten in just two days a year, Thanksgiving and Christmas.

2. No other fresh fruit in the world is eaten nearly three months after harvesting.

3. No other fruit is so abused in getting it ready to be shipped—cranberries are bounced (no improvement in 50 years) in screening—mechanical pickers bruise the fruit—cello bags hasten the deterioration—in shipping, warehousing and retailing berries are often subjected to a sudden change in temperature of 20 to 40 degrees from "refrigeration" to store temperature.

4. Most wholesalers and brokers could live happily if they never handled cranberries—the volume and price insecurity considered.

5. Most Supers are not excited about stocking cranberries before Nov. 1 to 10 and want very few Dec. 10 to 24.

6. Several presidents of leading chains think cranberry sellers are crazy to reduce prices drastically every October. They protect themselves from inventory losses by buying lightly until Nov. 10 and our "opening sales" Sept. 12-30 are getting smaller every year.

7. "Early Whites", are shipped every year in the mad rush to be first in some market, or to reduce

the shipping lag of Wisconsin harvest before the Cape harvest of early varieties. Housewives who buy their berries are disgusted for the balance of the season. They do not have to buy cranberries to feed the family nutritious meals.

8. I have personally seen in our 100 markets, fresh berries, usually cello-packed, in stores with 20 to 40% unsound berries per pound. Being sure berries are 97% sound at time of shipment is not enough. The housewife is only interested in the quality at her store and at the time she picks up the package and decided whether to buy fresh cranberries or something else that day. Let's face it, usually she gets a more consistent, better quality in the can.

9. The sale of fresh cranberries is poor when the weather is warm. Sept. and Oct. are warmer months where most people live in the USA than was true 5 years ago.

10. Just as "bad money drives out good money" so do poor-keeping quality cranberries drive quality growers crazy.

11. Unless the housewife wants to cook sauce to go with seldom served turkey or with chicken, what is the housewife supposed to do with fresh cranberries in Sept., Oct., and the first two weeks of Nov. while most of your berries are setting in the chaff shriveling away? The only recipe I have seen using a fair quantity of cranberries is the orange-cranberry relish, and there simply are no good quality, reasonably priced oranges in the stores during Sept. and Oct.

I don't care whether you agree or disagree with these eleven problems as long as you start thinking and decide to do something. After all you own part if you are in a Co-op or he is your employee, if you use an "independent".

Now he may not consider himself as your employee but in either event if you want to make money on your 1958 crop sold fresh, I would suggest you discuss with him NOW, not in Sept. or Oct. the following:

1. Are your berries going to be sold at a profit—or at least some of them? For most growers, a \$4.00 per box of 24 packages or \$16. per barrel selling price, f.o.b. his shipping point is the break-even price for you. Actually the cost to produce should be \$4.25 with 25c a box or \$1 a barrel spent on some type of advertising.

2. Why should you pay your "independent" selling agency the same price as you pay him for obtaining a profitable price for your berries? In 1957 you paid, for example \$1 a barrel for just

selling.

Would you be happy to pay \$2.00 per barrel in order to get \$20.00 for your berries instead of paying, as you did last year, \$1.00 to get \$12.00 or \$10.00 per barrel? If he sells your berries below your cost of \$16.00 does he really earn \$1.00 by "selling" them for you? Last year he got his \$1.00 whether you got \$12 or \$6 for your berries.

3. Ask the man you entrust with selling your "fresh" berries if he always sells them f.o.b. his shipping point or does he "absorb" some of the transportation in his "delivered" price, or place your berries on "consignment" in a market (to draw storage charges while the buyers let you cool your heels), or does he send them to a market already gutted with berries from other shippers (to consignment price cost spreads to other markets hundreds of miles away). Ask him, because you pay the bill, not your selling agent. He gets his \$1.00 anyway.

4. Does your selling agent have an underselling policy? Does he say to the large buyer, "Whatever the Co-op's price is, mine is 25c a box (\$1 a barrel) less, just name it." (or 10c a box less the first time the market is strong). Does he tell the buyer that he ships superior fruit and tell you he must get an inferior price because "we do no advertising".

If two shippers chose to have an "underselling" policy, or other shippers decide they must "meet" the price of the underseller, a price war is started all over the country within an hour; a few berries are moved; the buyer becomes cautious.

In my opinion, the biggest single reason for poor returns to growers everywhere the last few years has been sloppy selling and the worst offender who starts it all is the "underseller". Even a school boy could sell something in demand with a consistent "underselling policy" and a telephone.

What do YOU think? What arrangement do YOU have with your selling agent? What are YOU contributing to education of people to enjoy fresh cranberries?

If we all just grow them and fail to THINK about SELLING them at a PROFIT, and fail to DO SOMETHING ABOUT IT for FALL 1958; your pocket book will bleed again.

I am not for or against "independents"; for or against any particular Co-op. I am for making money again. I hope you are too!

Perley Merry

S. Duxbury and Marion,  
Mass.

# - Statements Concerning Western Picker -

Since using my two Western Pickers my crops have increased every year. The machines have cut down labor costs in picking and eliminated all labor costs of pruning and raking the bogs.

Elimination of walking has increased the growth of uprights very remarkably. I have used Westerns for four years.

Tony Lenari  
Main Street  
North Plymouth

Western Growers Supply  
Grayland, Washington  
Gentlemen:

I have used the Western Picker in harvesting my cranberry fields and some of my neighbors' fields since 1949. I didn't like the Western Picker at first but felt compelled to use it because of the high cost of operating the vacuum machine and the low returns on berries. By 1951 I had gained enough confidence to try a newer model, which I still use today.

I pick my land as clean as with the vacuum machine, which I believe is less than two per cent. Except for breaking an occasional vine roller spring, I have had very little maintenance to pay for.

I believe the Western helps to maintain production and that you have to learn to operate it and train your field for harvesting with it. In the nine seasons I have harvested with the Western, I have had an average crop of about 150 barrels per acre. The berries have gone on the fresh market whenever they wanted fresh berries and have not been returned for any reason.

Sincerely,  
Oscar Heino

Western Growers Supply  
Grayland, Washington  
Gentlemen:

I borrowed my neighbor's new Western Picker in 1951 and tried it on about  $\frac{1}{3}$  of an acre. Thinking it tore up my vines too much, I never used the machine for four years afterwards. However, I staked that  $\frac{1}{3}$  out and noticed it produced more berries in the succeeding years.

Then, in 1955, I got my neighbor's Western again and picked that  $\frac{1}{3}$  acre again and about another  $\frac{1}{3}$ . In 1956, I picked this ground with a Western and enough more to make up an acre and  $\frac{1}{4}$ . In the winter of '56 and '57, I got a demonstrator and trained another  $\frac{3}{4}$  of an acre. In 1957, I bought a new Western Picker that fall. I picked  $3\frac{1}{4}$  acres,  $1\frac{1}{4}$  acres which had not been trained or picked.

(ADV.)

It seemed that the machine went through this vine, which was 7 years old, easier than the older vines which I had turned in the training process.

The machine performed satisfactorily and seemed to have more power than the older model. The only difficulty I experienced was in an area where I had excessive top runner and had never been trained with a Western before.

I wish the machine had a high speed for deadheading around ends. The machine picked very clean in the trained areas got 99% of the berries, quite a bit cleaner than my suction picking.

Sincerely,  
Ralph Williams

Western Growers Supply  
Grayland, Washington  
Gentlemen:

I first used the Western Picker on my parent's farm. It was a machine that he had bought new in 1951.

When I purchased the property on which we now live, there was a 1949 model Western in the deal. In trying to use it to harvest the first year, I experienced some engine difficulty so borrowed my parent's machine to finish. Then I sold the old machine for \$400.00 and bought a new 1956 machine, which gave me a lot of trouble to begin with. It was too slow and kept losing berries.

After we had speeded the machine up, took off the right front wheel, and cut the side teeth back, it reduced the plugging to zero. I was able to start picking in four inches of water at the low end and continue on up to the dry vines without difficulty. Because the heavy rains that fall flooded one end, this was necessary.

In the three years I have been here, this farm has averaged 120 barrels per acre, and it has been harvested entirely by Western since 1949.

If the two side teeth were still the original length and tied into the machine frames like the 1951 model was, and it was equipped with a two-speed so I'd have a higher speed for deadheading around with, I would be perfectly satisfied. It picks very clean and has lots of power.

Sincerely,  
Arnold M. Perttula

Western Growers Supply  
Grayland, Washington  
Gentlemen:

In 1951 I bought a new Western Picker. My land had been picked with a Western for two seasons prior to that on "custom picked"

(ADV.)

basis.

I experienced some difficulty in establishing the most efficient pattern to follow because of some new bog which lay at one end of my field. However, after observing how the picker went through the five-year-old vines in 1949 and their ability to produce even though combed backward, so to speak, I was picking all of it by Western in 1952.

The only trouble I have had with the Western was in 1956 when I had the new type chain conveyor installed, and it damaged the berries to the extent that they were unacceptable to the fresh market. In 1957, the angle metal lug clamps were replaced with the sheet metal lug clamps, and this eliminated the damage to the berries.

The Western operates very economically, and I would have to use my imagination to say I left as much as 1% on the ground.

Sincerely,  
Clare Reid

Western Growers Supply  
Grayland, Washington  
Gentlemen:

My neighbor and I purchased a Western Picker in 1950. In 1953 I sold out my interest to him and got a new 1953 model Western Picker.

I have a four-acre field which I pick with the help of one old man, who runs the track car up and down the railroad. We pick this field of between 400 and 500 barrels in five days.

Since first starting with the Western in 1950, I have averaged well over 100 barrels per acre, and my berries have been readily accepted for fresh market sales.

If the Western Picker hadn't come along, I would walk off and leave this patch.

Sincerely,  
Emil Hegre

Western Growers Supply  
Grayland, Washington  
Gentlemen:

I started using the Western Picker in 1949, and I don't intend changing to any other type of picker.

The oldest piece of my land was planted 22 years ago, yet the farm seems to be producing just as good as ever, averaging about 117 barrels per year per acre, and I got my largest crop ever after picking with the Western for five years.

Sincerely,  
Uno Wilen

(ADV.)

# SERVING THE WISCONSIN GROWERS

## Fresh From The Fields WISCONSIN

Continued from Page 6  
new acres are expected to come into production this year. In view of the above, it is reasonable to expect Wis. can expect a better crop than last year.

### Deaths

Theodore W. Olson, 56, president of the Nekoosa Foundry and Machine Works since 1952 died June 12th. Mr. Olson was advertising manager for the Wis. Rapids Daily Tribune and later plant manager for the Huffman Printing Co., before becoming associated with the foundry in 1930. He was vice-president and a director of the DuBay Cranberry Co., a director of the Nekoosa-Edwards State Bank, Eau Claire Consistory and Rotary and Cranmoor Skeet Clubs and honorary president of the City Point Hunting Club. Survivors include his wife, a daughter, a son, a grandson, his mother and three brothers.

H. F. Duckart, 74, Wis. Rapids, passed away July 3 at his home. He was manager of the Jacob Searls Cranberry Co., Cranmoor and for the past eleven years president of the Midwest Cranberry Co-operative. He also was a past president of the Wis. State Cranberry Growers Association.

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**Eric Franke**  
R.R. 5, County Trunk "U"  
Sturgeon Bay, Wisconsin

## Late Massachusetts

### Insects

As of July 23 the second brood of fireworm was proving quite troublesome, but control measures were in good practice. The first brood did not turn out to be as bad as feared earlier in the insect season. Fruitworm was not as bad as at first feared.

On the whole it would not appear, generally speaking, to be a

bad insect year.

### Temperatures Up

Temperatures were running higher than normal, an excess of 34 by the 23rd. But this was not damaging as there had been a number of light rains and drizzles. Rainfall, however was on the deficient side.

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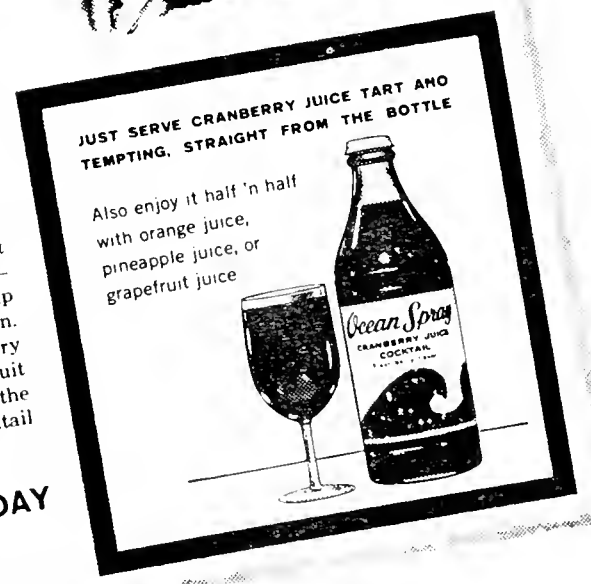


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DRINK *Ocean Spray* EVERY DAY

IT'S THE BRIGHT NEW WAY TO START THE DAY



## NEW ADVERTISING CAMPAIGN SELLS CRANBERRY JUICE

Here's an advertisement from Ocean Spray's new campaign. Big newspaper ads and hard-hitting radio commercials sell consumers new use and advantages of Cranberry Juice all through July, August and September. Developing new markets like this is just one more way NCA works for its grower members. Just ask your neighbor.

NATIONAL CRANBERRY ASSOCIATION GROWERS' CO-OPERATIVE, HANSON, MASSACHUSETTS



*V. J. M. ...*



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# DIRECTORY FOR CRANBERRY GROWERS

## POST-HARVEST AMINO CONTROL IN MASS.

A "flash" card has gone out to Massachusetts growers, prepared by J. Richard Beattie, Extension Cranberry Specialist, concerning post harvest use of Amino Triazole. It read: "Excellent control of cutgrass, nutgrass, asters, panic grass and white violets can be obtained by applications of amino triazole after harvest. The recommended rate is 16 pounds of 50 percent amino triazole in 300 gallons of water per acre, as recommended on the weed chart. Less damage to vines will occur if

treatment is delayed until at least 5 days after harvest. For best results, weeds should be green at time of treatment."

## NATIONAL PAYS GROWERS \$1.00 MORE

Checks for \$1.00 additional on the 1957 crop were paid to grower-members August 8. This brings the total to date to \$8.60 for last season's production.

It was announced the advance had bank approval and the money had been earned, although total barrels disposed of in the pool did not quite come up to schedule as of that date.

## WASHINGTON GROWERS CRANBERRY TOUR

Saturday, August 13th was the scheduled cranberry tour and research program at Grayland Washington. Program was to start in Community building at 10 a.m. which featured reports on research. The Grayland Growers' Association planned a light lunch and the tour was in the afternoon to several bog locations.

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## New Insect Pest In Oregon

Cranberry bogs of Southwestern Oregon were visited by R. G. Rosenstiel Associate Extension Entomologist, Oregon State College. The purposes of the visit, at the request of the Coos County Extension Service was to study a new cranberry pest that was feeding in the foilage of several bogs. Moths and larvae from the bogs were collected for laboratory study to determine the classification, life cycle and control practices necessary for future recommendations.

The new pest to the inexperienced eye, would seem to be the blackheaded fireworm which is no stranger to cranberry growers. For some growers the control practices for the black-headed fireworm also works successfully on the new invader.

The confusing elements of the whole problem are that the larvae of the recent pest reaches about 3/4 inch in length as opposed to the shorter size reached by the black-headed fireworm, the color is green, and the moth has not been isolated. Growers know that they have been severely hit by this insect but wonder if they can expect the cycle again this season and when.

Dr. Rosenstiel will culture the collected larvae and compare the moth produced with those collected on the bogs thus laying the ground work for entomology studies in laying out a control program.

### "Catface"

Further studies are being carried on by H. B. Lagerstedt, Instructor in Horticulture in cooperation with the extension service on the cat facing problem in the Searls varieties. This variety is seemingly the worst affected by catface although others are showing this damage in some areas.

### Fertilizer

This is the second year of this study which is based upon berry size connected with fertilizer element treatments. The results are not conclusive and the study will be continued. The results, thus far however, show that there are

more smaller berries catfaced than larger ones. Another way of putting it according to Lagerstedt, is that once catfacing occurs the berries chance of further development is reduced.

He further states that it is difficult if not impossible to draw any worthwhile conclusions from these fertilizer experiments. It may be too soon to tell differences, or the cause of the catfacing may be due to an entirely different cause.

Further study by the experiment station at Corvallis will probably include the problems in connection with fruit set.

Grant Scott

## Receives Plaque

Miss Jean Griffin, Abington, Mass., assistant home economics director of the National Cranberry Association, received national honor when she was awarded the Helma Bakeries plaque as editor of the outstanding Home Economics in Business newsletter of the year. This was presented at the opening luncheon at pre-convention in Philadelphia last month. This is the first year the award has come to Massachusetts.



Miss Griffin studied home economics at Simmons College, receiving her degree in 1953, and since then has been associated with NCA. She served as finance chairman of the Massachusetts Home Economics Association in 1956, and the following year became co-editor of the H. E. I. B.'s newsletter, Pilgrim Progress, and it was as editor of the monthly newsletter this year that she won the award. She has been named editor again for 1959.

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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



The contrast in weather patterns of the past two growing seasons has been most unusual. A year ago this August we were still experiencing one of the severest droughts in history, berries were ripening unusually early, the accumulation of hours of sunshine was exceptionally high, and temperatures were above normal. This season, on the other hand, will long be remembered as one of the wettest in history, with nearly our annual average rainfall being recorded by August 21st, a greatly delayed harvest, a sharp decline in hours of sunshine, and temperatures definitely below normal. The weather pattern this season has created its share of problems for our growers. It has been difficult to combat the various pests because of the frequency of heavy showers. Drainage problems have been greatly aggravated by excessive moisture which has created a tremendous crop of weeds. Vine growth, including top runners, has been exceedingly heavy on many properties which will complicate the harvesting operations on such bogs.

However, in spite of these problems, Massachusetts growers have produced another fine crop of cranberries, according to the estimate released August 19th by Mr. C. D. Stevens of the New England Crop Reporting Service at the annual meeting of the Cape Cod Cranberry Growers Association. Mr. Stevens placed the 1958 Massachusetts crop at 570,000 barrels, which is slightly higher than the revised figure of 563,000 barrels produced in 1957. Incidentally, it was very gratifying to learn that a near record number of growers cooperated with Mr. Steven's office by returning their crop estimates in August with the

necessary information. We sincerely hope that the next three monthly requests for this information will have the same excellent response. Accurate crop estimates are vital to the development of sound marketing programs and a very tangible way in which growers can assist their marketing agencies.

Adequate supplies of harvest labor are always a problem. The Massachusetts Division of Employment Security will be recruiting labor and is tentatively planning to establish field offices as usual in the Wareham area, at the National Cranberry Association headquarters in Hanson, and in the Middleboro area. As soon as final arrangements have been completed regarding the location of field offices, growers will be notified. Their home offices in Brockton, Hyannis, New Bedford, Ply-

mouth and Taunton will continue to serve growers. Those needing harvest labor should keep in touch with their local employment office.

Another marketing project has been approved for our station this fall, making the fourth successive season that we have been engaged in this type of work. The new project, a study of the shelf life of zineb-treated berries, both with and without refrigeration. We have secured a small refrigerated rack and are building a small dry rack to facilitate controlled experiments at the station. In addition to the control studies, we are planning to work closely with several local retail stores in the area in order to secure additional information on the shelf life of zineb-treated fruit handled under actual store conditions. Irving Demoranville, as usual, will be working with the writer on this project. Incidentally, Mr. Demoranville has received a well deserved promotion to the rank of instructor, effective September 1. We know that his many friends and associates are most pleased to learn of his advancement.

The program arranged by the directors of the Cape Cod Cranberry Growers Association at their 71st annual meeting held at the State Bog August 19 was well re-

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ceived by growers, marketing officials, and guests. Comments have been favorable and emphasized the fact that the program allowed ample time to tour the State Bog, inspect exhibits and equipment, visit with growers, and hear a program devoted entirely to cranberries. A detailed account of the day's activities will be found in this issue of Cranberries Magazine prepared by the editor, Mr. Hall.

**N. J. SUMMER  
MEET AUGUST 28**

Summer meeting of American Cranberry Growers' Association is scheduled for Thursday, August 28 at Citta's Old Time Tavern, Toms River, New Jersey. Meeting will feature a tour of bogs of Archer Coddington, Edward Lipman and Mac Crabbe.

Speaking program at the Tavern includes opening remarks by President Albert T. Andrews; "Experiences in Producing and Marketing Cranberries," by Anthony R. DeMareo; "Current Water Problems in New Jersey," Vinton N. Thompson, "Control of Spathoglyphis and Cranberry Fruitworm", by Philip Marucci.

Gordon G. Butler, N. J. Crop Reporting Service will give the 1958 crop estimate and E. Howard Major, local property tax state supervisor will talk on "Local Property Taxation and Assessments in New Jersey."

**Solved, Blueberry  
"Bird Problem"**

A summer visitor at the Cranberry Experiment Station, East Wareham, was a member of the Holland Department of Agriculture. He was Ir. B. Roelofsen, an agricultural research engineer.

Cranberries are cultivated to a minor extent in Holland, and there is a growing interest in the cultivation of blueberries. It was the latter in which the scientist was interested, particularly in the Netherlands.

He also visited New Jersey and Michigan, obtaining information as to starting a breeding program in the Netherlands.

Dr. Roelofsen told of a practice among the blueberry growers of his country concerning the "bird problem", that is, birds eating the fruit before it can be picked. Growers there devised a phonograph record of the cries of birds in distress. When the birds become troublesome, a record play-

er is carried out to the patch and the birds, apparently recognizing the cries, fly away from the patch.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of August 1958 - Vol. 23 No. 4

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## FRESH FROM THE FIELDS

Compiled by C. J. H.

### MASSACHUSETTS

#### July Rainfall Nearly Normal

July ended with a total rainfall of 3.90 inches, the normal being 3.21. Rainfall was deficient until the final day when 1.73 inches fell in a deluging storm. There were 17 days on which there was measurable precipitation, and the month as a whole was drizzle, cloudy and intensely humid. There were only three clear days recorded by Boston weather bureau. Month was extremely uncomfortable and seemed unusually hot, but actually there was only an excess of 11 degrees. It was that old story, "It's not the heat, it's the humidity!" July was the 6th month with more than normal precipitation.

#### Sunshine Down

The sunshine average for July was 54 percent, ten less than normal. This would have little effect upon the coming crop, but would adversely effect that of 1959 as has the lack of sunshine the whole year.

#### Rain Hampered

So much rain, drizzle, and much fog, hampered the insect control program rather seriously. Treatments were not possible at the desired times, despite the alertness of the growers and those supplying air control.

As a result second brood fire-worm had gotten ahead of the growers at many places. Most of the fungicide sprays and dusts had been applied before the "miserable" weather of July, so the fungicide program was not hurt materially. More than 2,000 acres were treated in Massachusetts this year, the largest ever, about three

times that of 1957.

### WASHINGTON

#### Good Growing Weather

Weather during June and July was about average. There were a number of warm days with humidity rather low. On July 27 temperature was at 95 with a relative humidity of 62 percent. On the whole it has been a good growing season with no temperatures high enough to cause severe damage to blossoms and fruit. Sprinklers were going on a number of days to prevent scald.

#### Observations on Sprinklers

As concerns the bad freeze of May 12. It now seems probable there was a little less damage than at first feared, which was 50 per-

cent. Some bogs were very badly damaged. Crop at the Experiment Station, Long Beach, which is one of the coldest spots now will not probably be more than 150 to 200 barrels.

This frost experience demonstrated very forcibly, in the opinion of Charles C. Doughty, Station superintendent, the necessity of having sprinklers running continuously during the period when temperature drops below the critical level. The bogs on which systems were started when the temperature reached 32-33 degrees and were kept running throughout the night suffered very little damage. However, those bogs where the sprinklers were late in starting or were shut down



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for brief periods, received considerable damage. At the State Bog the sprinklers were shut down for approximately one hour during the middle of the night and that proved just long enough for the damage to occur. The minimum temperature there was 25. In pockets the degree was probably lower.

Since some of the bogs which sprinkled continuously received some damage it is a possibility that 25 degrees is at the lower limit for protection from sprinkler systems during the middle and late hook development. D. J. Crowley, former superintendent, thought the damage was due to the low temperature factor rather than shutting off the sprinklers for brief periods.

## **WISCONSIN**

### **July Weather**

July was near normal for temperature and from normal to above normal in precipitation for the cranberry growing areas of the state. Although the warmest day was only 90 degrees registered on July 26, there was a long continued stretch of eighty plus weather during most of the month. Cool night time temperatures brought the average down 1.5 degrees below the normal. The coolest night of the month was on the 16th when temperatures dropped to 29 degrees in Cranmoor. Rains came the first of the month ahead of bloom and also at the end of the month after bloom. The period during bloom was one of the driest on record and resulted in good setting weather. Heavy rains fell in the north on the 1st with totals measuring over six inches. Total rainfall in that area was almost twice that of normal. Central marshes received about the normal of four inches and southern marshes less than 3 in. The extended forecast for August has been revised to near normal in temperature and precipitation. Normal temperature for August is 67.5 degrees and 3.63 in. precipitation.

### **Crop Not Bumper**

Full bloom was about one week to ten days later than normal in

all areas. The native variety in the south was extremely late. With the lateness of the season, berries could be expected to be smaller than normal unless extra favorable weather prevails during the balance of the growing season. From all appearances the set appears to be above normal and very much better than last year. Berries in the north are expected to be smaller than normal and in the south with the exception of the natives, about normal in size. At the present time Wisconsin can expect a good crop this year, but the possibility of a bumper crop is ruled out because of berry size.

### **Insects Controlled**

Fruitworm controls were applied during the month and in general it appears as if the fruitworm population is down this year. There was some second brood fireworm, but numbers were down. Early controls appear good in controlling these two pests. Second ap-

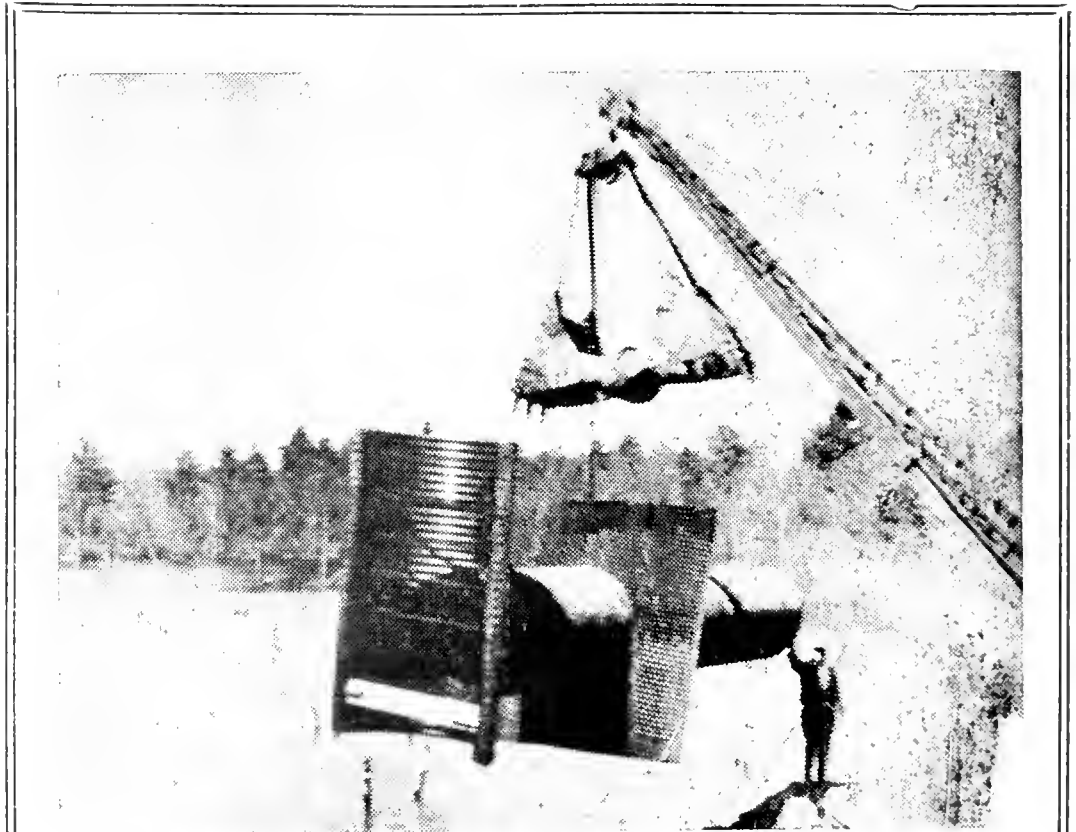
plications of fungicides were applied the later part of July and first part of August growers were also applying a top dressing of fertilizer on sand beds and weak areas where vine growth was short.

### **Dr. Dana Tour**

Dr. M. E. Dana of the Horticulture Department of the U. of Wis. was to conduct a tour of weed control plots in the Rapids area on Aug. 8. He was to show growers plots that had been applied the past summer on numerous types of weeds, using systemic herbicides.

### **Summer Meet Aug. 30**

The summer meeting of the Wisconsin State Cranberry Growers Assn. is to be held on August 30th at the Cutler Cranberry Co., Shennington, Wis. A display of cranberry equipment will be on the grounds and some demonstrations will be given. Dean R. K. Froker  
(Continued On Page 19)



**FOR PREFABRICATED FLUMES**

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**North Carver, Mass.**

# Selective Weed Killers For Cranberries

Malcolm N. Dana

Department of Horticulture, University of Wisconsin, Madison 6, Wis.

Discovery of 2, 4-D and development of practical methods for its use in weed control provided the impetus for a surge of interest and study of many materials for the selective control of weeds in many crops.

Many thousands of organic chemicals have been screened for herbicidal activity on a wide range of weed and crop species. Only a few have survived the field tests and have become accepted as useful materials. Listed among the successful herbicides are three that have been used with considerable success on an experimental basis in the cranberry marshes of Wisconsin.

Amitrol (3-amino-1, 2, 4-triazole) is the most promising on a number of weed species in cranberries. This material has been tested in other areas as well as Wisconsin with success 1, 2, 3). Researchers have also had good success on certain weeds from the use of two other materials, maleic hydrazide and dalapon. Under Wisconsin conditions, these materials have controlled some weed species on which amitrol has little or no effect. The present report was prepared to acquaint cranberry growers with some of the successful experimental uses that have been found for these two materials.

A note of warning:

**Maleic hydrazide and dalapon have not received label clearance from Federal Control Agencies and may not be used on producing cranberry vines. Growers are cautioned to use these materials only on non-producing sections or small experimental areas until label clearance is obtained.**

MH, Maleic Hydrazide, is a material that can be purchased as a 30% liquid. Sprayed on and absorbed by certain plants, it inhibits vegetative development for considerable periods of time. Commercially, it is used to control quack grass, reduce growth of bluegrass, and to inhibit sprout development in onions and potatoes in storage. In New Jersey, Marrucci and Moulter (4) report that MH reduces runner growth in cranberries.

In Wisconsin, this material was applied in midsummer in cranberries to perennial weeds. This was done to inhibit development of these weeds the following spring.

With two species of weeds, sensitive fern, *Onoclea sensibilis*, and marsh smartweed, *Polygonum natans*, an acceptable degree of control was attained. Ten pounds per acre of actual maleic hydrazide applied July 26, 1955, gave a 95% reduction of fern stand in 1956. Treatment of other fern infested areas about August 1, 1956, with MH at ten pounds per acre brought excellent control throughout the entire 1957 season. Areas treated with five pounds per acre of MH showed a significant reduction in fern stand, but the control was not as complete as in the plots treated with ten pounds per acre. Applications later in the season were generally not as successful as the late July-early August treatments.

Treatment of a heavy stand of marsh smartweed with maleic hydrazide in 1956 brought stand reductions throughout 1957 as shown in Table 1.

It was evident in the plots and the data confirmed that the ten pounds per acre rate of treatment was necessary in order to assure an effective job of controlling this species. The treatment on August 1 was more effective than the mid-August application.

Other weed species temporarily

inhibited in their seasonal development by maleic hydrazide applications were St. Johnswort, *Hypericum virginicum*, and sickle grass, *Leersia oryzoides*. However, these species overcame the inhibitory effect and developed to nearly normal stands late in the season.

Such weed control as demonstrated in these plots was not attained without some sacrifice to the cranberry crop. Ten pounds per acre of MH did not measurably reduce the crop maturing on the vines at the time of treatment but it did reduce the flower bud set and thus the succeeding crop, in some instances. This was by no means a universal occurrence in all plots. However, when used in midsummer, the material must be considered as a threat to the next season's crop. It may safely be used only on areas where competition from the specified weeds is a serious handicap to high crop yields and may advantageously be eliminated even at the sacrifice of some crop.

Dalapon, 2, 2-dichloropropionic acid, has been used experimentally in Wisconsin cranberry bogs with considerable success for several seasons. Dalapon is a tan-white, free-flowing powder that is readily soluble in water. It is formulated as an 85% sodium salt equivalent to 74% of active acid. Dalapon is primarily a grass killer and has found commercial acceptance in other crops as a control for quack grass and other grass species.

When applied as a post-harvest spray in cranberry bogs at rates of 6-18 lbs. per acre, dalapon has caused a complete loss of crop in the year following treatment. This was due to morphological aberrations in the flowers which

Table 1  
Per cent REDUCTION IN STAND of perennial smartweed following treatment with maleic hydrazide.  
Weed Counts — September 1, 1957

Lbs. MH Acre	Date of treatment	
	August 1, 1956	August 17, 1956
	Percent	Percent
0	0	0
2.5	20	—
5.0	90	75
10.0	95+	85

prevented normal fruit set. Fall applications also caused slight delay in cranberry bud emergence in the spring and marginal chlorosis on young leaves. As the rate of application was increased, the leaf injury became more severe. Applied in early spring, equal rates caused a more severe injury and a resultant crop loss. Spray applications after growth started, at rates up to ten pounds per acre, resulted in serious chlorosis and early season stunting of the vines. At no time did death or defoliation of vines follow treatment with dalapon at rates of application of ten pounds per acre or less, regardless of season of application. Late season vine development has been good whenever dalapon treatment was made after October 1 or before June 1.

The extent of vine injury which has followed spray applications of dalapon determine the limitations on the use of this material as broadcast applications. Poor producing sections—either because they are recently established or because they are seriously infested with susceptible weeds—would seem to be the only areas on which broadcast spray applications are practical. It would not be advisable to spray good producing sections, because of the certainty of complete crop loss for one year.

The crop injury described above lasted in the vines for only one year. Plots established after harvest in October, 1957, in a section seriously infested with wide leaf grass, *Carex rostrata*, were harvested for yields in October, 1956, with the results presented in Table 2.

Table 2

All three series of plots that received dalapon applications produced significantly more fruit than did the untreated plots. On the average, the treated plots produced over twice as many berries as the untreated plot. The yield increase following treatment was more than enough to make up for the one year loss in crop due to dalapon injury on the treated plots. The control plots retained a high population of wide leaf grass, while all the treated plots remain-

Table 2  
Yield of cranberries in the 2nd  
season after dalapon treatment. Bbls/acre

Replicate	Dalapon (lbs/)			
	0	6	12	18
	Bbls.	Bbls.	Bbls.	Bbls.
1	139	246	233	233
2	65	187	168	252
3	110	158	213	215
Mean	105	197	205	230

ed free of this pest for three years after treatment (1958).

The yield increase in the dalapon treated plots was probably due to two factors: the elimination of weed competition and the stimulation of production because the vines "rested" the previous year. These data, however, showed that, properly used, dalapon would result in only one year of crop failure and could result in a potentially greater yield due to control of grassy weeds.

Spray applications of dalapon have been successful in the eradication of wide leaf grass and bunch grass, and a practical reduction in stand of wire grass, sickle grass, and several other less populous grasses and sedges.

Swab applications of dalapon have been tried experimentally by several growers in Wisconsin. Careful applications on several grass and sedge species have caused reductions in weed stand both in stature and number of plants with a minimum of injury to the vines. A report on this work was made earlier by Dr. George Peltier (5).

Dalapon is primarily a herbicide for the control of grass and sedge species. It had little effect on the broadleaf weeds common to cranberry bogs. Because of the cranberry vine injury which results from its use, it may not be applied safely to sections that are producing reasonable crops of fruit. Two or three year old sections that are crowded with grassy weeds, or older, non-productive weedy sections would seem to offer problems where dalapon may find a practical use.

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## New Researcher At National

Dr. William F. Hampton, who recently joined the executive staff of National Cranberry Association as director of research and technical development, came to the co-op with a fine record in food technology. He replaces Dr. William Filz, research chemist, who resigned last fall.

Dr. Hampton has for the past three years been engaged in the Food and Agricultural Organization of the United Nations with headquarters in Rome. Among his prior assignments he spent many years as chief of research in several divisions of General Foods Corporation.

Born and reared in Newfoundland, he received his doctor's degree at McGill University.

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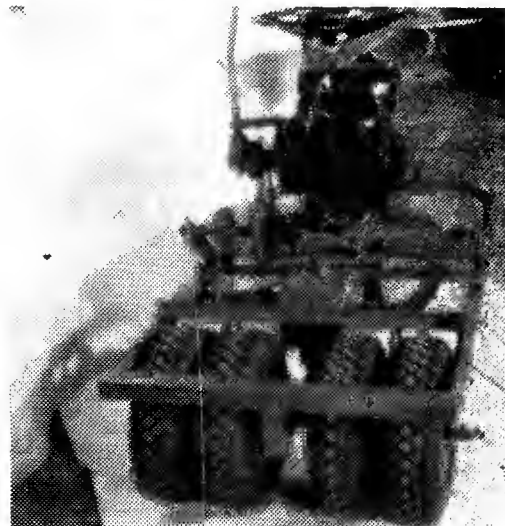
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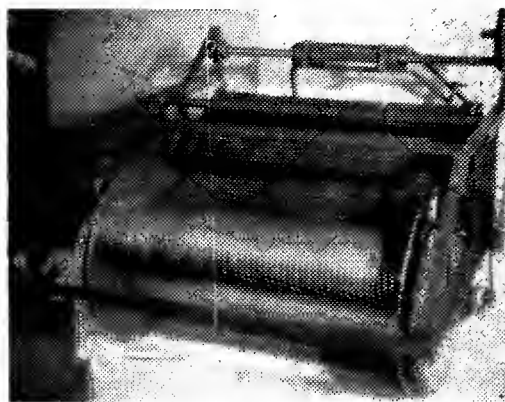
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WISCONSIN RAPIDS, WISCONSIN

# Feeling of Optimism, Unity Prevails At Annual National Cranberry Meet

## George Olsson Elected President

"In unity is our strength," was the wording on a large motto attached to the wall of the meeting room at Hanson headquarters of National Cranberry Association for the 28th annual meeting of that cooperative Tuesday, August 20. And unity almost prevailed throughout a session lasting from 10 a.m. until 4 p.m. attended by more than 600 stockholders and guests.

Only disputes were concerning disposal of a canning plant at Coquille, Oregon and the immediate dissolution of Cranberry Credit Corporation, a subsidiary of NCA. These were lively, but nothing like the stormy session of last two years.

A feature of the meeting was the presentation and unveiling of a bronze plaque to Marcus L. Urann, president from 1930 to 1955. This was presented to the association by Russell Makepeace, secretary of the organization.

Stockholders voted election of the following directors:

Massachusetts: Walcott R. Ames, Osterville; Alden C. Brett, Belmont; Lawrence S. Cole, North Carver; Frank P. Crandon, Acushnet; William E. Crowell, Dennis; Carrol D. Griffith, South Carver; Russell Makepeace, Marion; Lawrence S. Pink, Middleboro; Elmer E. Raymond Jr., Braintree; Chester W. Robbins, Onset; Ellen Stillman, Hanson; Marcus M. Urann, Duxbury; George C. P. Olsson, Plymouth.

New Jersey: John E. Cutts, Vincentown; Thomas B. Darlington, New Lisbon; William S. Haines, Chatsworth.

Wisconsin: Richard J. Lawless, Wisconsin Rapids; Charles L. Lewis, Shell Lake; John M. Potter, Port Edwards; Tony Jonjak, Hayward; Bert Leisure, Chicago.

Washington: Leonard G. Morris, Long Beach; David E. Pryde, Grayland.

Oregon: James Olson, Bandon.

This action followed a vote that the number of directors be 24. Wisconsin now has five directors and New Jersey three. This is in proportion to patronage and acreage of the two states. All are re-elections with the exceptions of Jonjak and Olson. Slate was nominated by Alfred Pappi of Wareham, chairman of the nominating committee.

Top voted in order named were: Marcus M. Urann, Miss Stillman, Russell Makepeace and Frank Crandon.

Directors in executive session following the meeting elected officers. George C. P. Olsson, succeeded Crandon as president. Charles L. Lewis, remains first vice-president; Russell Makepeace, secretary; Alden C. Brett, treasurer.

Principal addresses were by Ambrose E. Stevens, general manager and executive vice-president, with his first annual report, and H. Drew Flegal, director of advertising and public relations.

Of immediate concern and interest to the grower-members, Stevens said, is the date the pool for the 1957 crop will close and what the 1957 pool will pay to patrons.

Stevens said, "And yet, on this 20th day of August, it is still too early to make a prediction that you can really rely upon. The most that I can say to you is what the figures say to me—and that is—the 1957 pool will pay a somewhat better return than the 1956 pool.

"Will it be \$11 in cash? Or \$10, or \$9.50, or \$9 in cash? Nobody knows. With you I hope for the best."

To date NCA has paid \$8.60.

Stevens continued that the cranberry sauce business is one-eighth the size of the canned peach business and a little over one-third the size of the canned applesauce business. This was an explanation as to how the cranberry business fitted into the American economy and how important cranberries and cranberry products are to the American economy. He told of the increase in size of the cranberry crop. He said the 1930 crop was 82 percent of the 1939 crop and the 1957 crop was 150 percent of the 1939 crop. The era of million barrel or more crops began in 1953 and is continuing. He added he believed the industry will have a million barrel crop from now on for a long, long time. "We cannot plan on short crops to bail us out," he said.

Stevens declared that more than half of the patronage in the 1957 pool was made up of growers who delivered less than 200 barrels. "This cooperative is even more for the little fellow than the large grower," he added.

Turning to the NCA executive staff he said that with few excep-



## New President

George C. P. Olsson (Cranberries, August, 1953) became a cranberry grower in 1953 when he, with Judge Amedeo V. Sgarzi took over the interests of Albert A. Thomas of Middleboro in the Rocky Meadow bogs in Carver, a property of about 50 acres. Mr. Olsson has been Clerk of Courts of Plymouth County since 1928. He has long been extremely active in Republican political activities.

Born in Boston, he moved with his parents to Brockton and attended schools there. He was graduated from Boston University School of Law in 1926 and became a practicing attorney. He is a past president of Plymouth County Bar Association and also of Boston University Law School Association. He is a past president of the Plymouth County Republican Club.

During the Second World War he was a lieutenant in the U. S. Naval Reserves. Boy Scouting is an avocation to him and he is past president of Squanto Council.

He is a director of Plymouth Savings and Loan Association, member of the Plymouth and Massachusetts Farm Bureau; a trustee of Chiltonville Congregational Church. He is a governor of Plymouth Plantations, Inc. He is married to the former Mary Craig of Plymouth and the couple have two sons.

Mr. Olsson became a director of NCA for the first time in 1957.

tions, the personnel could not be replaced with comparative experience and know-how at present pay in management jobs. "At the present NCA is not overstaffed," he said.

Basic problem of the cranberry industry, he said, is that not enough people in America eat cranberry sauce the year-round. Competition with other foods is constant and unrelenting. Other industries have overcome this competition. "We can and we will," he added.

Pertinently, he said, NCA has been having a very bad "downer," but, "I am quite confident that the bottom has been reached. Our progress may be painful, our progress may be slow, but progress we have and will have."

NCA now has 2,149 holders of common stock, 1,425 holders of preferred shares and 1,323 marketing agreements: that is cranberry growers participating. NCA handles approximately 75 percent of the total cranberry crop. These were figures presented by John P. Harriott, assistant treasurer. Harriott continued that the association's financial condition continues to improve. Dun and Bradstreet rating has been changed from Aa to 1A.

Treasurer Alden C. Brett asserted, "Your co-operative is in good financial condition. There is nothing wrong but what a good dose of sales will fix."

Flegal told of advertising plans for sale of the 1958 crop. He said an important part of the national sales campaign was to use the "heavy artillery" on television. He gave a preview of 60 second and 20 second spots on this media. They were flashed on a screen for the NCA audience. They emphasized that cranberry sauce is the natural mate for meats of all kind, and are addressed to the "old man of the home." These will be heard over 20 television spots in America's 20 major markets after Labor Day. The catchy jingles emphasize, in some of the spots that vitamin C content of cranberry cocktail is greater than that of frozen orange juice. The sales campaign is intended to induce the greater use of cranberry cocktail as a breakfast juice.

There are to be full-page Fall ads in leading magazines and advertisements are now being inserted in New England newspapers. He said he sincerely believed an exceptionally good advertising campaign had been prepared. "We believe our campaign is basically sound and given time to prove itself will sell Ocean Spray the year around."

Flegal's address was received with much optimism by NCA



Russell Makepeace (left) presenting plaque honoring Retired President Marcus L. Urann, (right). (CRANBERRIES Photo)

members.

Meeting was conducted by President Frank P. Crandon and Mr. Stevens. Crandon said in his welcoming address, "As I stand before you today, I can look every one of you in the eye and truthfully say we have made considerable progress, and we are in a much more stable condition than in 1956."

He also said there was no intent on the part of management to limit discussion as had been charged in the past.

There was lengthy debate on the proposal to sell, lease or dispose of the Coquille plant. A final vote was to leave this to the

action of the board of directors. On the matter of the immediate dissolution of the Cranberry Credit Corp., it was voted after a long discussion led by Atty. Robert Briggs, Plymouth, that this be left to the board of directors to accomplish this as soon as reasonably possible.

Other reports were by director of research, Dr. Lawrence E. Proesch, director of marketing. A telegram from U. S. Secretary of Agriculture Ezra Taft Benson was read. In this he said he had watched with interest the efforts of the cooperative to improve the position of cranberry growers through the development of mark-



et quality.

Edward C. Bloom, attorney New York, and small cranberry grower of Centerville spoke in the matter of the Coquille plant disposal, saying he thought stockholders should be better informed before action was taken. The suit of Mr. Bloom against past and present directors and officers of National is still pending from last year. Although he characterized the reports of management at the meeting as "baloney—a lot of hot air—an insult to intelligent growers," he appeared to feel some progress was being made by management to the advantage of the growers and that Stevens "is a pretty good fellow with creative ideas, and will do a pretty good job if given a free hand."

He said to the stockholders, "I will continue to help you all I can." His remarks brought forth laughter and applause.

At noon a luxurious buffet lunch was served.

This included a variety of cold meats and both whole and jellied sauce demonstrating the new slogan "a natural mate for every meat".

During the meeting, Bruce Arthur, 52, of Pembroke suffered a collapse. After being given first aid by Dr. John E. Angley of Hanson he was taken to Goddard Hospital, Brockton. He was reported as resting comfortably, and not on the danger list.

During his report Garside discussed NCA personnel, saying that there are 164 persons on the permanent payroll, a reduction of 21

from previously. Total payroll, including seasonal help, was \$963,900 for the fiscal year ending May 31., a reduction of \$142,395 from previous year, even though the crop handled increased from 550,039 barrels to 765,776, and the number of cases of finished goods from 5,013,546 to 5,503,960. He said in summary that in a period distinguished by rising costs, the operations of National have been conducted with an actual and important decrease in unit costs.

In the report of Controller Gaughan, growers were given a clear picture of how NCA financial and accounting matters were handled. He said that in the past year his department had made tremendous progress in bringing the accounting procedures of NCA and Ocean Spray of Canada up to date. He said all procedures are on a current basis.

The plaque to Mr. Urann reads: "To Marcus L. Urann, in profound respect and admiration for his major part in creating and building National Cranberry Association. He loyally served it as president from 1930 to 1955. To him the Association owes its existence. As a stalwart pioneer, his vision, courage and unbounded vigor in establishing the cooperative has endeared him to its members, all of whom have benefitted from his unselfish devotion to their welfare. His peerless leadership has won him the gratitude and affections of the Cranberry industry."

In presenting the plaque, Russell Makepeace also paid tribute to the late John C. Makepeace.

## E. C. St. Jacques

Many within the cranberry industry from coast to coast will be saddened to learn of the death of Emil C. St. Jacques, head of Hayden Separator Manufacturing Company, Wareham, Mass., manufactures of cranberry equipment. Mr. St. Jacques, 66, died suddenly at his home, in the morning of the 25th. He had recently been in hospital with a heart ailment.

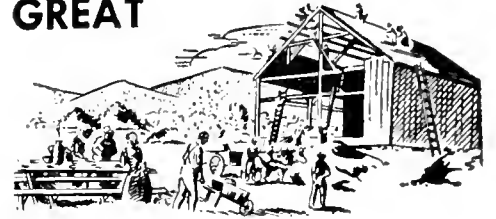
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Warren R. Arnold, Sec'y-Treas.

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**NIAGARA**<sup>®</sup> instant starch • **ARGO**<sup>®</sup> corn and gloss starches

**KASCO**<sup>®</sup> dog food

## OUR ANNUAL TIME OF HOPE

THE season of the year—harvest—for which growers have striven towards, is now about at hand. Preliminary crop reports are out. Yet we do not know for certain how many berries will be harvested, or of what quality the fruit will be until later.

Perhaps most importantly of all we do not know what the selling price of fresh fruit will be and therefore what the returns for the labor of a year will be. That is the thought uppermost in the mind of every grower, and everyone in anyway directly associated with the cranberry industry for an income.

We can at least hope, at this moment, for cool, "good buying" weather, a brisk demand and adequate prices.

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## INSTITUTE REVIVAL

WE ARE more than heartened by the fact the Cranberry Institute, which did not "die," but for the past several months has been hibernating, is now to be re-activated. With officers elected at this time, including a board of directors not to exceed 25, instead of in January the unit is expected to be in full swing of activities by first of the year 1959.

Long-range objectives have been agreed upon. The Institute can be a definite factor towards successful marketing of the crop of next year. As we have stated more than once, we believe a strong and active Institute can do a great deal in helping the industry get out of the doldrums in which it has drifted for too long.

We wish President Orrin G. Colley and the other officers every possible success and we feel certain they are imbued with sufficient realization of the potential of the Institute to make it of real value to every grower.

---

## THANK YOU

PERHAPS this is a good time to express our gratitude to growers for their continued support of Cranberries through subscriptions, despite the rise in subscription price recently put into effect. This was necessary, as apparently was understood, due to constantly rising costs in the carrying on of a business of any kind. It is indeed gratifying that renewals and new

Editor and Publisher  
CLARENCE J. HALL

EDITH S. HALL—Associate Editor  
Wareham, Massachusetts

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Pemberton, New Jersey

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subscriptions continue to come in as usual.

We have been publishing this magazine now for 22 years and one of the most heartwarming features of this is, that a surprisingly large number of subscribers have been with us continuously since we started in May of 1936.

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Next month we expect to start an unusually informative series of articles by Dr. F. B. Chandler. With surveys from all areas made relatively recently, he is assembling a mass of facts (including Canada) bringing cranberry statistics up to date. We do not think this has been assembled before in overall entirety.





ORRIN G. COLLEY

## Cranberry Institute Reactivated; Elects

The Cranberry Institute was reactivated Tuesday morning, Aug. 19, at the East Wareham Cranberry Experiment Station, preceding the annual meeting of the Cape Cod Cranberry Growers' Association. Orrin G. Colley of Duxbury, who has previously headed this body and has been active in cranberry growing since 1929, was elected president.

Other officers elected were: Ambrose E. Stevens, Duxbury, general manager of NCA, first vice-president; second vice-president, Vernon Goldsworthy, Eagle River, Wis.; secretary-treasurer, Kenneth E. Garside, Duxbury.

Executive committee is Colley, ex officio; Stevens, alternate Garside; Goldsworthy, alternate Clarence A. Searles, Cranmoor, Wis.; Maurice Makepeace, Wareham, alternate Theodore H. Budd, Sr. Pemberton, N. J.

Alden C. Brett, retiring president, acted as chairman, discussing by-laws and membership. He is to give a report later.

The treasurer reported a balance of \$10,587.50 on hand and this sum is to be retained. The treasurer is also to bill members for an unpaid balance of about \$16,000, based on a seven-cent assessment per barrel on the 1957 crop.

The group will hold fall meetings and looks forward to being fully active in January of 1959, with plans for the entire year.

Proposals are to promote the industry at all levels by providing an effective medium through which all segments and groups within the industry may work together for the common good.

Services are to include representation of the industry on matters affecting it and its economy; collection and correlation of statistics of a marketing, selling and merchandising nature; to provide orderly marketing; standardization of products; sales promotions; to represent in consumer relations and consumer education; transportation; cooperation with related industries; utilization of state and federal services; legislative proposals on the local, state and federal levels; forward planning; market research; and a general clearing house for ideas within the industry.

Directors are: Stevens, Marcus M. Urann; Kenneth Garside, representing National; Orrin Colley, Cape Cod Cranberry Cooperative; John Melville C. Beaton, Beaton Distributing Agency; William Decas, Decas Bros.; Goldsworthy, Cranberry Products, Inc.; John B. Minello, Minot Food Packers. At large are: Brett; Bernard C. Brazeau, Wisconsin Rapids; Budd, N. J., Cape Cod Cranberry Growers' Association; Maurice Makepeace, Chester Robbins, Howard B. Hiller, Wisconsin State Cranberry Growers' Association; Clarence A. Searles; Donald S. Buckart, American (New Jersey) Cranberry Growers' Association; Allison Seammell. West Coast groups: can designate.

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COOS BAY, OREGON

# Cape Cod Cranberry Growers Make Tour of Berry Experiment Station

## 70th Annual Meeting Elects Waite President

More than 200 cranberry growers—192 buying tickets for the chicken and cranberry lunch, as compared to 150 last year—attended the 70th annual meeting of the Cape Cod Cranberry Growers' Association, Experiment Station, East Wareham, Tuesday, Aug. 19. This was a session devoted largely to technical discussions by station staff members and a tour of the State Bog, with new developments explained by staff members to groups.

Growers also heard C. D. Stevens, chief, New England Crop Reporting Service, give the preliminary estimate of the prospective U. S. cranberry crop. This is expected to be the second largest on record, the sixth largest for Massachusetts and the second largest for Wisconsin. This was the 30th year in which Mr. Stevens has made this report, which was released from Washington at 1 p. m.

Election of officers on a slate, nominated by Arthur Handy of Cataumet, chairman of the nominating committee, resulted in the following officials elected unopposed:

President, Ferris C. Waite, Plymouth; first vice-president, Ralph Thacher, Marion; second vice-president, Philip S. Gibbs, Carver; secretary, Gilbert T. Beaton, Wareham; treasurer, Mrs. Ruth Beaton.

Directors: Waite, Thacher, Mr. and Mrs. Beaton, Gibbs, Dr. C. E. Cross of Sandwich, Paul Morse of West Wareham, Robert C. Hammond of East Wareham, J. Foxcroft Carleton of Sandwich, Handy. Also directors are cranberry club presidents, South Shore, Louis Sherman, Plymouth; Southeastern, Oscar L. Norton, Rochester; upper Cape, Victor Adams, Osterville; lower Cape, Francis Kendrick, East Harwich. Honorary directors are: Chester A. Vose, Marion; Dr. Herbert F. Bergman, Amherst, and delegates to the Cranberry Institute, Chester W. Robbins, Maurice Makepeace, Marion, and Howard B. Hiller, Rochester.

President Waite, who is serving his second term, in opening the meeting went back into the history of the organization. Records imply, he said, that the unit is 70 years old, but an earlier minute book tells of a cranberry

growers' convention at Harwich in 1866, 92 years ago, indicating a lapse in which the association did not function.

He said that a study of these old minutes revealed that many of the problems of the earlier growers were still problems of growers today.

The morning was devoted to the bog tours. The meeting opened after lunch. President Waite called for a minute of prayer in memory of members who had died during the past year. He mentioned Dr. H. J. Franklin, former station director; John C. Makepeace, a past president, and Walter E. Piper, Massachusetts Department of Agriculture, Division of Marketing. Invocation was by Rev. James P. Wolfe, East Wareham.

Massachusetts Commissioner of Agriculture Charles H. McNamara made his first appearance before the cranberry growers. He told the cranberry men he was a dairyman, and jocosely urged them not to become too discouraged with the present depressed market condition and get into dairy farming—or they would be even more depressed. He urged growers to tell him of their problems and promised his department would do all possible to be of assistance.

Dale Seiling, dean of the College of Agriculture, University of Massachusetts, discussed improvements which had been made at the Cranberry Station in the past year, mentioning in particular the many new research programs in progress.

Louis Webster, Massachusetts Department of Agriculture, Division of Marketing, was another speaker. He said he could promise the growers one-minute promotion spots on at least 20 radio stations during the coming marketing season.

Following the report of Secretary Beaton, Treasurer Ruth Beaton said the association had \$3,537.07 cash on hand, and \$3,859.53 in general bank funds. She said membership is 240 with two sustaining members: the A. D. Makepeace Company of Wareham and the Charles W. Harris Company of North Dighton.

Reporting for the frost warning committee of the association, J. Richard Beattie said subscribers totalled 186, less than the 200 of last season. He said the commit-



Officers of the Cape Cod Cranberry Growers' Association elected Tuesday were, left to right, second vice-president, Philip Gibbs; treasurer,

Mrs. Ruth Beaton; president, Ferris C. Waite; secretary, Gilbert T. Beaton. Ralph Thacher, first vice-president is not shown. (Cranberries Photo)

tee had ended \$7.91 "in the black", and total expenditures of the committee had been \$1,673.

A report on vandalism was given by Ralph Thacher, chairman of the vandalism committee, the other members of which are Beattie and Robert C. Hammond. He said only a single case had been reported in the past three months and that was in Middleboro. He added that growers complained of various troubles but failed to report them. He said the committee had been in conference with the area chief of police associations, and the police offered cooperation. They said they could not patrol all cranberry bogs, but would act if reports of law violations were made to them. Thacher urged growers to report infractions to their town chief of police if they wanted remedial action.

Oscar Norton, who had charge of the exhibit of the association at the Union Fair in Worcester last winter, told how the association had taken top honors in its field. He said the exhibit was the last the fair association was to hold due to the usually inclement weather. He was pleased that the cranberry growers had been with the fair organization until its ending. Norton was also commended highly by President Waite for planning the luncheon for the association the day of the meeting.

At this point Station Director Cross took over the meeting and called upon various members of

his staff. William E. Tomlinson reported on insects; Beattie on his duties as Extension Service cranberry specialist, and explained his work was much concerned with an educational program. He stated that Irving E. Demoranville and he would continue marketing surveys this fall for the fourth consecutive year. This is a program for quality control.

Dr. Bert M. Zuckerman, station pathologist, gave a brief report of his work in fungicides this past summer, but said results would not be known until harvest or after. He introduced his summer-time assistant, John Coughlin. Zuckerman and Coughlin have begun studies of nematodes, a microscopic worm-like creature which maybe causing hitherto unsuspected trouble to cranberry growers, as it has been found to be doing to other agriculturists. He urged growers to send in samples of bog soil, taken from spots where vines were thinning out into barren spots. Following the meeting, he showed a collection of the worm-like creatures to interested growers.

Demoranville talked upon weed control, telling of new herbicides which are better than some of the old ones and more economical to the grower. He stressed pre-emergence control of insects and material. Amino Triazole, in post-harvest treatment this fall. He told growers that the new material must be applied each bog between seven and ten days following har-

est.

"Getting More Production" was the topic of Dr. F. B. Chandler. He said growers should strive to get between 350 and 370 uprights to the square foot. If there are less, fertilizer should be increased; if more than 700, he said there should be pruning. He urged growers to build better soil.

John "Stan" Norton, engineering research member of the staff, reported on his work of a little more than a year, saying he had many projects in mind, but had been unable so far to get as many of them completed as he had hoped. The all-purpose bog vehicle has not yet been perfected, but he had stated work on a new type of separator, which did not operate on the bruising "bounce" principle. This would be tried out this fall, along with water raking (Wisconsin method) of cranberry harvest and also artificial drying of berries, and he hoped with better success than last year.

Final speaker was Dr. Cross, who said it was his job to steer, balance and coordinate the work of his staff in such a way as to best meet the requirements of the growers. Much of the station research is now directed at "fundamental" as well as immediately practical projects.

During the bog tours, much of this new research was explained to growers. Groups visited the varieties section of Dr. Chandler, where he has planted a large num-





Visiting Cape Cod Cranberry Growers' Association for the first time was Charles H. McNamara, Massachusetts Commissioner of Agriculture, (left). He is shown with Dale Seiling, dean of College of

Agriculture, University of Massachusetts and Dr. C. E. Cross, Cranberry Station director.

(CRANBERRIES Photo)

ber of new and old varieties of cranberries.

On an irrigated acre, besides sprinkler experiments for irrigation, there have been applications of insecticides through the systems, which were reported as the most successful of all insect controls, nearly 100 percent perfect. This was a statement by Entomologist Tomlinson.

In conclusion, Cross pointed out a new adverse factor which may face cranberry growers in a few years. This is that—with the growth of towns and cities in the cranberry area—there is growing demand for water resources and the cranberry men will almost inevitably not have the amount of water for various controls they have been accustomed to in the past. This is already a factor in the New Jersey industry.

Experiments of Norton in two new methods of ditch cleaning were explained. In one, a powerful jet stream was played into the ditch, agitating the muck, which was then pumped out by a sludge pump to the upland. Another was by use of a new type rotary weed cutter, which also agitated the muck and both were then deposited on the upland by sludge pump. The latter method is considered as possibly more effective.

Another interesting experiment in drainage by Dr. Chandler was the re-building of three plots and a check. On one, sand and peat were removed to a depth of about two feet—approximately a foot of each—and then mixed and returned to the plot.

In the second experiment, the sand was removed from the top and the bottom peat placed on the surface. On the third, the surface was merely scalped in the

conventional fashion. All were sanded as usual and replanted with vines.

Growers had perfect weather for the meeting. Among those attending was a large delegation from Wisconsin and others from the West Coast and New Jersey.

As usual, a feature was the commercial exhibition of equipment. Displays included a helicopter from the Wiggins Airways,

## Second Largest Cranberry Crop Forecast; Mass. Estimate 570,000

Preliminary forecast of the United States Department of Agriculture is 1,076,500 barrels. This is second largest to the record 1,203,000 of 1953.

Of this total, Massachusetts is estimated to have 570,000 barrels compared to 563,000 in 1957 and 560,000 on a ten-year average. There have been five crops larger. It is approximately average.

New Jersey is accorded 88,000 barrels. It had 78,000 in 1957 and 89,100 on a ten year average.

The Wisconsin figure is 335,000; 284,000 in 1957; average 222,500, and second largest.

Washington is estimated at 49,500 barrels, approximately half of

the 84,000 of 1947, the loss being due chiefly to a sever frost May 12; average 47,590.

Oregon is estimated at 34,000, less than the record for that state of 41,000 in 1957 but more than the ten-year average of 20,300.

Growing season in Massachusetts was reported as being wet and cool, with medium to heavy bloom and good set, the best since 1953. Early Blacks will make up 60 percent of the crop, Howes 36, others the remainder. Fruitworm caused less injury than many years; there was an ample supply of rainfall which prevents a quality problem.



Cranberry growers made group tours of the State Bog at the annual meeting of Cape Cod Cranberry Growers' Association to look over new field

research projects. This group is led by Cranberry Specialist J. Richard Beattie.

(CRANBERRIES Photo)

Norwood; display, Marshfield Airways, Marshfield; Samson digger by E. W. Turgeon Co., North Dartmouth; E. C. Goodhue Lumber Co., East Freetown; Hayden Separator with Darlington picker, Wareham; Davis Tractor Co., Boston; Louis Sherman, Plymouth, special spray rig; Brodeur Machine Co., New Bedford, pumps.

### *Some Notes From Washington*

Ralph E. Tidrick, County Extension Agent, Pacific County, Washington, reports experiments are being made in using aromatic solvents as weed killers in submerged ditches. Object is to find

an economical and easier way of getting rid of water starwort (watercress). Two ditches were used.

In a flowing ditch the solvents were injected into the water under pressure as follows; two and one-half gallons of solvent were mixed with 25 gallons of water. This was fed into the relatively small ditch at a rate of one gallon per minute, for approximately 30 minutes. A fair kill was achieved with the first application, however, it was found the level of the ditch water was too low. Tips of weeds were out and were not killed. Seed quickly germinated in the muck at bottom of the ditch. Ditch was re-treated at the same rate with water level higher and current faster. Excellent kill resulted.

In another ditch with very little flow there was constructed a dam bringing the water level to the tops of the weeds. Material was then injected into the ditch under pressure by walking along with the nozzle under the surface. An excellent kill was obtained but

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"Alice in Dairyland" girls recently visited the plant of Cranberry Products, Inc. at Eagle River, Wisconsin. They are shown with President Vernon Goldsworthy, and from left to right are: Jane

Trappe, Green Bay; Carole Calabrese, Milwaukee; Goldsworthy; Nancy Trewyn, Princess; Connie Lutz, Oconto Falls and Barbara Haslow, Chili.

more material was required due to the absence of an accurately metering procedure.

Tidrick also reports more fruit-worm than in the past several years. He wonders if this insect isn't beginning to show resistance to present spray program. On the other hand the record warm and dry season may be responsible for increased insect activity. Localized infestations appeared in all areas. Although he points out growers in general did a good job of worm control, some infestations were due to improper timing or not spraying at all.

Red Leaf spot was a problem this year, as Tidrick predicted earlier, because of excess vine growth on many bogs where the May 12th frost destroyed the crop. Bordeaux on spots heavily infested is the surest way of control, he says. If left unsprayed, partial defoliation results.

A few Washington growers are

adopting a page from the weed book of Wisconsin. They have been experimenting with Dalapon by wiping the concentrated material on the grassy type of weeds.

## Blueberry Price Low To Consumer

An unusually good cultivated blueberry crop—good in both quantity and quality—is being harvested in southeastern Massachusetts this season. The crop, however, is extremely late. Growing is delayed about three weeks, and picking is not expected to be finished until the end of August and, for a few late varieties, the first of September.

With somewhere in the neighborhood of 300 planted acres, the total crop may exceed the normal, 60,000 pints. With the abundance, prices are satisfactory to the consumer, but not to the grower or retailer. Wholesale price is reported as around 22 cents a pint. Growers who are doing best, per-

haps, are those who sell their own fruit in roadside stands or permit pickers to come in and harvest for themselves by the quart. Jersey blues continue to be available in quantity and at low prices.

## Fresh From The Fields

(Continued From Page 6) of the College of Agriculture, U. of Wis. will be the guest speaker.

## OREGON

### Little Frost

There has been relatively little frost damage to Coos County bogs this year, although there was some damage last spring on higher elevation bogs which were not protected by sprinklers. There were a number of borderline nights when growers adequately protected themselves.

### Heavy Set

On most bogs set was heavy and crop prospect reported up.

# SERVING THE WISCONSIN GROWERS

## Growers Meet

Southeastern Oregon Cranberry Club held its annual gathering at Shore Acres State Park, Charleston, Sunday, August 3. There was a potluck picnic.

## Nova Scotia

There was a severe frost on the island on the morning of June 9. Temperatures dropped to 16 degrees on the Oyler bog at Auburn and probably lower at other points. About the only cranberries which escaped were those completely flooded or under sprinkler control. The damage was not as extensive in eastern Nova Scotia where bogs are closer to the salt water of Northumberland Strait.

A 50 percent cut in the normal total would be a reasonable estimate according to E. L. Eaton, Senior Horticulturist at Kentville, Experimental Farm, Department of Agriculture. A normal crop might be 5,000 barrels.

## Late Massachusetts

### August Weather Better

August started with the kind of weather growers wished had prevailed during July. In sharp contrast to the humidity, drizzle and fog of that month were clear, warm days with relatively little humidity. Rainfall was on the very scant side first part of the month, only .21 of an inch.

### Good Rains

By the 14th three storms had brought the total up to 3.20, with average for the month 3.60. These rains did the crop much good as they were well spaced.

### Hot

Month was continuing considerably warmer than normal. Total excess to the 14th was 34 degrees above average. Humidity was not as extreme as during July, at least during first half of month.

### Insect Loss "Normal"

Due to new chemicals and alertness of growers, fruitworm did not cause an undue amount of damage. Many eggs earlier indicated a severe year, but injury

from this pest has not been and apparently will not be excessive. Blackheaded fireworm was spotty, bad on some older bogs and those which were not treated. Total damage about normal, according to Dr. Cross.

### Crop Not Very Late

With good growing weather, berries were sizing up and are expected to be of reasonably good size. Lateness of the season was

being overcome, and by mid-August, crop was not more than a week late. Picking was expected to start early in September, not in August as last year, the earliest season on record.

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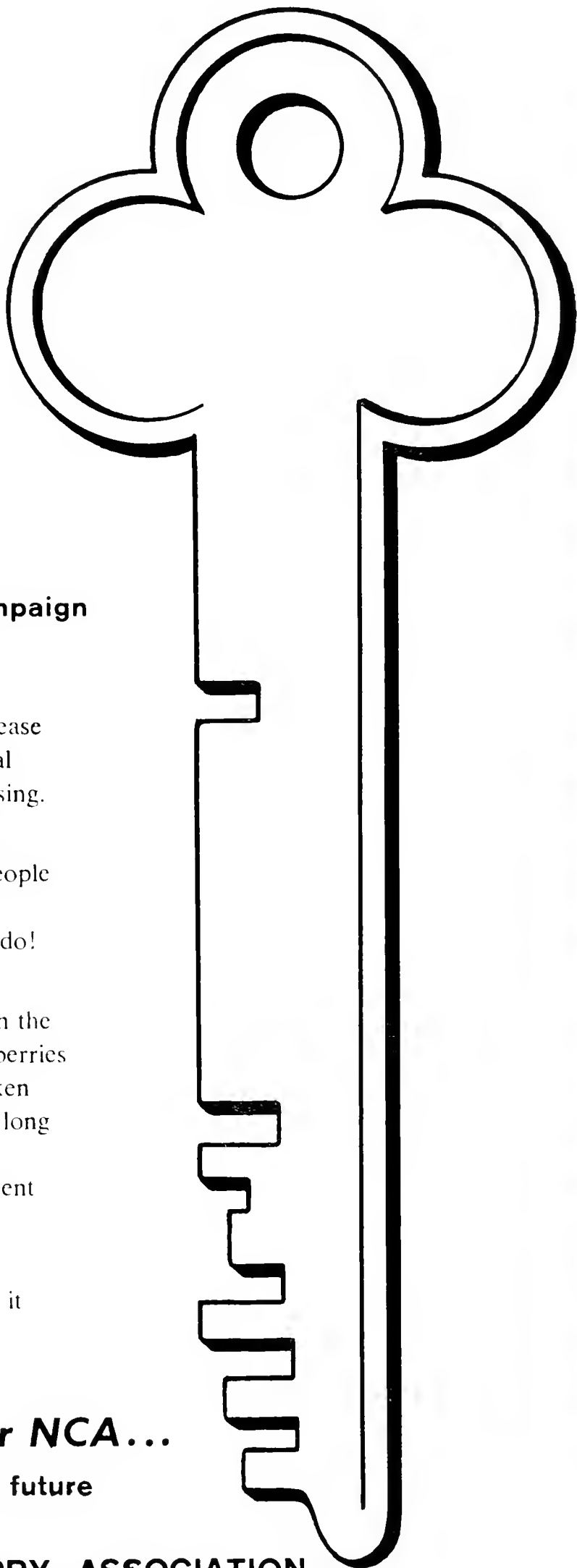
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## *Bog Experiment In Michigan Peninsula*

An experimental planting of a commercial cranberry marsh in Upper Peninsula of Michigan; a state which now grows no cranberries because of much alkaline water has been made South of a community named Dollarville. Donald Zettle of Marquette, regional forester for the state conservation department said land was selected close to a highway, where

interested persons could observe the experiment. It was felt cranberry cultivation might be an economic asset to the Peninsula.

Donating the vines was Vernon Goldsworthy of Eagle River, Wisconsin and accompanying him on the planting expedition were Ralph Sampson and Howard Query, also of Eagle River. All three are growers and officers of Cranberry Products, Inc. of Eagle River. Goldsworthy found the soil and location suitable for cranberries and that estimated development costs were at \$3,000 an acre.

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## Jersey Growers Met At Toms River, Aug. 28

Hobart R. Gardner of Indian Mills, as Vice-President, convened the summer meeting of the American Cranberry Growers' Association on August 28 in the absence of President Albert T. Andrews, who was away on a trip.

The guest speaker of the day was E. Rowland Major, Local Property Tax State Supervisor. Mr. Major concentrated on two main questions: (1) what are the causes of sharp tax increases and (8) does equalization have anything to do with increase of taxes? Mr. Major pointed out that in addition to the "exploding" population of Southern New Jersey, which demands so much more service, especially in schooling, tax valuations have not been increased as fast as the cost of providing these services. In ten years tax valuations for the State as a whole have only increased fifty per cent while local taxes have nearly tripled.

Unfortunately, rising costs and taxes have not been paralleled by similar improved returns from farming. Mr. Major maintained that on the whole equalization does not increase taxes. However, it does hit most rural areas harder because they have been generally underassessed to save the load on the farmer, while city properties were kept at higher assessments because that helped cities in borrowing money. In order to help assessors in revaluing properties Mr. Major's department organizes classes in different parts of the State and has provided an appraisal manual.

### Sparganothis

Philip E. Marucci reviewed the situation in regard to Sparganothis fruitworm. He pointed out that several bogs last year lost 25 per cent of the crop by not following the regular spray schedule. It is very difficult in the spring to find the worms of the first generation. But since there are two generations it is important to spray or dust at the proper time, which occurs in early June, and sometimes again in early July. Figures

were given to show that even on a very lightly infested bog a Sparganothis spray will pay off. The combination of Parathion and DDT has continued to be very effective against Sparganothis and cranberry fruitworms.

### Water Problems

Vinton N. Thompson, cranberry grower and Executive Director of the N.J. Rural Advisory Committee, spoke on current water problems. Mr. Thompson is also a member of the N.J. State Water Supply and Policy Council. He pointed out that there is a possibility that if certain provisions for increased water supply in North Jersey are not constructed, these communities may find ways to take water from South Jersey. It is a well known fact that common law, dating back to the Romans, in regard to a man's right and restrictions when taking water from a stream is very vague and can cause serious injustice. Large numbers of people have been putting pressure on the State to clear up this matter of law. As a result, a committee was appointed to prepare the first draft of a bill which would permit the State to have some control over the fair diversion of surface waters for

private use. Mr. Thompson served on this committee and urged the Association to appoint persons to study the draft in its present stage and report on the feeling of the cranberry growers.

### DeMarco

Anthony R. DeMarco, cranberry growers and shipper, briefly discussed his company's methods in growing a crop. In regard to sales, Mr. DeMarco feels that more care should be taken of the berries after they are delivered to the trade. The trade, of course, should make money on the crop. But a product can be priced too high to fit into the buyer's budget. If the price on cranberries is right for the Thanksgiving market, then a good fifty percent of the crop will be sold in that market.

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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



## E. C. St. Jacques

The cranberry industry has again lost one of its able leaders in the death of Emile St. Jacques of Wareham, Mass. "Doc", as he was known to many of his friends, was one of our pioneers in the manufacturing of cranberry equipment. His separator, pumps, dusting machines and cranberry picking machines are in use throughout the cranberry growing areas of this country and Canada. He served with distinction as president of the Southeastern Cranberry Club, as well as its secretary-treasurer, and was active in the Cape Cod Cranberry Growers' Association. No cranberry meeting in Massachusetts was complete without his presence. We at the Cranberry Station join his many friends in extending our sympathy to his family.

## Weather Pattern

We have seen no evidence to indicate any change in the weather pattern established several months ago—namely, excessive rainfall, cool temperatures, and cloudy conditions. The rainfall for the first eight months of 1958 has been recorded at our station, giving a total of 47.58 inches, or 3.27 inches in excess of our yearly average. Rainfall in August measured 9.02 inches at our station, making it the third wettest August in our records, topped only in 1922 and 1927, and then by less than one-half inch. Heavy rains that were associated with Hurricane Daisy in late August flooded the low areas of some bogs, but damage appears to be negligible. We consider ourselves most fortunate that the hurricane missed our area.

## Berry Growth

General picking did not get un-

der way in Massachusetts until nearly mid-September—a full two weeks later than last year. Irving Demoranville has been carefully checking samples of berries from our State Bog each week since August 25, as a part of his growth studies which he began in 1953. His purpose is to secure valuable information as to the rate of growth of "early and late-water" fruit in terms of size and weight. His records show that "early-water" Early Blacks apparently reached their peak of growth this year by September 15. However, "late-water" Early Blacks were still increasing in size and weight on this date. Compared to last year, the present "early-water" Early Blacks are about the same size and weight, while the present "late-water" Early Blacks are the largest and heaviest since his studies began. A complete report, including the Howes variety, will be available at a later date.

## Labor Adequate

We have heard of no serious labor problem, so apparently the Massachusetts Division of Employment Security has been able to supply the necessary workers. A flash card was mailed to growers in early September giving the location and telephone numbers of their temporary field offices. These are as follows: Square Deal Garage, West Wareham, Tel. Wareham 1298; National Cranberry Association, Hanson, Tel. Cypress 3-7626; and Public Service Building, Wareham Street, Middleboro, Tel. Middleboro 1210. Their home

offices in Brockton, Hyannis, New Bedford, Plymouth and Taunton are also assisting growers with labor problems.

## Water Supplies

Water supplies as of mid-September appear to be adequate for frost protection unless we encounter an unusually active frost season. With supplies available, growers are encouraged to flood each bog immediately after picking. It helps to revive the vines and removes much of the harmful trash that collects each year. The float boat is ideal for this task. Before leaving the subject of frost, the below fall radio schedule which supplements the telephone frost warning service, sponsored by the Cape Cod Cranberry Growers' Association, is now in effect:

## 80% of Crop Machine Picked

The picking machine schools held in August 1957 proved so helpful that they were rescheduled by popular request in late August of this year. We expect that at least 80% of our present crop will be picked by machine. Certainly, any techniques that could be relayed to growers to reduce picking costs are in order.

Three schools were held for this purpose and enabled growers and operators to familiarize themselves with operational techniques, general maintenance, adjustments, and simple repairs. Approximately 150 growers attended these sessions and received one and a half hours of instruction per machine. We are indebted to Kenneth Beaton who did an excellent job as a substitute for Robert St. Jacques whose father passed away just prior to the schools. "Ken" was our instructor for the Darlington picker. Louis Sherman, as usual, handled his assignment as instructor for the Western picker in a very capable manner. Mimeographed outlines of instruction were prepared for each machine and enabled growers to follow the lecture and demonstration at each

Station	Place	Dial		Afternoon	Evening
		A.M.	F.M.		
WEEI	Boston	590 k.	103.3 mg.	2:00 (ex. Sat.)	9:00
WBZ	Boston	1030 k.	92.9 mg.	2:30	9:00
WOCB	W. Yarmouth	1240 k.	94.3 mg.	3:00	9:00
WBSM	N. Bedford	1230 k.	97.3 mg.	3:30	9:00

session. Extra copies are available at the Hayden Separator Manufacturing Company, West Wareham; Louis Sherman's home, Plymouth; County Extension offices, and at the Cranberry Experiment Station.

#### After Harvest

Growers are reminded again that **asters, nutgrass, cutgrass, panic grass, and white violets** can be treated effectively with **amino triazole** after harvest. It is suggested that this treatment be delayed until five days after picking a bog in order for the vines to make a partial recovery from the harvesting operation. This is also an excellent time of year to fertilize the thin or weak areas on bogs that show up so clearly during the picking season.

## Dapalon Tests In Washington

A few Washington growers have tried trial sized patches of Dalapon for grass and rush control. A concentrated solution of the material was wiped on the weeds with a wick-fed boom such as used in Wisconsin. Only the weeds are contacted with these booms as they pass over the top of the cranberry vines. The process was reported as looking fairly promising on grasses and such rushes as cotton top.

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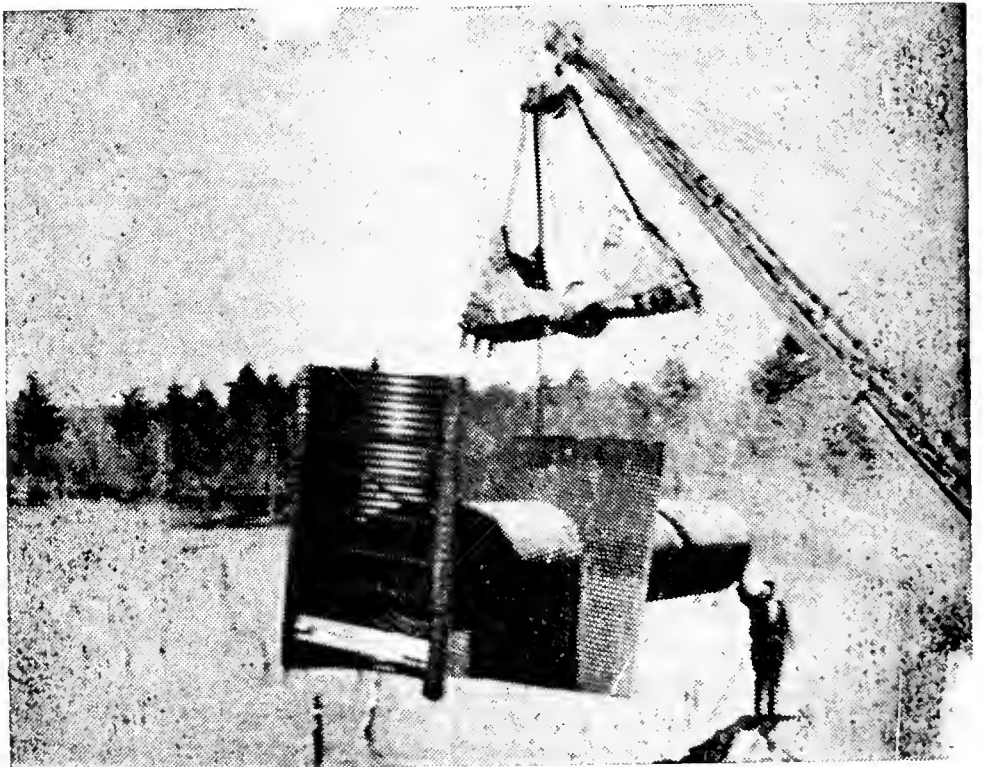
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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of September 1958 - Vol. 23 No. 5

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Entered as second-class matter January 26, 1943, at the post-office at Wareham, Massachusetts, under the Act of March 3, 1878

## FRESH FROM THE FIELDS

Compiled by C. J. H.

### MASSACHUSETTS

#### August Adds to Excessive Rain of Year

August was the eighth month of 1958 with excessive rainfall. The total amount of precipitation during the 31 days was 9.02 inches. This included the rainfall from the hurricane Effie on the night of August 31 of which the cranberry area received only a token of the disturbance which originated in the tropics.

The months during which rainfall was not excessive were March and July.

The total precipitation for the first eight months of the year has been 47.58 inches. Normal for an entire year is figured as 44.31.

With so much rain a number of growers in Plymouth County and particularly in Barnstable county were obliged to start up pumps or to pull planks to get the water off. Loss of fruit was probably not much.

#### August Temperature Almost Normal

Temperatures for the month ran about a degree a day above normal.

### NEW JERSEY

For temperatures, July was fairly close to normal with an average temperature 0.7° above the normal of 75.6°; August was cool with an average temperature 1.2° below the normal of 73.6°.

#### Excessive Rain

Rainfall, however, was greatly in excess of normal, being 5.82 inches in July (1.49 inches above normal) and 10.80 inches in August (6.12 inches above normal).

As of August 31, Pemberton received in 1958 a total of 47.89 inches of rainfall, which is actually 18.09 inches greater than the average rainfall through this date. It is also 4.73 inches more than the average year's rainfall.

A number of dams suffered washouts and many bogs had standing water for a couple of days. On some properties standing water accumulated several times and has destroyed the cranberry crop. Ripening and picking will be delayed.

Blueberries were also hit hard by the excessive rains and dampness which caused molding of fruits on the bush, injury to roots by flooding which was also serious in nurseries of young plants, washing off of insecticides, and interference with picking.

### WISCONSIN

#### August Frosts

August was slightly below normal in temperature, with precipitation above average in northern areas, but continued below normal rainfall in southern districts. The warmest day was 97 degrees on the 3rd and coldest was 24 degrees on the morning of the 25th. Cold spots off the marshes registered 20 degrees and was the coldest on record for that date. Some berries were lost to the frost and growers with short water supplies were unable to effect complete protection. Roughly the first half of the month was warm and the last half unseasonably cold. This marked the continuation of killing frosts during each of this year's grow-

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ing months. Average rainfall for the state is now about 4 inches below normal and the ground water table remains 1.9 feet below normal. The extended forecast for September is for cooler and wetter weather than normal. Normal temperature for Sept. is 55.2 degrees and 3.76 inches.

#### Hail Loss Heavy

The big news in Wisconsin the past month was the short water supplies in the Mather and City Point areas, the severe frosts the latter part of the month and the hail storms at Manitowish Waters on the 6th and in the Biron area the 29th. This was followed by a severe hail storm on the 3rd of September near Mather. The Mather storm covered about two hundred acres, the Biron storm about 125 acres and the Manitowish area about 200 acres. Least damage was in the Manitowish area, in Biron about 25 percent of the berries were knocked off the vines and in the Mather area from 30 to 90 percent. A high percentage of the berries remaining on the vines were scarred badly. There was little color on the berries and they are small due to the late season and cool weather. Frost damage to immature berries on two frosts the latter part of August probably took between 3 to 4 thousand barrels. Hail loss probably will run close to 10 thousand barrels, depending on what can be salvaged. Water supplies were improving the first part of September with southern marshes getting heavy showers.

#### Probably Short Of Estimate

Berry size continued to cause concern among growers relative to their estimates of crop. With the frost and hail damage sustained in late August and early September, coupled with small berry size, it is extremely doubtful if Wisconsin will reach the August estimate of 335,000 bbls. Berries are expected to color earlier than normal and to be of good keeping quality. Ample supplies are expected to be available the first week of October.

#### Black Light Traps

Fruitworm were working late in August, but damage appeared light. With the late season and cool weather there was some possibility worms would be harvested with the berries and taken into the warehouses. Weather conditions the first half of September would have considerable bearing on this possibility. The writer successfully trapped adult fruitworm millers and black headed fireworm millers with the new black light traps. Two different models were used and both worked equally well. Further study will be made to determine if there is some possible manner in which these machines can be used economically.

#### Picking September 22

Growers with adequate water supplies were planning to wait as long as possible before starting harvesting, in an effort to gain as much size and color as possible. Most marshes were expected to begin operations Sept. 22 and the balance Sept. 29. An excess of 90 percent of the crop is expected to be both mechanically

harvested and dried this year. Over half of the mechanical harvesting will be done with some type of boat arrangement.

Leo A. Sorensen

### *NCA Opens At \$16 Per Barrel*

Ocean Spray's opening price on fresh cranberries is \$4.00 a case (\$16.00 a barrel) for both the one-pound sellophane bags and the one-pound window boxes, it was announced Sept. 5 by Ambrose E. Stevens, general manager and executive vice-president of National Cranberry Association. All prices are f. o. b. shipping point in the producing area.

The total cranberry crop is expected to run close to the Departments of Agriculture's early estimate of 1,075,500 barrels, depending upon weather conditions the next two months, but due to heavy processed sales of Ocean Spray in the spring and summer, the supply of fruit will be about 10 percent less than last season.

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# Cranberries In North America

by

F. B. Chandler

Research Professor, Cranberry Station

East Wareham, Mass.

Most of the commercial cranberries of the world are grown in North America. There have been experimental plantings set in many countries in the northern hemisphere in the past, and recently there have been some sent to the southern hemisphere. England and Holland have plantings which may be considered larger than experimental. The cranberry of commerce, *Vaccinium macrocarpon* Ait., is native to North America and is found quite abundantly in Northeastern United States and Southeastern Canada. This has often been called the American cranberry. *Vaccinium Oxycoccus* L., the moss cranberry, is found in the same region as well as in Europe and parts of Asia, but the fruit of this plant is much smaller than that of the American cranberry.

## Start

The cultivation of cranberries started about 1820, a little earlier in Massachusetts than in New Jersey. The industry spread north to New Brunswick and Nova Scotia and west, reaching the Pacific Coast in the 1880's. During this period of development bogs were started in many states, some of which have little or no acreage now, such as Ohio, Iowa, Michigan, Minnesota, New Hampshire, and North Carolina. Maine has only a few acres currently but in the period from 1850 to 1900 many growers were interested in cranberries and many articles were written about the culture of cranberries in Annual Reports of the Commissioner of Agriculture. Some

of the reports listed the growers and the acreage. Connecticut, Rhode Island, and Long Island, N.Y., still have commercial acreages. Cranberry bogs in Canada have been developed much more slowly than bogs in the States and little or none of this acreage has been abandoned.

## Producing Areas

From the beginning of the cranberry industry up to 1900 the amount of acreage used to produce the crops is not known for all sections. As New Jersey led in the production up to 1875, it might be assumed that New Jersey had more acres. At the turn of the century Massachusetts had 11,300 acres, New Jersey 9,000, Wisconsin 1,200, and the industry was

so small in other sections that it is difficult or impossible to find the number of producing acres. The acreage increased to a maximum of 15,000 in Massachusetts in 1949. In New Jersey the maximum acreage of 11,200 was reached thirty years earlier. The acreage in all other sections has increased continually and the maximum apparently has not been reached.

## Recent Surveys

So much for the past. In 1956 and 1957 surveys were made in all of the cranberry areas, the last bulletin containing this data was published recently and the Canadian information will be published in a later issue of CRANBERRIES. The information from these surveys will be summarized in this and later issues of CRANBERRIES. Massachusetts, New Jersey, and Wisconsin have had surveys before so trends may be shown, but the 1956-57 surveys were the first in other sections.

The number of growers in Massachusetts has dropped from 2,148 in 1924 to 984 in 1956, while in New Jersey it has gone from 305 to 170. Similar information is not available from other sections but they probably have not shown as great a decline and some have shown an increase. The 1956, and 1957 surveys indicate that there were 1,686 cranberry growers in North America with bearing bogs which were distributed as follows: Massachusetts 984, Washington 237, Wisconsin 148, Oregon 142, New Jersey 129, Nova Scotia 29, and other Canadian Provinces 17.

When these surveys were made there were 22,651 acres in North America distributed as follows: Massachusetts 13,466, New Jersey 3,519, Wisconsin 3,900, Washington 960, Oregon 470, Nova Scotia 220, and other Canadian Provinces 116.

Five sections reported non-bearing acreage totalling 1148 acres. New Jersey reported the largest non-bearing acreage of 526 and Wisconsin had 400 acres. The West Coast, (Oregon, Washington and Lulu Island) reported 222 acres. Massachusetts and Nova Scotia did not report non-bearing acreage.

Cranberry Acreage at the Time of the Survey\*

Location	Bearing	Non-bearing	Intend to build
	Acres	Acres	Acres
Masachusetts	13,466		50
New Jersey	3,519**	526	
Wisconsin	3,900	400	200
Washington	960	87	315
Oregon	470	59	181
Nova Scotia	220		
Other Provinces	116	76	100
Total***	22,651	1,148	846

\*Apparently questions were not asked where data is missing. Massachusetts survey was the only one asking for the number of acres to be abandoned in the future. The report was 183 acres.

\*\*598 acres held late, these had no crop in 1955.

\*\*\*There are probably about 200 acres which were not included in these surveys, 120 acres in the remainder of New England and 80 acres in New York, Michigan, Minnesota, Iowa and North Carolina. There are probably 16 growers who are not included.

Intention to build 846 acres was reported from five sections; Washington 315 acres, Wisconsin 200 acres, Oregon 181. Lulu Island 100, Massachusetts 50. If these intentions are carried out, there will be over 25,000 bearing acres of cranberries in North America. Information on new acreage was not reported for New Jersey or the rest of Canada.

The size of the cranberry bog holding is very interesting and may be looked at in a number of ways. First, consider the change in Massachusetts since 1924. At that time there were 1,844 growers with less than ten acres, while in 1956 there were only 718. The change in numbers in the other groups was rather small. However, when these are converted to the percentage of growers in each size group, we find the less than ten-acre group in Massachusetts has dropped from 85.8% to 73%, while the percentage in all other size groups has increased and the greatest increase came in the two largest groups (25 to 50 acres and over 50 acres). The percentage of the number of holdings with ten acres or less in the recent surveys in other sections was New Jersey 56.6%, Wisconsin 33.8%, Nova Scotia 86.2%, other Canadian Provinces 88.2%, and it probably was over 90% for Washington, and Oregon. Massachusetts leads in the group of over 50 acres with 41 holdings, New Jersey is next with 18, and Wisconsin has 14.

When these are expressed on a percentage basis, New Jersey leads with 14 percent of its growers operating over 50 acres, Wisconsin next with 6.9%, and Massachusetts has 4.1 percent. When production is considered by size groups less than 10-acre holdings produced only 4.5 percent of the state crop in New Jersey, and in Wisconsin only 5.6 percent. In New Jersey 68 percent of the crop was produced on holdings of 100 acres or more, while this size holding in Wisconsin produced 21.5 percent of the state crop. The holding 25-50 acres in Wisconsin produced 37.1 percent of the crop in 1955 which was the largest producing group. Massachusetts production data was not tabulated by size of holding. The average holding per

grower was 6.5A in 1924, 10.4A in 1934, 12.3A in 1946, and 13.7A in 1956.

A better understanding of the cranberry acreage may come from a comparison with acreage of other crops. Surveys of the apple industry in Massachusetts showed that the number of growers dropped from 1576 to 371 during the period of 1940 to 1955. The orchard size during the same time increased from 605 to 929 trees. A comparison of the area of some other fruits harvested in the United States is published in Agricultural Statistics for 1950, the acreages are as follows: apples 833,000, oranges 566,000, grapefruit 176,000, strawberries 127,000, lemons 58,000, figs 33,000, cranberries 27,000, olives 26,000, tangerines 24,000, and limes 5,000. Agricultural Statistics lists, the United States acreage of only two fruits for 1955, cranberries 22,270 acres and strawberries 108,860 acres. Some crops with about the same acreage as cranberries are honeydew melons and spearmint, while hops is just a little larger, cauliflower has 28,900 acres and celery is 33,710 acres.

Summarizing the first installment of "Cranberries in North America," it appears that the number of growers and the acreage are decreasing on the Atlantic Coast, while in Wisconsin and the West Coast cranberry acreage is increasing.

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# Marcus M. Urann, President Of UCCCC Has Known Cranberries All His Life

**This Large Corporation Has Long Been Important  
In Massachusetts Industry—"Markie", Official  
of NCA, Is Also Active In Civic Affairs.**

by

Clarence J. Hall

"We must lower our costs of production and extend our sales."

That is as concisely as the problem facing Massachusetts especially, and other cranberry growers can be expressed. They are the words of Marcus M. Urann, 41, president of United Cape Cod Cranberry Company of Hanson.

UCCCC now operates approximately 800 acres, with an average production of 50-55 barrels per acre as compared to a 35 bbl. Massachusetts average. United, a few years ago owned about 1500 acres, but a program of contraction and concentration has brought holdings to the present figure. This lowered acreage is still probably second in size with the Makepeace interests being the largest.

"Markie" is the son of Mr. and Mrs. Carl B. Urann (the former now retired) and nephew of Marcus L. Urann. As such he has been familiar with cranberries all his life, and of cranberry problems in good times and not so good, as now. He knows the cultural, canning and marketing sides of the industry. Until more recently he has been most interested, or at least most active, in the growing end, rather than marketing.

However, he served as NCA director to his father during 1952, and has been a director in his own right since the retirement of Carl. He is a member of the 7-man executive committee. Now his position permits him a more active role in selling policies. He realizes the industry cannot be successful without a marketing program which gives the grower the returns he must have.

Marcus was born (in Braintree) while his parents were living in Wareham and it was from his father that he learned most about cranberries. Carl B. Urann was always known as one of the better growers; he was much interested in inventing and developing machinery to make various jobs of cranberry growing easier and economical. "My Dad is a fabulous man to work with in the growing end," Marcus says. Massachusetts growers who knew Carl when he was on the bogs will

agree that Marcus is not boasting unduly of his father's abilities. Marcus was graduated from Wareham schools and then went to Bates where he majored in geology and economics. He worked for United before and while going to college, and in 1939 for National. He was sent out to Chicago in 1940, where he took a part in building the North Chicago factory of NCA. He had intended to stay there only a short time,

but remained to operate the second shift.

He entered the Army in 1941 and was one of the first to reach Europe. He had expected to be placed in combat engineering, believing his training best suited him for that. Instead he was assigned as a weather man in the Air Force and was sent to Biloxi, Mississippi. He was stationed at Headquarters, 2nd Air Division, 8th Air Force. His unit consisted of 14 officers and 17 enlisted men. He had learned something about weather in his studies in geology. Included in his duties were studies of the upper air masses, and this weather training in the army has since proved of much value to him in cranberry growing.

One of these advantages is the recognition of various clouds and their movements, as indicative of weather to come. He also is able to check with military and civil airports, through his basic knowledge of weather, concerning local winds that cannot early be forecast. These would be such as that at Logan Airport, East Boston or the airport at New Bedford. This double check may often save

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a flow, which is of much importance with such large acreage to protect.

He was sent overseas in 1941 and assigned to bases in East Anglica, east coast of England, as observer in the U. S. Air Force. He was station chief, headquarters 2nd Bombardment Division. Until American air forces were brought over, he served with the RAF, and was on sea expeditions as an observer on British torpedo boats.

With a touch of embarrassment he relates how at times, wearing one of the first "Eisenhower jackets," he was mistaken for the general. A glance at his photograph (cover) will show he has the same facial structure and other characteristics.

He remained in the army until 1945 when he was discharged with the rating of staff sergeant. He returned to cranberry work, and

as his father's health began to decline he became assistant manager of United, assistant treasurer and in 1948 vice president. Marcus L. Urann is treasurer and has been for many years.

United Cape Cod Cranberry Company, Inc. is a sizeable outfit to head. There are 70 full-time employees, including several foremen, harvest crew in the fall runs between 300-400. There are some 15 major buildings, including screenhouses, although all screening at the moment is done at NCA plants. Total property consists of 12-15,000 acres of land.

United, organized by Marcus L. Urann in 1907 has a charter sufficiently broad to take in a number of enterprises. The corporation owns and operates the cannery at Yarrow, British Columbia, property formerly owned by National. This plant both freezes and cans. This past season it froze 1,309,000 pounds of peas, 400

tons of strawberries and about 600 tons of raspberries. Most of farming residents of Frazer Valley, where the plant is located work at times for United, by an agreement whereby the produce of the farmers is bought by United and they have a bonus in the operation. There is a full-time, manager, but Marcus has made several trips there. Packing is under the Canada Food, Ltd. trade brand. Cranberries are processed for the account of National. Another product is "Hi-C," an orange drink sold extensively in Western Canada.

Marcus is one of those who are enthusiastic about the climate and beauty of the Pacific Northwest. "I think that's the best part of the world to live in—next, of course, to my own Southeastern Massachusetts." This is where "Fritz Shaw," James Thomas and Norman Holmes, three Carver men are settled and operating bog.

# SAMSON

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Cape Growers' Meeting

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United operates two fish freezers, at Sandwich and at Barnstable on the Cape, where cranberries have been frozen and stored, and can be, if again necessary. These bases are about 24 hours closer to the fishing grounds, Grand and Georges, for the radio-telephone equipped fishing fleet than other ports.

Marcus built and owns one of these, a 25-footer, which he has named "Scram," which is approximately his name spelled backward. Fish handled at the freezers are not "trash" fish, so-called, although a major part of the frozen fish eventually goes to animal consumption.

At present 18 units of bog are operated by United, two of the largest being Manomet, 135 acres and Burrage, 109. Bogs are all in the towns of Halifax, Hanson, Pembroke and Plymouth, all Plymouth County. Properties formerly extended into Barnstable County.

It is scarcely necessary to say that United is about as fully mechanized as it is possible to be. Depreciated equipment valuation is approximately \$70,000. There are picking machines, both Western and Darlington.

"Our salvation (the industry) is in mechanization," Markie says. "That is one way in which our production costs may be cut. We have about 30 jalopies for sanding and that seems to be the most economical way to sand, so far developed. But, there can probably be still better methods and devices for this costly, necessary practice. We like to sand on ice when possible. We haven't used a wheelbarrow on planks for years."

Better and cheaper ditching methods are another major need of Massachusetts growers. Marcus is now experimenting with a new ditching device, which is rather in the nature of a mud sucker, or hydraulic sand pump. "Our bogs need better drainage; improved drainage means better crops, less weed costs."

United, or more specifically Marcus and Superintendent Eddie Heleen have been working for 10

years on a new type of harvesting machine. He is careful to give full credit to Heleen for the mechanical aspects of this project. Picking machines have cut the cost of harvest, but it is no secret that there is room for improvement and refinement, in this now necessary piece of equipment.

United has always been interested in developing labor-saving devices of one kind and another, and, as Markie declares, these have not been patented, but once an improvement has been achieved any grower may take advantage of it. In the matter of the picker an exception has been made and this is already patented.

"The ditch cleaner that we now use is a drag line type; a pipe 16" in diameter is drawn through the ditch, jaws open in front like the jaws of a fish. On the return the jaws shut and hold the mud until released on the shore or into a truck.

"We have a venturi principle float-gathering rig that works off our Chrysler irrigation pump. This machine will deliver one box of clean berries per minute, but we have to work to keep loose vines away from suction.

"Sand screens have been designed in our shops for the sand loading machines and also a bin with shaker screen to load either jalopies, railroad, or trucks."

With Wisconsin having a state average of 70 barrels and better, and many individual marshes much higher, increased barralage per acre for Massachusetts has become a must, Marcus realizes among many others. He believes this increased production can be obtained.

As an experienced grower he suggested the following definite steps:

1) Better drainage, including removal of frost water quickly.

2) Nutrition of plants in an orderly system.

3) Proper timing of sprays and dust, including checking of results.

4) Keeping up bog as much as possible.

5) Developing berry dryers to use all the berries produced.

6) Experimenting with other methods of harvesting, i. e., water.

7) Research on chemical make-up of plants with spectographic slides.

"Our record production was at the rate of over 400 barrels to the acre, here at United," he says. "It is a fact verified by Dr. Bergman. 'Run-of-mill', bog or state average must be upped in Massachusetts. We know it can be done by our own experience. We must produce at least 60 barrels to the acre in the next five years if we are to be in a competitive position with Wisconsin. Some bogs will

## Cape Cod Cranberry Co-operative, Inc.

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be well above that, but I am convinced we must grow cranberries at at least that rate."

Turning from the cultural aspects of Massachusetts, Markie has some thoughts on the economic side. He is one of those fully aware that Massachusetts must do something to improve its position with other areas. All thinking growers agree on that.

"The industry is not successful without a marketing promotion to give the grower the fair returns he needs. I feel the future of the industry lies mainly in the juice, frozen cranberries and our growth and orderly growth in canning sauce at a price reasonable to the consumer."

He is deeply concerned with Massachusetts cranberry bog taxation as compared to other growing regions. He fears it will be difficult for Massachusetts to stay in inter-area competition unless growers receive relief in the line of taxation. He asks, "What other business is taxed on its real estate 10 percent of the total income—tax \$1.00 per barrel vs. \$10.00 price per barrel?"

As a director for the Hanson district, he has appeared as a witness for growers of his district at the Appellate tax court.

Complicating this tax situation in the northern portion of Plymouth County, or the Hanson area, is that many who have lived in Boston are now moving in constantly increasing number to this commuting area. Halifax, with its many bogs, for instance, is only 25 miles over good highways, constantly being improved. It is now possible to "get into Town," in less time from some of these rural sections than from nearer regions. There is a considerable amount of commuter buildings in Pembroke.

This trend could influence tax rates of cranberry growers who own property along and near main highways. Markie has a particular interest in this problem of taxation. He is active as Halifax representative to a recently-formed Southeastern Massachusetts Industrial Development Organization,

which as its name implies, is seeking new industry for the cranberry portion of the state.

Concerning the marketing situation, Marcus says, "I feel strongly that no distributor of cranberries is any asset to the industry, who does not try to help the whole industry by trying to increase the consumption of berries by advertising promotion and industry cooperation. No man can lift himself at the expense of others."

He, like many others does not like the idea in theory of seeking any government assistance in cranberry marketing.

"If we can't get together by ourselves, then it looks as if we must be made to. We can't get along with 'splinter' parties constantly torpedoing each other. I don't see why we can't act like men when it comes to selling our crop and not like a bunch of boys. We should be able to act constructively along logical lines and within federal regulations. Nobody would expect a grower of any commodity to continue year after year to sell his fresh berries at a loss. Why should they not be fairly priced and that price upheld?"

He also definitely believes in the need of a Cranberry Institute and that it should be a strong, well-functioning organization to which all growers belong.

He makes one suggestion, a relatively simple one—the Institute should keep every distributor informed daily during the marketing season of the conditions and sales (including price) of the various distributing cities. "We know from experience that often one market is flooded at a given time while another, maybe only a short distance away, has no cranberries. This glut in some markets while others are starving raises havoc with prices." He sees no reason why it would cost too much or inconvenience too much, if each distributor at the end of a business day wired the Institute how many cars he had shipped to each market and at what price. This accurate summary could be wired to each distributor, so that

the following morning he could look at a map and have a complete picture at a glance. Each agent then would be better enabled to judge where to make his own shipments that day.

"We would all know what the other fellow is doing, and if a dealer or distributor didn't send in his report, we could guess pretty well why. The Institute would be a real clearing house. We would have stronger markets." This is in line with the "posting" argument in favor of a marketing order.

Besides heading up United at the end of its first half century, Markie is a grower in his own right.

He owns a personal bog of 12 acres, operating as the Robbins Pond Produce Company of East Bridgewater. He really is keen on the actual growing of cranberries and this is his individual outlet. At the time he was learning the business with his father, and while he was going to college, he worked two summers at the Massachusetts Cranberry Experiment Station, East Wareham. He learned much of cranberry growing then under Dr. H. J. Franklin and with Dr. C. E. Cross, Dr. H. F. Bergman, "Joe" Kelley and Dr. Sawyer.

He has high hopes of the hybrid program as producing better and more fruit, another factor in cost cutting. United Cape Cod is participating in this program and has a quarter acre set aside for testing the new varieties. This is newly-built bog on best bottom, not a run-out piece.

He is also an active partner in "Three M" cranberry bogs. This is a property of 26 acres in East Middleboro. He and his two sisters, Mina and Maxine (now Mrs. Karl Manner of Caracas, Venezuela, and Mrs. John Baldry of St. Leonard's-on-the-Sea, England), respectively, make up the "Three M", with his mother included.

Interests of Marcus are, activity in a number of civic and other organizations. He is treasurer of Boy Scout Troop 39 of Halifax;

leader of the Explorer Scouts, Halifax. Past president of Halifax Kiwanis. Member of the Halifax school survey and building committee. He is chairman of Halifax Republican Town Committee, director of Tax Payers' Association, Div. Fleet captain Coast Guard Auxiliary, and Halifax American Legion.

He is a director of Ocean Spray, Ltd., of Canada and director of Cascades Foods, Ltd. He is a member of Cape Cod Cranberry Growers' Association and of South Shore Cranberry Club, and has served on various cranberry committees.

He is married to the former Nadine Jason of Wareham and the couple have two sons, Marcus Morton Urann, III and David Winslow Urann.

When Markie finds time he likes to go fishing boating. Since this article was written, he has moved to Duxbury.

## Crop Prospects

September U. S. D. A. crop estimate, released the 10th, was unchanged from the August preliminary. Total remains at 1,076,500 barrels, divided as follows: Massachusetts 570,000; New Jersey 88,000; Wisconsin 335,000; Washington 49,500; Oregon 34,000.

A release of September 9th, quotes Vernon Goldsworthy, of Eagle River, Wisconsin, second vice president of Cranberry Institute as estimating the Wisconsin crop as short by about 35,000 barrels of estimate.

"Dry weather and a shortage of water are taking a toll," he stated "and there was considerable damage from hail in some areas last spring."

Orrin G. Colley, president of the Institute in the same release, expects the New Jersey crop to fall short of estimate, but that Massachusetts is expected to fulfill its estimate and that Washington and Oregon crops look favorable,

## Wisconsin Meet

More than 150 cranberry growers and guests attended the 72nd summer meeting of the Wisconsin State Growers' Association

held at the Cutler Cranberry Co., Shennington. Half of the group partook of a fine luncheon prepared by the women of the Danish-American Lutheran Church of

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**NIAGARA**<sup>®</sup> instant starch • **ARGO**<sup>®</sup> corn and gloss starches

**KASCO**<sup>®</sup> dog food

Shennington. From 10 a.m. to noon, growers witnessed various demonstrations of cranberry equipment put on by the local host grower and various exhibitors. The regular meeting opened at 1:30 p.m. and was devoted mainly to technical reports by University of Wisconsin researchers and weathermen. An introduction of guests preceded the opening of the speakers' program.

President Marvin Hewitt welcomed the group and expressed thanks to the Guy Potter family for the fine meeting place. He also expressed thanks to the various exhibitors. As this was the start of Labor Day weekend he was extremely appreciative of the turnout of growers and of the speakers appearing on the pro-

gram. Introducing guest speaker, Dean Froker, Hewitt emphasized here was the man responsible for the research help the growers were receiving from the University.

#### Dean R. K. Folker

Dean R. K. Folker extended greetings from the College of Agriculture and the University of Wisconsin. He stated the agricultural school was very much interested in Wisconsin cranberry culture and pointed out that agricultural extension work was started in cranberries in 1903 in Wisconsin. In reviewing the first report made by the extension service in 1905, he remarked how general it was in nature, compared to the specialized reports and fields now carried on by depart-

ment personnel.

He reported of the formation of the cranberry experimental area in Cranmoor under a 15 year agreement with the Growers' Association back in 1905 and told of the fine relationship under that agreement. He cited numerous cultural problems in cranberry growing during that period, pointing out that they were basically the same today. He enumerated the men and departments from the college working on cranberry problems and remarked of the fine relationship they were enjoying working with the growers. He stated that although Wisconsin production had increased materially since the end of the war, it was not altogether a result of re-

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A crew of six girls will harvest with a Western Picker the 50-acre bogs, in Middleboro, and Plymouth, Mass. of Harrison Goddard. Women have operated mechanical harvesters in previous years in limited numbers, but this is probably the largest all-woman crew assembled. Goddard has had two women operators the past two years. Group is shown at Cranberry Experiment Station, East Wareham August 27 attending the cranberry picking machine school under

direction of county agents. Louis Sherman, Plymouth, left, was the instructor and the girls from left to right are Barbara Davis, Bula Presnahan, Jean Richards, Barbara Richmond, Edith Cazafoli and Maggi Goddard. Mr. Goddard is at the rear. Some growers say women are more "conscientious" pickers than men, disliking to see the waste of berries left on the bog.

(CRANBERRIES Photo)



## THE BATTLE IS ON

PICKING is in full swing. Despite frosts, rainy spells, labor shortages the berries will be gotten off the vines and into the warehouses.

The problem of the industry, or more specifically that of the distributors is to get them marketed at a price with a fair measure of profit to the grower. Handling about 75 percent of the crop this is mainly the job of National Cranberry Association. Other co-ops and independents, too, must do their full share in attempting to maintain an orderly market.

Following the annual meeting of stockholders of NCA we believe there is a feeling of optimism in the industry. Many commented favorably on the hard-hitting promotion plans of the new director of advertising and public relations, H. Drew Flegal. There is newspaper and magazine and radio promotion, but the heavy artillery, as Mr. Flegal said, "lines up on television."

The 60 and 20 second "spots" with the catchy jingles and the apparent common sense of the sales messages conveyed could, and we hope, do, a great deal to stimulate, and quicken sales. Consumer research has revealed that cranberries combine well with meat favorites, pot roast, pork roast, ham, chops, meat loaf (and cold cuts, as growers enjoying the buffet lunch at the meeting found out.) The popular notion of cranberries with turkey and chicken is now well established, but will continue to be pressed. The new slogan of cranberries the "Natural Mate for Every Meat," broadens the base tremendously. Also cranberry cocktail, fortified with vitamin C, as a breakfast juice, if it clicks, against the toughest kind of competition, could dispose of a small mountain of cranberries.

Behind these plans is the thought of building up cranberry sales the year around, not just for certain holidays.

We hope there will be adequate promotion and real sales effort on the part of all distributors in the fresh fruit market. Our eggs are not all in the processed fruit basket yet, by any means. It will be many a year before they are, and probably never entirely.

And, we must all of us realize fully,

Editor and Publisher.  
CLARENCE J. HALL.

EDITH S. HALL—Associate Editor  
Wareham, Massachusetts

## CORRESPONDENTS—ADVISORS

### Wisconsin

LEO A. SORENSON  
Cranberry Consultant  
Wisconsin Rapids  
Wisconsin

### Washington—Oregon

CHARLES C. DOUGHTY  
Cranberry Specialist  
Long Beach, Wash.

### Massachusetts

DR. CHESTER E. CROSS  
Director Mass. Cranberry Experiment Station  
East Wareham, Mass.

BERTRAM TOMLINSON  
Barnstable County Agricultural Agent  
Barnstable, Mass.

### New Jersey

CHARLES A. DOEHLERT  
P. E. MARUCCI  
New Jersey Cranberry and Blueberry Station  
Pemberton, New Jersey

that we have the prospect of our second largest crop, and not to "look for miracles," as General Manager Stevens of NCA has pointed at various times.

WE CALL special attention to the series "Cranberries In North America" by Dr. F. B. Chandler beginning this month. We do not think there has been before such a wide-ranging compilation of information and statistics brought up to date by the recent area surveys.

## WISCONSIN MEET

(Continued From Page 14)

search work, but that the growers themselves have been responsible for much of the increased yields along with their fieldmen. He commended the growers for their great strides in mechanization. With production up and competition great, he urged the growers to give careful and serious study to their marketing problems.

Stating marketing was his field, he urged co-operation among all producing areas in the field of marketing. Only on an industry basis, whereby various segments of the industry work together can marketing problems be solved and handled satisfactorily for grower profit, he said. In conclusion, he stated he was very happy to be present and pledged continued support from the university, not only in growing but also in marketing research, which he considers the number one problem for the grower today.

Dr. R. H. Roberts of the University of Horticultural Dept. was next on the program. He mentioned he had not been out on the marshes too much the past year as he had been busy working with plant substances, which inhibit tumor growths on animals. He remarked that for 17 years he had been working on cranberry weeds, with both selective and contact type weed killers. During this time he stated that selectives were not too promising and of the contact types, solvent gave the best general control. He recommended low pressure in applying solvent. He feels weeds do most damage to cranberry production by interfering with wind pollination of the blossoms. He felt that only 10 percent of the state marshes need nitrogen applications, otherwise too much vine growth and weed growth result, cutting production. He said everyone agreed that the cleaner and shorter the vine growth, the better the set and crop.

He stated that the best method of solvent control was with the under vine boom when the weeds to be controlled were up to the tips

of the vines. He mentioned that weeds kill easier at this stage by getting at the crowns. As seasons vary, he suggested growers not go by the calendar in applying solvent. He concluded stating that he doubted if it were practical to clean out all weeds and felt that any weed killer that would give weed control for three years without hurting the crop was cheap. He suggested spraying wideleaf and bunchgrass with solvent after harvest as long as the plants stay green.

### Dr. M. N. Dana

Dr. M. N. Dana of the Horticultural Dept. discussed his experimental work with selective herbicides. He stated this was his 4th year of experimental work and growers were shown some of his test plots on the weed tour Aug. 8th. He remarked that he had tried numerous herbicides and that this type of work takes time. He mentioned that all three systemic herbicides he was recommending for trial work had not been cleared for pre-harvest use. As for post-harvest applications, he doubted if this would be of much benefit to Wisconsin, especially on broad leaf weeds, due to the early hard frosts and plant maturity in September. He mentioned possible work could be done on anything that appeared green after harvest.

He passed out a summary sheet on suggested experimental uses for systemic herbicides he had worked with, pointing out that use should be governed to label restrictions. He stated that legal clearance for amino triazole was still up in the air for pre-harvest use, but reported American Cyanamid was submitting additional samples of AT to the Food and Drug Administration for analysis. He again was hoping for clearance for pre-harvest use of AT in 1959. He also stated that Dow Chemical was submitting dalapon residue samples in an effort to get clearance for the use of dalapon in swabbing and post-harvest use.

He continued, reporting malic hydrazide samples were sent in, but more samples were requested. He

mentioned New Jersey was interested in obtaining clearance for MH to use as a vine growing inhibitor. He outlined the work he had done on perennial smartweed and sensitive fern using MH. Discussing Simizian, he felt any possibility of getting clearance on this material was at least two years away. He concluded stating he had some good results using 2 pounds per acre for pre-emergence annual weed control.

James Georg, meteorologist in charge of the cranberry frost warning service, discussed the basic principles of the sling psychrometer and net radiometer in cranberry weather forecasting. He opened his talk stating the sling psychrometer was used for measuring the dew point and had been used for many years in weather forecasting. He explained the working principles, costs and time to take readings. He felt every grower could beneficially use one of these psychrometers, especially in conjunction with the net radiometer. Georg explained the net radiometer was invented by University of Wisconsin meteorologists to measure radiation. While radiometers are not new, this type was exceptional in that it is cheap, accurate, easy to obtain and easy to use.

He outlined the experience he had with this machine in Florida and on Wisconsin marshes. He has developed a formula and data curves in adapting the readings to individual locations. Last year one machine was in use in Cranmoor and this year three machines were out in Wood County marshes. He felt the data obtained this year would be most beneficial and felt other growers could start using these instruments next year. Cost of the machine and blower is about \$50 in kit form. He continued saying that within a short period an individual grower using these two instruments would be able to do an exceptional job in forecasting his own minimum temperatures. He concluded saying Wisconsin was in for a cool, wet September and hoped the growers

harvested good crops and would receive adequate returns.

Leo A. Sorensen, secretary, gave a report of the association's activities for the year to date. He suggested the members give consideration to setting definite dates for the two annual meetings at the January meeting. He reported on the attempt to receive clearance on the use of AT and of the appearance made at Madison relative to legislation changes in Wisconsin water laws. He said a continued watch would be kept on any further hearings or legislation. He reported an estimated 250,000 people visited the Agricultural Building, which housed the association's cranberry booth at the State Fair, August 16 - 24 and of the thousands of recipe folders distributed. He stated work was just about completed on the new colored cranberry film being made by the University of Wisconsin extension service and prints would be available early this fall for distribution.

Work was also progressing on the cranberry directory in cooperation with the State Dept. of Agriculture and a combined directory with other state associations was now planned to be printed by the first of the year.

He gave a review of the growing season and felt that the preliminary estimate of 335,000 bbls. was too high due to the late season and small berry size, plus the losses to hail and frost.

The meeting was adjourned at 4 p. m.

L. A. Sorensen

## **Stanley Benson To Ocean Spray Fresh Fruit**

Stanley D. Benson of Lakeville, Massachusetts, with 17 years' experience in the cranberry industry, has been added to Ocean Spray's fresh cranberry division, according to an announcement by Larry E. Proesch, director of marketing.

After 10 years with New England Cranberry Sales Company in merchandising, promotion and



grower relations, Mr. Benson transferred to Eatmor sales in 1950.

He began his work with Ocean Spray September 1 and will work from National Cranberry Association's headquarters in Hanson, Massachusetts, as assistant to Gilbert Beaton.

Moderator of the town of Lakeville, Mr. Benson is active in the community, serving as an incorporator of St. Luke's Hospital, incorporator of the Middleboro Savings Bank, director of Y.M.C.A. and clerk of the Central Congregational Church in Middleboro.

His duties at Ocean Spray will include sales and traffic, fresh fruit.

## **LATE MASSACHUSETTS**

### **Harvesting Begun**

Harvesting generally began September 10 - 12. Berries in most instances were reported as being of good size, good quality, but much fruit of light color, even on thin vines. Lack of sunshine may be the cause of this. More than 2,000 acres were given fun-

gicide treatments to improve the quality and this is felt to have definitely been a help.

### **Early September Dry**

September up to the 15th had been dry, total rainfall to that date being .69 inches. This included .45 inches which fell in a freakish storm on the 8th. The storm brought a waterspout, or twister across a portion of Buzzards Bay. Little or no damage was caused. Such a thing as a waterspout in waters of the South-eastern Massachusetts cranberry area, seems not to have been recalled before, at least not in many years. What with hurricanes, excessive rains, droughts, frosts, etc. it gave present-day growers the opportunity to say "We've seen about every sort of weather now."

### **Temperature**

Temperature to the 15th was a minus 8 or practically normal, as weather is almost never absolutely "normal".

### **Shipments**

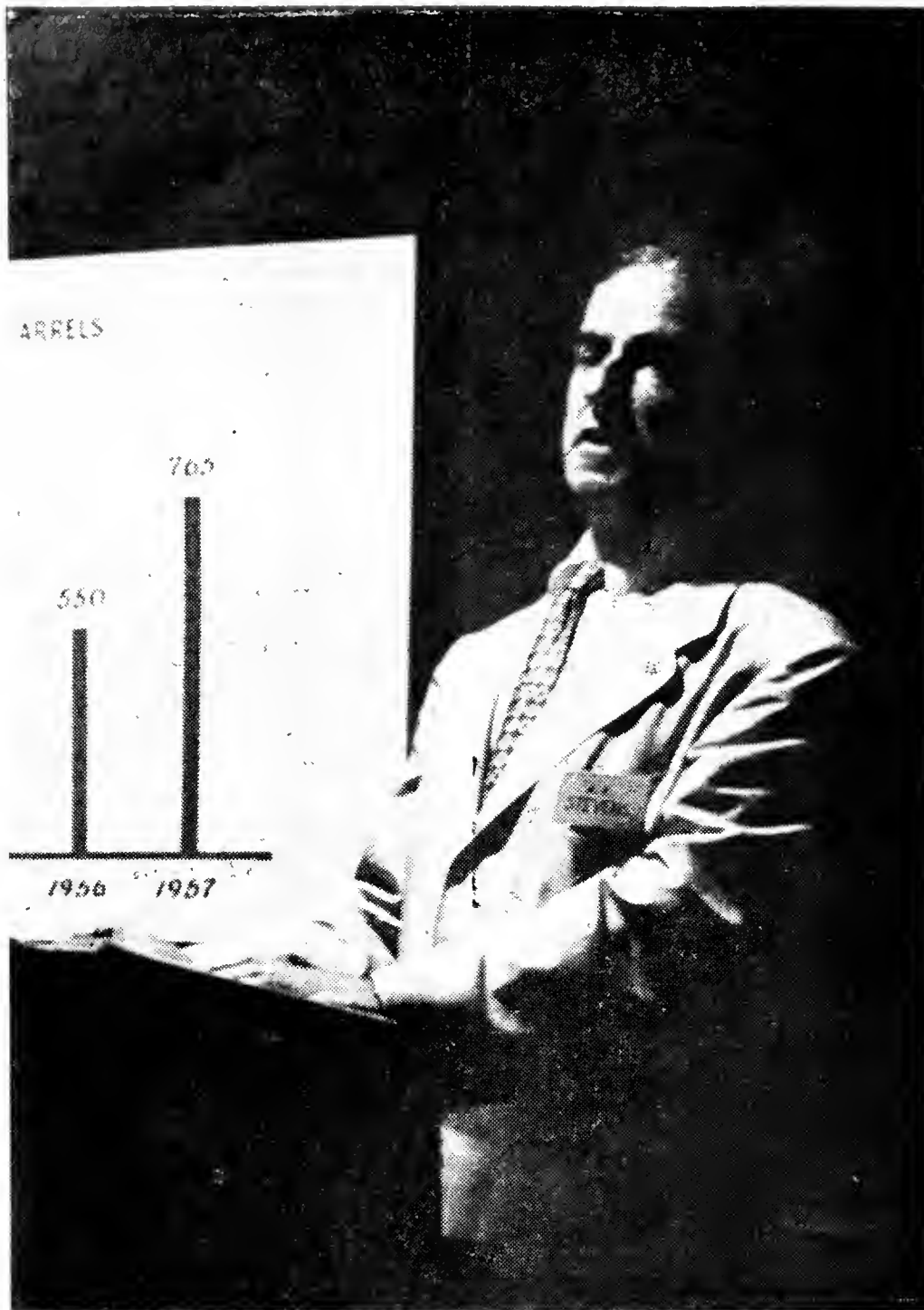
Up to the 15th probably not more than ten cars had been shipped from Massachusetts. But shipments were speeding up. Top prices for "earliest first round" of shipments were reported as being \$4.25 to \$4.50 in Boston with \$5.50, \$5.75 in Chicago for a choice, well-colored lot.

### **More Rain**

Harvesting had proceeded on a heavy scale for about four days when a northeast rain storm hit on the 17th which was causing at least a four day loss of picking as this issue went to press. The rain, mostly heavy, was adding to the size of berries and giving needed coloring. Color should improve rapidly from that point on.

The storm gave growers an opportunity to make any repairs necessary to picking machines or do other indoor work, but with the month so far advanced they were anxious to get on with harvesting.

Up to the 19th there had been no frost losses and there was certainly an amplitude of water for whatever frosts might lie ahead.



Ambrose E. Stevens, general manager and vice-president of NCA is shown in this unusual photograph as he delivered his report at the annual meeting at Hanson, last month.

## Cooling Fruit In Storage

(Editor's Note:—In view of experiments to keep cranberries fresh longer, the following may be of interest.)

Storage operators who handle apples and pears like to "room cool" their fruit. When this method is properly used, they can keep the fruit at a uniform temperature with a minimum of handling and expense.

Fruit that is "room cooled" is received, cooled, and stored all in one room. In this way, some of the problems of precooling are

eliminated and there is only one handling and stacking operation.

But simple as this sounds, "room cooling" can be complicated business. Many factors influence the effectiveness of cooling. It's often difficult to maintain uniform temperature throughout storage, and different handling procedures produce different results.

AMS handling and facilities experts have been studying the various factors that determine successful cooling of apples and pears. As a yardstick, they have developed what they call "half-cooling time". This is the time it takes to reduce the temperature of a stored apple or pear halfway

between its initial temperature and the storage air temperature.

Researchers determined half-cooling times for the more common containers and stacking arrangements. They were: 6 to 10 hours for unpacked pears in cannerly lugs in individual rows and 8.6 to 18.4 hours on pallets; 6.9 to 14 hours for unpacked apples in apple boxes in individual rows and 15.4 to 23.4 hours on pallets; 23 to 36 hours for packed pears in wooden boxes in individual rows; and 27 to 50 hours for packed apples in wooden boxes in individual rows and 45 to 66 hours on pallets.

The refrigeration capacity must be adequate to keep the storage room at the lowest temperature that can be used safely during cooling. If this capacity is provided, the three most important factors that influence cooling time are the method of packing, the dimensions of the packages, and the manner of stacking.

Unpacked fruit cools more rapidly than packed fruit because the air can flow more easily through the boxes.

The distance from the center of the pile of containers, to the surface where the heat is removed is also important. Packages with three or four surfaces exposed to the air have a definite advantage over those with only one or two exposed surfaces. This can be seen in the differences in cooling fruit in pallet stacks and in individual rows.

Increased air velocity also has some effect in reducing cooling time, but as exposure becomes less, so does the effectiveness of air velocity.

An ideal storage room should hold all fruit in the room at the same temperature. Although this is not possible, it is practical to say that the average difference between the warmest and coolest fruit should not exceed 2° F.

Improperly adjusted air distribution systems are a major cause of nonuniform temperatures. Heat transmission into packages in contact with outside walls or ground floors, and variations due



to poor operation of temperature control systems also produce non-uniform fruit temperature.

Air should flow parallel to the stacks to produce the most uniform fruit temperatures.

## Emile C. St. Jacques



Emile C. St. Jacques, 66, owner of the Hayden Separator Company, and long active in the cranberry industry, died suddenly at his home at 124 High St., Wareham, Mass., at 2 a.m. Monday, Aug. 25. For some time Mr. St. Jacques had been suffering from a heart condition and had been only semi-active in his business.

In 1927 he bought the Hayden Separator Company of South Carver and transferred the office and plant to Main St. in Wareham. The business was recently moved to West Wareham. His son, Robert H. St. Jacques, has been associated with him in the business for some time. Mr. St. Jacques pioneered in cranberry dusters, and the firm was the manufacturer and distributor of the Darlington picker. It supplies many items of specialized equipment to cranberry growers, not only in Massachusetts, but in other cranberry areas.

For a while, Mr. St. Jacques operated a bog at Crooked River, Great Neck, Wareham.

Mr. St. Jacques was born in Marlboro, Mass., the son of Dr. and Mrs. Robert St. Jacques. He attended public schools in Whitinsville and was graduated from Worcester Polytechnic Institute with a civil engineering degree in 1915.

Following his education, he engaged in construction work, and

served as an appraiser for the American Appraisal Company.

He was married to Marie R. Messier of Pawtucket, R. I., on Sept. 20, 1921.

Mr. St. Jacques was a past president of the Southeastern Cranberry Club meeting at Rochester, a member of Cape Cod Cranberry Grower's Association, and had served on the board of directors. He was a past president of the former Wareham Rotary Club. For about three years he was the ERA administrator in Wareham. He had also served as Wareham town auditor. He had been a member of the Plymouth County Agricultural Council.

Surviving besides his widow and son, are two grandchildren, Roberta and Elizabeth, and two sisters, Mrs. Blanche Mayday and Mrs. Aline Cotnoir of Leicester, Mass.

High Mass of Requiem was held August 27 morning at 9 a.m. at St. Patrick's Church, Wareham, where he was a communicant. Interment was at St. Patrick's cemetery, Wareham.

## Cranberries In Wisconsin

There is some variation from year to year in the harvesting period for cranberries. For the state as a whole the normal harvest season begins about September 17 and is completed by about October 13.

In 1956, the average date harvesting began was September 21 and the date of completion averaged October 11. Harvesting methods have undergone considerable change during the past decade. In the 1949 survey, 95 percent of the growers representing 96 percent of the average employed the flooding and raking method in harvesting their berries. Mechanical pickers at that time were still in the experimental stage.

In the 1952-53 survey 25 percent of the acreage was mechanically harvested. In the years immediately following, the mechanical pickers were improved and used more extensively in the harvesting of the fruit.

In harvesting the 1956 crop, growers reported that 66.5 percent of the production was mechanically harvested and about 62 percent was mechanically dried. All

but about 2 percent of the bearing acreage was harvested on the flood in 1956, according to the survey.

Pollination is one of the important factors in producing cranberries. In addition to the natural pollinating media, honey bees play an important role. In the 1952-53 survey, an average of one colony of bees was owned or rented by growers for each 4.6 acres of bearing marsh. About 48 percent of the colonies were owned by producers with 52 percent being rented.

The 1957 survey indicated that the use of honey bees is not declining. An average of one colony for each 2.8 bearing acres was reported for the 1956 crop.

About 30 percent of the colonies were owned by the growers reporting and 70 percent were rented.

## Simazin Tests In Washington

Ralph E. Tidrick, County Extension Agent for Pacific County, Washington writing in his bulletin to growers, "The Cranberry Vine", tells of the experiments of Charles E. Doughty, Superintendent of the Long Beach Experiment Station with Simazin for weed control on young bogs. He writes the tests were at 24 and 16 pounds of 50% wettable Simazin per acre applied as a ground spray on young vines. Doughty's report was that weed control was excellent on the plots receiving 8 and 16 lbs. of the 50% material. The control on the four pound plots was fair. The two pound rate did not appear adequate. Doughty has suggested eight pounds of the material per acre is probably the more economical. This year the applications were applied April 30. He adds, perhaps another year under different weather conditions the results might not be the same.

Trials were put on established vines also but with disappointing results. Doughty listed several reasons why this may have been so. They are: (1) this material must reach the ground in order to be effective and the material may have been held up by dense vines;

# SERVING THE WISCONSIN GROWERS

(2) the material kills only germinating weeds and it may be that earlier treatments would have produced better results. Doughty has indicated he plans to do additional work next season.

## Fertilization In Massachusetts

(From "The Cranberry Industry in Massachusetts," Bul. No. 157)

Data on the usage of fertilizers were obtained for 1,158 bogs having a total of 12,149.6 acres. The conclusions as to fertilizer practices of cranberry growers, therefore, as based on records secured by enumerators covering 90 percent of Massachusetts cranberry acreage. Reports relating to 426 bogs and involving 2,622 acres of cranberries show no fertilizer used, while 732 reports involving 9,527.6 acres reported the use of 906.3 tons of fertilizer. Fertilizer was added to 7,776 acres, which is 78 percent more than in the previous survey. Reported acreage includes the entire acreage in bogs to which fertilizer was applied on a spot basis. In 1955, 906 tons of fertilizer was reported used, a 24 percent increase over the 1946 report.

On the basis of reports secured, the survey indicates that 70.6 percent of the cranberry acreage was fertilized in 1955. In Barnstable nearly 61.4 percent of the cranberry acreage was fertilized while in Plymouth County the percentage was 76.0. On the basis of the number of bogs reporting, 45.8 percent of the bogs in Barnstable County show fertilizer used; 65.5 percent in Plymouth County, and 58.5 percent for the state.

The 5-10-5, 7-7-7 and 8-16-16 grades were applied to nearly the same number of acres. Each of these fertilizers was used on four times the acreage of the next most-used grade. Of a total tonnage of 906 tons used, 236 tons were 5-10-5. Eighty-six percent of the tonnage, was complete mix-

ture, 7% was nitrogen alone and 7% carried no nitrogen.

Try to remember that it is just as easy to form good habits that will help you, as bad habits that hinder.

If all the useless words spoken were placed end to end, they would reach some man trying his best to concentrate.

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IN  
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PROPERTIES

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**Vernon Goldsworthy**

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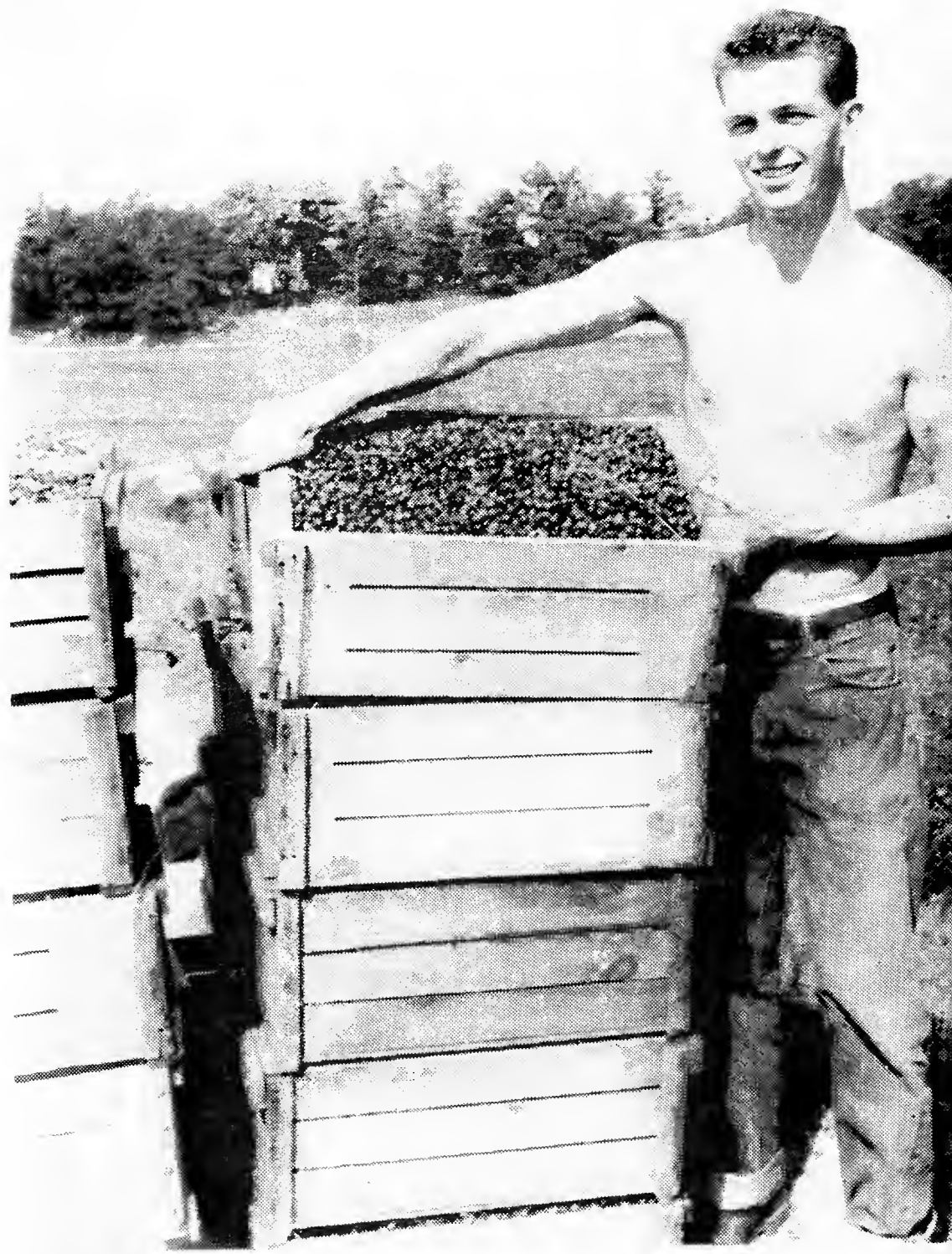
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# DIRECTORY FOR CRANBERRY GROWERS

## VARIETIES

(From the "Cranberry Industry in Massachusetts", bulletin No. 57).

The acreage of Early Blacks has continually increased, while all other varieties have been decreasing. Production in 1955 consisted of 64 percent Early Blacks, 32 percent Howes, and 4 percent other varieties.

Through the U. S. Department of Agriculture new varieties of cranberries have been developed and some produce higher yields of better quality fruit than Early Blacks or Howes. All of the selections may be observed at the State Bog, East Wareham. These selections are being tried at six or more locations in the State.

The 1956 acreage of Early Blacks was 8,387, Howes, 4,373, McFarlins, 117; others, 588.

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## *Cranberry Recipe Makes Woman A Pillsbury Finalist*

A cranberry recipe made Mrs. Elsie Fraher of Wareham, Mass., one of 100 finalists in the national Pillsbury Baking Contest at Hotel Waldorf-Astoria, New York, September 22. Before she left for New York with her husband, Frank, she had already received an electric range and a check for \$100 as a finalist's prize.

In New York before the bake-off she was a guest at the Waldorf-Astoria, treated to a round of restaurants and met movie star Ronald Reagan and officials of the General Electric Company and

Pillsbury Company. In addition to the prizes, each finalist was given an evening bag, French perfume, an overnight bag, an assortment of spices, a corsage.

Although Mrs. Fraher was not the grand prize winner, her recipe will be seen by thousands of homemakers in a recipe booklet being prepared by Pillsbury.

Mrs. Fraher's finalist recipe is:  
**CAPE COD RUBY SQUARES**

Filling:

2 cups cranberries  
1½ cups crushed pineapple  
1 10-oz. pkg. frozen strawberries  
or 2 cups fresh berries  
½ cup sugar  
1 tblsp. corn starch  
1 tsp. vanilla

Pastry:

1 cup vegetable shortening  
2 cups Pillsbury best all-purpose

flour

½ tsp. baking powder

½ tsp. salt

⅓ cup plus two tablespoons

it comes from the can, and the frozen strawberries. Add sugar and stir until cranberries have popped. Add cornstarch which has water

Wash cranberries and cook together with pineapple and juice as been moistened with ½ cup water and cook until fruit mixture is a clear red (about 5 min.) Set aside to cool. When partially cooled, add 1 tsp. vanilla.

Add Pillsbury flour, salt and baking powder to the 1 cup shortening. Cut shortening in, but only until there are no large pieces left. It is not necessary to mix until the ingredients are like meal, but rather until the shortening is cut into bean-size pieces. Add cold water and mix only until flour is mixed in. Roll pastry out to fit jelly roll pan approximately 11 x 14. After rolling pastry quite thin, line pan with pastry. Spread fruit mixture over the pastry just until pastry is covered. Wet edges of pastry with one egg which has been beaten with about ⅓ cup milk. Roll out additional pastry into ¼ inch strips and form a top crust of lattice work. Paint top of crust with egg mixture and bake 450 degrees (about 20 min.) until brown. When cool, cut in squares.

There should be enough filling left to make extra squares or tarts if desired. This filling may be prepared ahead of time and either frozen or put up like preserves when hot.

## A SALUTE TO CANNING INDUSTRY

America's canning industry was saluted during September for the vitally important function it performs in marketing agricultural products, "Agricultural Marketing" reports.

All segments of the food marketing business combined in a celebration of September as "Canned Foods Month." It was one of those occasions when the spotlight was put on an important industry serving agriculture and due tribute was paid for the day-in, day-out, around-the clock contributions that the industry makes to building a better way of life for Americans.

The U. S. Department of Agriculture took a leading part in the celebration.



# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



## Machine Harvest

The Massachusetts cranberry harvest has progressed remarkably well considering the late season and the frequency of our rains and frosts. Just for the record, measurable amounts of rain were recorded on 10 days in September and 8 frost reports, including the afternoon and evening warnings, were released during the first 16 days in October. If it hadn't been for the picking machines, the harvest would have been greatly delayed under these unfavorable conditions. New improvements, good servicing, and careful operation of these machines have greatly increased their effectiveness. We estimate that at least 80 percent of the Massachusetts acreage was picked by the Darlington and Western machines this fall.

## Demoranville Studies

Irving Demoranville's growth studies are providing some very useful and interesting information. His records this fall show that "early water" Early Blacks are about average in size and weight compared with samples collected during the last five years. They reached their peak of growth about mid-September. However, our "late water" Early Blacks are the largest and heaviest since he began his studies in 1953. One sample of "late water" Early Blacks showed an unusual cup count of 84. They completed their growth by the last week in September. "Early water" Howes, on the other hand, are the smallest and lightest that Demoranville has recorded in five years. We had no "late water" Howes at the State Bog this year. A complete report of his studies will be available at a later date.

## Visitors

The Cranberry Experiment Station has enjoyed many visitors during the past month. We rather expect that the colorful harvest was the prime attraction for so many visitors whom we always enjoy. They include a group of growers, extension and research representatives from Nova Scotia who were interested in small fruits, including cranberries. J. K. McEwen, from the Ontario Department of Lands and Forests, was another visitor. Mr. and Mrs. Lawrence Dana from Wisconsin spent a few days in the cranberry area while Dana experimented with water picking under Massachusetts conditions, using one of his new picking machines. Our staff cooperated with these experiments, including techniques for drying the water-picked fruit. We were also hosts to an Amherst,

Massachusetts & Washington, D.C., delegation from the Commodity Stabilization Program. Guests are always welcome at our station.

## Market Report

The first cranberry market report for fresh fruit was released September 23 from the Agricultural Marketing News Service under the direction of John O'Neil, Boston, Mass. This will be the fifth season that these weekly reports have been prepared for growers and shippers. The weekly reports include current information on movement of cranberries by rail and truck, price and terminal market conditions in the leading markets in the United States. Anyone interested in this type of information may receive it by writing to John O'Neil, 408 Atlantic Avenue, Room 703, Boston, Mass., and requesting that his name be added to the mailing list.

## Zineb

Our quality control program at the station is in operation and involves a study of the effect of zineb on the shelf life of fresh fruit, as well as a means of reducing shrinkage of fruit held in storage. We have a small refrigerated rack and a dry rack at the station for conducting a portion of this work under what we call controlled conditions. Two retail stores in the

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cranberry area are cooperating with our study by permitting us to place cranberries receiving various treatments in their stores where they are sampled at regular intervals. Results of our investigations will be presented to growers and shippers during the winter months.

There are a few suggestions on late fall management that we would like to call to the growers' attention. This is an excellent time of year to fertilize thin areas on bogs in order to stimulate vine growth without encouraging the growth of annual weeds. Woody plants, such as hardhack, meadow sweet, and bayberry should be pulled out after harvest, which will greatly improve the harvest operation next season. This is a good time of year to drag a hook or potato digger around the shore ditches in order to pull out runners, small bramble, Virginia creeper, and morning glory which may be crossing the ditch from the shore to anchor themselves on the bog. Wherever water supplies are available, growers are urged to flood their bogs after harvest in order to rid them of the harmful trash that accumulates each year and revive the vines after the rough picking operation. The float boat is ideal for this task.

Statement required by the Act of August 24, 1912, as amended by the acts of March 3, 1933, and July 2, 1946 (Title 39, United States Code, Section 233) showing the ownership, management, and circulation of

CRANBERRIES, The National Cranberry Magazine published monthly at Wareham, Massachusetts for October, 1958.

1. The names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher—Clarence J. F. Hall, Wareham Mass. Editor—Clarence J. F. Hall, Wareham, Mass. Managing editor—Clarence J. F. Hall, Wareham, Mass. Business manager—Clarence J. F. Hall, Wareham, Mass.

2. The owner is:

Clarence J. F. Hall, Wareham, Mass.

3. 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. H. HALL.

Sworn to and subscribed before me this 30th day of September, 1958.

(Seal) BARTLETT E. CUSHING,  
Notary Public.

(My commission expires April 5, 1963)

Four

## Britain Reopens Cranberry Imports

Cranberries have found a renewed market on grocery shelves in London, England after being absent from that country for 18 years.

October 7, 250 cases of Ocean Spray fresh cranberries arrived in England from the A. D. Makepeace Company of Wareham and NCA spokesman Stanley D. Benson says the firm already has a repeat order.

Benson said the European market might prove a stimulus to the cranberry industry. He noted that import restrictions placed on cranberries in the past had made exportation to Britain impractical since World War II. However, a combination of lesser restrictions and a demand for the berries has made it possible to reopen the British market.

Other outlets, he said, have opened in Belgium and Hamburg, Germany as shipments of berries have also been made to Saudi Arabia and Ireland. In all cases, fruit is shipped fresh, not canned.

Benson said that an attempt will be made in Arabia to process fresh fruit into cranberry sauce prior to sale.

Benson explained that it seemed more poultry is being consumed in Europe than ever before, opening the market for cranberries.

## Kickapoo Fertilizers

Kickapoo Fertilizers, Stevens Point, Wisconsin, states it has the newest and most modern plant in Wisconsin in the heart of the cranberry growing area. There are also dealers in the various marsh locations. The company invites inquiries from Wisconsin cranberry growers as to any problems which it might help solve.

Kickapoo reports cranberry growers have become more and more interested in the quality of granulated or pelletized fertilizers as many call it. The company reports making great strides in granulating fertilizer in its year and a half of operation of the plant at Stevens Point, and has had a gratifying acceptance of its product.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of October 1958 - Vol. 23 No. 6

Published monthly at The Courier Print Shop, Main St., Wareham, Massachusetts. Subscription \$3.50 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

Compiled by C. J. H.

## MASSACHUSETTS

### Rainfall Again Excessive

September ended with an excess of rain 4.78 inches as recorded at State Bog with the normal 3.56 inches. This makes the 7th month of a heavy surplus of precipitation out of the 9 so far of 1958. Boston reported this as the rainiest year to date, on record.

### Temperatures Slightly Up

Temperatures ran an excess of 8 degrees, with several very warm days, the 26th reaching a maximum of 87 in the shade with extremely excessive humidity, as was the condition for several days around that period. There were also a number of beautiful, clear days, "shirt-sleeve" weather which did not prevail during July and August. Temperatures to October first for the year have been a minus 40.

### 60% Crop In October First

September, with so much rain sized the berries. In spite of so much rainfall, many mornings of late heavy dew, it was considered by Dr. Cross that a fair estimate of the crop brought in by October first would be about 60 percent. Machines pick much more rapidly than can be done with hand scooping. At least 80% was machine harvested. With the exception of some small acreage all Early Blacks were in and Blacks this year will make up about 60 percent of Massachusetts production. As of October first it was estimated that harvest was not more than two days behind schedule in general, harvest having caught up from an estimated two weeks behind as harvest began.

### No Frost Loss

Adding to the size of the crop

was the fact there were no frost losses in September. The night of September 29 brought some low temperatures, down to the high 20's. No frost warning was put out by Cranberry Station, but telephone calls were made to inland bogs, where temperatures were lower than in Plymouth and Barnstable counties. There is an ample water supply for the remainder of the frost season.

### Sunshine Deficient

To October first there had been a deficiency in sunshine of between 40 and 50 hours. This factor would indicate a decrease in the size of the crop of 1959, but barring other factors it would be one of better quality.

### "First Round"

Shipments for the "first round" of supplying wholesale outlets were completed about September 22. At that time warm weather over much of the country was slowing down demand at both the

market and retail levels. Prices were reported as holding fairly good up to that time.

## OREGON

### Harvest Early

Southwestern Oregon Cranberry growers have started harvest this season a few days earlier than their usual October 1 starting date. Several growers have started bringing berries in to the Coquille receiving station for packaging in order to fulfill the early first fruit market demands which are said to be exceptionally good.

### Quality Good

According to Bill Dufort, Coop manager, the fruit this year is of very high quality, but it is a little early to predict the production from the standpoint of quantity. Ray Bates made the comment that his berries this year are as good a quality as any he has ever produced.

**Cape Cod Cranberry Co-operative, Inc.**

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### Over-Growth

According to some of the growers, there seems to be more over-growth than usual this year, which might be attributed to late rains, or to excessive fertilization; at any rate, the growers with bogs in this condition have a tougher picking problem.

### Cranberry Festival

The people of Bandon are all agog over the 1958 Bandon Cranberry Festival, October 10-12. Various clubs and organizations are sponsoring their favorite beauty in a contest for "Queen of the Cranberry Festival."

## WASHINGTON

### Long Beach Area

Cranberry harvest started during the last week of September. Guido Funke, Ilwaco was the first to start on his Early Blacks. Several growers appear to have good yields, these are the growers who were not hurt by May 12 freeze. E. C. Chabot, Long Beach, probably will have the largest crop he ever had. Chester Mattson has completed his first harvest on his young bog. The production was about 132 barrels per acre. A number of other growers are running low because of the freeze.

### Grayland

Grayland reports that while the quality is fairly good, production is down considerably from last year. This, too, is due to the freeze. More deformed berries are showing up on some bogs than in previous years.

### Weather

Weather has lent itself well to harvesting this fall, although some growers in the Long Beach area are a little short of water to flood with. There were no frosts to October 3. The minimum temperature during September was 37 degrees with a maximum of 91 degrees. Sprinkler systems were used for heat control on September 6 and 7, with a maximum of 91 and 87 degrees respectively. The minimum relative humidity was 50 percent on September 4, 6 and 30, which is a little below normal.

### Berry Color

The color of berries is not great-

ly different than last season. Some of the berries which have been taken from the heavier vines are a little light in color.

## NEW JERSEY

### Rain Fall Under

September was the first month on the dry side in this year's growing season since June. Practically no rain fell during the first 17 days, which very much favored the cranberry harvesting. The total rainfall for September was 3.02 inches as compared with the normal of 3.62 inches.

### Ripening, Harvesting Favored

Many cool nights in September also favored the ripening and harvesting of cranberries, especially since there were no serious frosts. The average temperature for the month was 65.4° as compared to the normal of 67.5°.

### 2 Insects Reduced

The wet summer had the undesirable effect of stimulating excessive runner growth during August. On the other hand, the wet weather may have been a blessing in reducing a very severe Sparganothis infestation that started in June, with the result that Sparganothis is not a serious matter now at the time of harvest. Some good dusting on the part of certain growers was also helpful.

## WISCONSIN

### Weather

September was slightly below normal in temperature and precipitation was again above average in the north and continued below normal in the south. This is a continuation of the same weather pattern for the growing areas for the entire season. Warmest day was the 14th when the mercury rose to 85 degrees and coldest on the 30th when eighteen degrees was registered in Cranmoor. The month was marked with several cold freezing nights and very few warm days, consequently the weather was not advantageous to good berry development. Average rainfall for the state is now above normal in the north, five inches below normal in the south. Ground water levels are from one to one half feet below normal.

### Small Berries

Early raking showed small berries reducing the crop yields. As many as 30 percent pies were counted in some areas as compared to and average seven to ten percent. Small berry size was especially evident in the northern marshes. Color was very good the last of the month and quality appeared above average. Late varieties were coloring slowly due to late blooming

(Continued On Page 16)

## R. F. MORSE & SON



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DEPENDABLE ECONOMICAL SERVICE



# Frosts And Cranberries In Wisconsin

Most Critical Period For Grower, September Into October.

by  
**Dr. George L. Peltier, Consultant**  
**Indian Trail, Inc.**

Fortunately the long continuous cold winters in Wisconsin are an asset to the successful over-wintering of vines, if they are well protected in local areas, no losses from winter killing, desiccation (physiological drought), and oxygen deficiency, occur. In general such losses are much less frequent and severe, than in other states. For the most part, they can be considered of a minor nature within localized areas. The widely scattered bogs throughout the northern half of the state may contribute to the fact, that winter damages are slight and localized.

Ordinarily, the winter flood is removed the latter half of April (somewhat later in the North) and the beds are exposed to the prevailing weather until most of the frost in the soil disappears, and growth processes of the vines has started. This usually occurs, depending on a number of inter-related factors, about the 10th to the 15th of May.

After growth has started, the expanding buds must be protected against spring frosts by flooding. These frosts vary in numbers and intensities from year to year.

## Weather Digest

A digest of the weather records for 27 years (1931-57) obtained in the Cranmoor area, show that an average of 8.2 frosts can be expected during May. The range runs from one to as high as 15 for the month. The number of light frosts averaged 7.1, heavy frosts 1.6, (8 years, none) and temperatures below 20°F occurred in 11 out of the 27 years. The majority of these temperatures occurred before mid-May, at which time vine growth has started. This is the most crucial period for the grower.

Reflowing usually begins about May 10, although, in certain years (1957) reflows are put on early in May. Too, temperatures of below 20° do occur as late as the 26th of the Month.

During some years (12 out of 27) a succession of cold nights, from 4 to as high as 11 prevail. The usual custom under these conditions, is to keep a flood on until the danger of frost is past. Apparently when expanding buds are subjected to submersion in water for some duration, it is inevitable that they become water soaked

sufficiently to damage the floral structures, resulting in pollen sterility and perhaps, other parts of the young developing flowers. Of course, if the buds are not fully protected, temperatures of 25° or below, can injure the new growth.

## May Frost Important

Thus in normal years, with proper flooding procedures, May frosts cause very little damage. When a series of cold nights occur and flood waters remain on for extended periods, an unknown amount of injury can and does occur in certain years. Unfortunately no physiological studies have been made to determine, first the critical temperatures causing injury and secondly, the full effects of extended periods of complete submersion of the growing buds,

and particularly, the damage to the pollen and other floral structures. It is my opinion that losses from these conditions is of more importance than is generally realized by the grower. My observations point to the fact, that where sufficient water reserves are at hand, it is much better to flood nightly, than to hold water on the beds for periods of a week or longer, especially when temperatures reach 70° or above during clear, sunny days. The subject of reflowing needs considerable study before the proper procedures of water management at the critical period in mid-May is solved.

In the period under study in only 3 years was June frost free. The number of frosts ranged from zero to as high as 9. Most of them prevailed during the first two weeks. No temperature below 20° was reported and in only 4 years did the temperature fall below 25°F. So far as my observations go, June frosts cause little or no loss, if the vines are protected.

## Summer Frosts

Temperatures below 32° can occur any time during July and August during certain years. No frosts were recorded in 15 of the 27 years in July. In only 2 sea-

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sons was more than 1 frost reported. The lowest temperature in July was 27°. In August no frost occurred in 11 out of 27 years, and in 7 years both July and August were frost free. Most of the frosts in August occur in the last half and range from none to as high as ten. In five years, temperatures of 25°, or lower occurred. Only in 2 years, did a succession of nightly frost prevail (1950: 4 days; 1934: 10 days). Summer frosts, while not unusual, must be watched by the grower, otherwise, some damage can occur and does if the berries are not protected by flooding (August 5, 1957).

#### Fall Critical

The most critical period for the grower is the protection of the crop from recurring frosts in September and on into October, until the harvest has been completed. In the days of the hand rake, harvest was usually in full swing the first week in September and at times if water was short, harvest of poorly colored berries began in late August.

Within recent years the tendency has been to wait until the berries were fairly well colored, thus delaying the harvest. Machine raking is usually in full swing by the 20th of September and is completed within a month. Thus harvest is now extended to mid-October or later, depending on the acreage, yields and number of machines available. The postponement of the harvest in turn has increased the danger from more and intensive freezing temperatures.

The number of September frosts varies from 2 to as high as 16, with an average for the 27 years

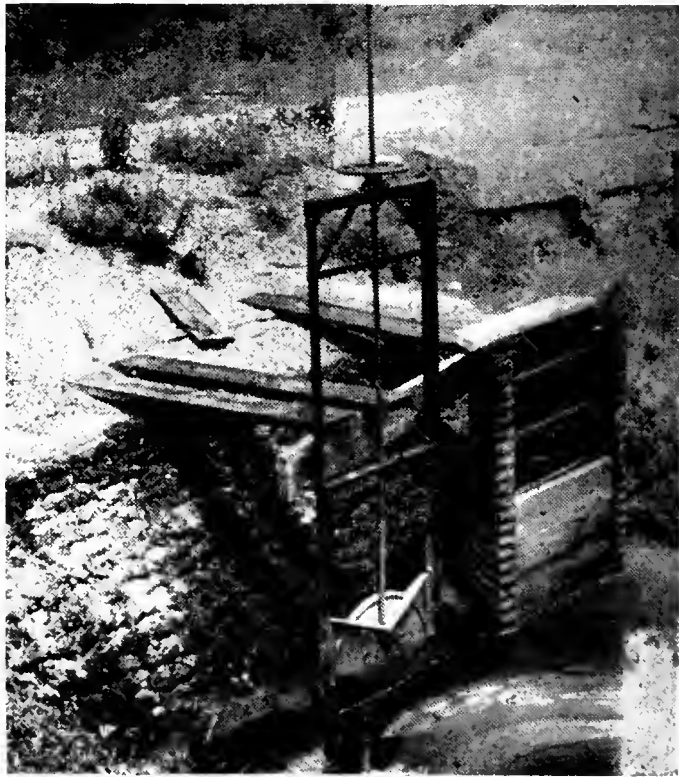
of 8.0 per month. Temperatures of 25°, or lower occurred once or more during 24 years of this period. Their number and severity increase from week to week. The lowest temperature recorded was 11°F. During some years (12 of 27) a succession of nightly freezes varied from 3 to as high as 12 days, which meant that water protection was necessary for almost 2 weeks.

With the advent of October daily frosts are still more numerous and intense. Unfortunately the data for October weather is complete only for the first 10 days of the month. The number of frosts for the 10 day period, range from 1 to 10, with the lowest recorded temperature at 10°. Temperatures of 25°, or lower occurred in 24 of the 27 years. Also daily frosts extended from 4 to 10 days in this interval.

The longest continued succession of below freezing tempera-

tures in September and October was 19 days, in fact in 8 years out of 27, frosts occurred on 10 or more continuous nights. Thus the longer the harvest is delayed, the more critical becomes the period from freezing temperatures, which may become a two-headed dragon, in that unless a flood completely submerges the berries, the top crop may be frozen and in turn if the water is left on for extended periods the berries may become scalded, or water soaked. The large shrinkage of the 1957 crop in Wisconsin was largely due to these two factors.

Thus frosts play an exceeding important role, both in May when vine growth starts, and the buds expand and again in the fall before and during the harvest. In both instances, submergence of the vines and fruit for extended periods cause untold damage to the buds and the immature flower structure, modifying to varying



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extends the percent of pollination and set, and in the fall the rapid deterioration of the quality of the berries and their subsequent loss in storage and poor keeping qualities in the packaged product.

#### Water Management

Some of these troubles can be decreased materially by the proper management of water, both in the spring and fall by more frequent floods when necessary, rather than holding the floods on the beds for extended periods of a week or more. During harvest the less contact the berries have with water, the better their soundness and quality. Berries should not be allowed to become water-soaked, by holding water for several days, or until the berries are completely raked in a section.

Water is completely essential in diverse ways in cranberry culture, but sometimes, its overuse can cause injury to the vines and fruit in direct proportion to the amount and extent of its improper usage.

True the alert grower must be continually prepared for frosts during the entire growing season and protect the vines by rational manipulation of the flood waters. Also the fact that harvest is now started later in September and is not completed until into October, increases the hazards from freezing temperatures.

#### Medical Use For Cranberries

Another use has been found for cranberries. The effectiveness of cranberry juice in treatment for bladder infections has been proven by an eminent Harvard professor, Dr. Edwin R. Kass, even where "Miracle Drugs, penicillin, aureomycin and chloromycetin have failed.

In a recently published clinical research bulletin by Cambridge University he explains that cranberries and cranberry juice is known to contain quinic acid, which when introduced into the human system is converted into hippuric acid of a high potency, high enough to destroy the most powerful types of bacteria found in bladder infections.

Dr. Kass stated in the publication that when hippuric acid was fed to adults with chronic bladder infections "the bacteria were reduced or eliminated even in patients whose infections were resistant to previous antibiotic treatment."

This hitherto unrecognized value of the cranberry could add to cranberry use. Doctors have been prescribing cranberry juice in the treatment of bladder infections. Dr. Kass concludes consideration of hippuric acid as an antibiotic "also suggests a pathway for future investigation of antibacterial agents."

#### NCA Closing 1957 Pool Early

A news release of Oct. 7 from Ambrose E. Stevens, general manager and executive vice-president of National Cranberry Association, states that an early settlement of the 1957 cranberry pool will be made with a 35 percent increase in returns to grower-members.

Processing of the remaining berries from that pool was expected to be completed by Oct. 11. Final payments to growers are scheduled for November indicating that all NCA's 1957 berries will be processed and sold before the new 1958 crop is completely harvested.

Stevens said that heavy orders for more than 2,500,000 cases of Ocean Spray products in August and September cleared the way for an early closing of the 1957 pool.

After allowing for stockholder

compensation (dividends of 34 cents per barrel) cash paid to grower-patrons should exceed \$10.00; \$8.60 has already been advanced.

#### "CRANSWEETS" INTRODUCED TO STATE HEADS

"Cransweets" in the form of cordial covered chocolate "Cran-sweets" were distributed at the 40th annual convention of the State Department of Agriculture Convention in Madison, Wisconsin, early this month. These were furnished in the form of "room surprises" at the Edgewater hotel. This was through the courtesy of Cranberry Products, Inc. of Eagle River, Wisconsin, with President Vernon Goldsworthy in attendance.

This was the first time many of these important agricultural officials had been introduced to cranberries.

Goldsworthy has received several letters of appreciation for furnishing this introduction to cranberries. One was from Clyde Spry, Secretary of Agriculture of the State of Iowa.

Another was from Phillip Alampi, Secretary of the State of New Jersey Department of Agriculture of New Jersey.

A third was from Marlon Schwier, in charge of Fruit and Vegetable Section of the Department of Agriculture, State of Wisconsin.

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**WISCONSIN LEADS THE  
INDUSTRY IN CRANBERRY  
YIELDS PER ACRE**



Beginning a series of five articles sponsored by the Cranberry Institute, presenting statistical data about each of the major cranberry-producing areas. The first is Wisconsin, with comments by Vernon Goldsworthy, Vice President of the Institute and prominent cranberry grower and researcher, of Eagle River, Wisconsin.

According to Department of Agriculture estimates, the 1958 cranberry harvest in Wisconsin will equal its 1956 record of 340,000 barrels and so supply 31% of the estimated total U.S. crop of 1,108,500 barrels. If the harvest proves out these figures, Wisconsin's yield per acre will again reach its 1956 peak of 91.8 barrels, the highest average ever produced in any area.

Wisconsin's rise to second place in cranberry production and to first place in yield per acre is the outcome of close cooperation among Wisconsin growers, a sharing of experience and experiments that has brought about improvements and advances that are state-wide.

Cranberry yields in Wisconsin overtook Massachusetts in the 1930's, about the time Vernon Goldsworthy became interested in cranberries. This pioneer of cranberry growing in the northeastern territory, through his researching of disease control, contributed immeasurably to Wisconsin's increase in yield. Mr. Goldsworthy says, "There are many factors involved in Wisconsin's progress to increased production and yield. Important is, of course, the control of weeds, disease and introduction of new fertilizers, and the development of the Searles variety with its larger berry. Adequate water supplies give us protection against drouth and freezing, but, so far, we have no protection against hail. This has taken a serious toll of the harvest this year."

Native to the area, Wisconsin cranberries can be traced to the Indians when Algonquians gave them the name of "Atoqua." Wild

berries were harvested as early as 1850, but commercial cultivation did not begin until 1900, when a crop of 18,000 barrels was raised on some 1200 acres, making an average yield of 15 barrels per acre. The 100,000 barrel mark was passed in the 1930's, starting the dramatic rise to present eminence.

The accompanying graph and statistics cover the period from 1930 through 1957, and it can be noted that during that 28-year period, when the acreage nearly doubled, yield per acre was more than quadrupled.

For purposes of comparison, the year 1939 has been used as the reference point. The 2,400 acres harvested that fall and the yield of 45 barrels per acre are each considered 100% to provide a basis for comparison. Subsequent charts for other areas will follow this procedure and will use the same year, 1939, as the reference point of 100%.

It then follows that the charted acreage and yield in the graph intersect in 1939. The graph points up the gradual rise of acreage harvested. Though the yield fluctuates from year to year, it continues on an upward climb, and in 1957, the 4,000 acres harvested is 167% or 67% higher than 1939 and the 65 barrel yield per acre is 144% or 44% higher than 1939.

The most important producing areas in Wisconsin are in the central part of the state, located in the counties of Wood, Munroe, Jackson, Juneau and Portage... Wood, Munroe and Jackson being the top three. Burnett, Washburn and Sawyer in the northwest and Vilas, Oneida and Price in the

north make up the remaining important cranberry-growing counties with some acreage in Lincoln and Rush.

Besides the Searles which compose more than half the Wisconsin crop, other leading varieties are McFarlins, Natives and Howes.

Water raking did not come into general harvesting practice until World War I. Before that, the crop was picked by hand. In recent years, mechanical picking has been developed and today, as in other areas, most of the harvest is being brought in by machines. All but very small amounts are harvested on the flood and most of these are mechanically dried.

About 1/3 of the Wisconsin crop comes from plantations of from 25 to 50 acres and another 1/5 of the crop is raised on plantations of 100 acres or more. This prevalence of large plantations makes practical the increased mechanization of the Wisconsin cranberry industry.

The future looks bright for continued advances in production. Some 650 acres are expected to come into production by 1961 and another 200 acres by 1964 with probably other new plantings during the next decade.

Wisconsin growers hope to continue to increase their yield along with their acreage and so improve their economic position.

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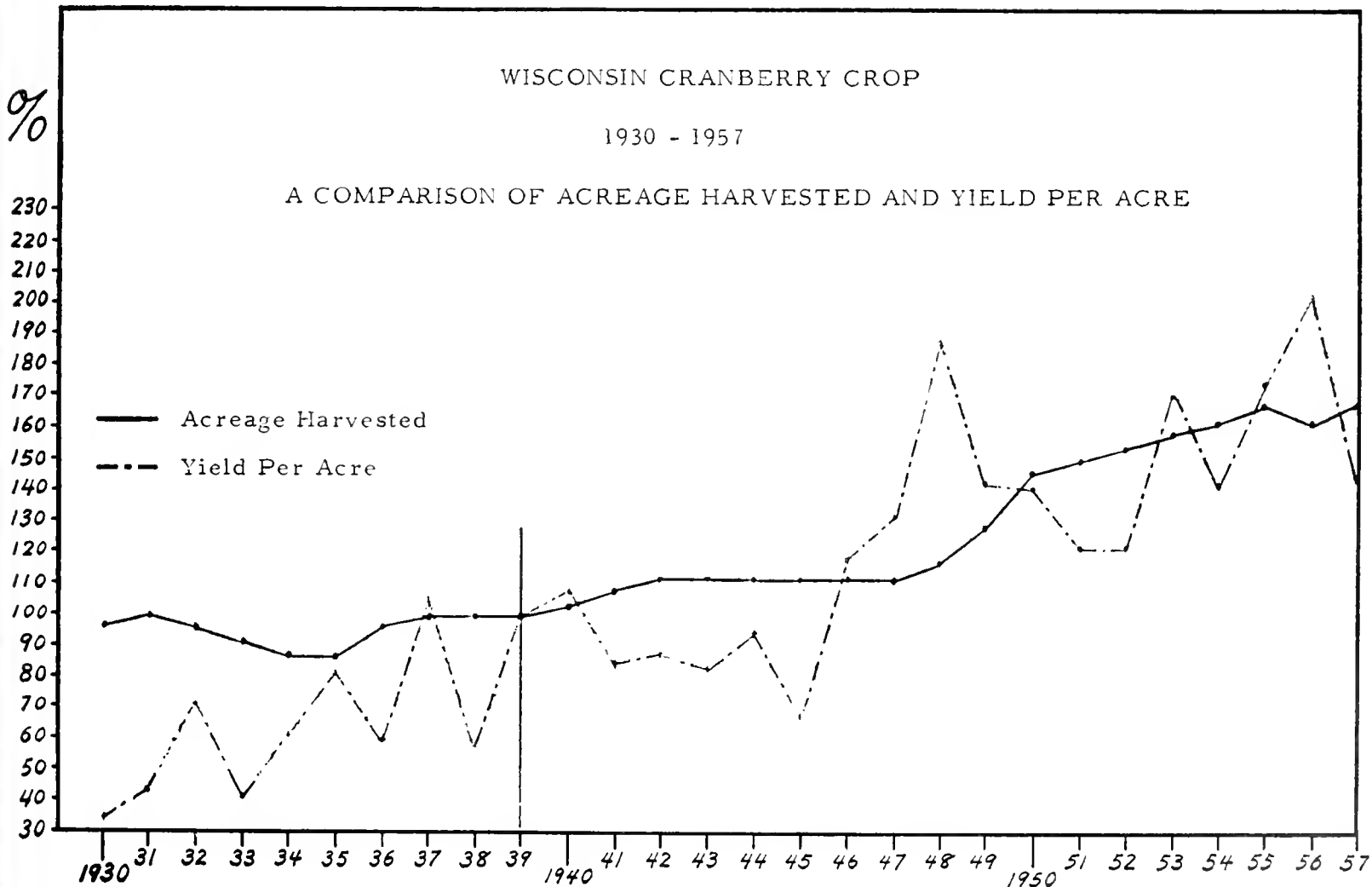
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**WISCONSIN CRANBERRY CROP\***  
1939 = 100%

Year	Actual Acreage Harvested	% Acreage Harvested	Actual Yield Per Acre	% Yield Per Acre
1930	2,300	96	15.7	35
1931	2,400	100	20.0	44
1932	2,300	96	32.6	72
1933	2,200	92	19.1	42
1934	2,100	87	28.1	62
1935	2,100	87	36.7	82
1936	2,300	96	27.0	60
1937	2,400	100	47.9	106
1938	2,400	100	26.7	59
1939	2,400	100	45.0	100
1940	2,500	104	48.4	108
1941	2,600	108	38.1	85
1942	2,700	112	39.6	88
1943	2,700	112	37.8	84
1944	2,700	112	42.6	95
1945	2,700	112	30.4	68
1946	2,700	112	53.7	119
1947	2,700	112	59.6	132
1948	2,800	117	85.0	189
1949	3,100	129	64.5	143
1950	3,500	146	63.4	141
1951	3,600	150	54.4	121
1952	3,700	154	54.9	121
1953	3,800	158	77.6	172
1954	3,900	162	64.1	142
1955	4,000	167	78.8	175
1956	3,900	162	91.8	204
1957	4,000	167	65.0	144

\*Figures from United States Department of Agriculture



\*Figures from United States Department of Agriculture

(Advt.)

## ***Bandon Has 12th Berry Festival***

Twelfth annual Bandon Cranberry Festival was held in that Southwestern Oregon city October 10, 11, 12. Local people had been busy as the proverbial "Cranberry Merchant", to plan for parade with floats, decorations, cranberry fair exhibits, barbecue foods, the annual ball, selection and crowning of the 1958 cranberry queen, and other events.

Chosen queen was Linda Sutherland, president of the student body of Bandon High School and honor student, and the daughter of Football Coach Dick Sutherland. She was crowned by Patricia Moore, winner of the 1957 top honor.

The 1958 queen won over six other "princesses", and all discussed some phase of the cranberry industry. One of the princesses, Peggy Hunt, enlivened her remarks by a dialogue with an animated cranberry.

Outstanding school floats dominated the parade, which many called the best yet. News of both the parade and a football game were broadcast over radio station KWRO, Coquille, Oregon.

Some 250 square dancers and spectators attended the Ocean Spray Twirlers Cranberry Festival which concluded the three-day celebration Sunday afternoon.

### **Cranberry Winners Goal**

#### **Senior Grand Champions**

Fresh Cranberries—Mrs. Marion Wilson.

Culinary—Mrs. H. E. Armstrong.

Canned—Mrs. E. H. Strain.

Decorative—Mrs. Howard Wilson.

#### **Junior Grand Champions**

Culinary—Joanne Gorman.

Canned—Joanne Gorman.

Decorative—Jesse Laub.

#### **Division A—Fresh Cranberries**

Class 1, Stankavich—Blue, Marion Wilson, Ray Bates.

Class 2, McFarlin—Blue, Marion Wilson; red, Dave Philpott.

Class 4, Misc.—red, Ennis Loshbaugh.

#### **Division B—Cranberries, Culinary**

Class 1, Pie—Mrs. Howard Kehl

(2), Mrs. H. E. Armstrong; red, Mrs. Howard Wilson, Mrs. Howard Kehl; Jr., Verlene Haga.

Class 2, Sauce-Cooked sieved—Blue, Mrs. Paul Colgrove; Jr., Dixie Van Leuven.

Class 3, Sauce, Cut or whole—Blue, Mrs. Joe Turner, Mrs. Hugh Stevenson; red, Mrs. E. H. Strain, Mrs. N Davidson; White, Jr., Dixie Van Leuven.

Class 4, Relish, Mixed fruit—Blue, Jr., Carol Laub; red, Jr., Vicki Bowman.

Class 5, Relish, Mixed fruit—Blue. Jr., Kristy Bowman, John Van Leuven, Dixie Van Leuven; red, Mrs. Hugh Stevenson, Mrs. E. H. Strain; Jr., Sandra Bowman, Jesse Laub; white, Jr., Merriane Metzger.

Class 6, Bread—Blue, Jr., Kristy Bowman; red, Mrs. E. H. Strain; white, Mrs. Howard Wilson.

Class 7, Quick Bread—Blue, Mrs. Hugh Stevenson; Jr., Helen Donahue, Chestine Anderson; red, Mrs. E. H. Strain; white, Jr., Jesse Laub, Carol Laub.

Class 9, Salad, Desserts—Blue, Mrs. E. H. Strain, Mrs. Howard Kehl; Jr., Joanne Gorman; red, Mrs. Hugh Stevenson; Jr., Verlene Haga.

Class 10, Cocktail or Drink—Blue, Jr., Darla Bowman; white, Jr., Carol Laub.

Class 11, Candy—Blue, Mrs. Mabel Phillips.

Class 12, Cookies—Blue, Jr., Jesse Laub, Carol Laub; red, Mrs. E. H. Strain, Mrs. Wm. Biggar.

Class 13, Cakes—Blue, Mrs. E. H. Strain, Mrs. Howard Kehl; Jr., Carol Laub, Joanne Gorman; red, Mrs. H. E. Armstrong.

Class 14, Unique—Blue, Mrs. E. H. Strain; red, Mrs. E. H. Strain; Jr, Shirley Davidson.

#### **Division C—Cranberries, Canned**

Class 1, whole—Blue, Mrs. N. Davison, Mrs. E. H. Strain; Jr., Claudia Biggar, Joanne Gorman; white, Dave Philpott.

Class 2, Berries, cut—Red, Jr., Joanne Gorman; white, Dave Philpott, Mrs. E. H. Strain.

Class 3, Canned sieved sauce—Blue, Mrs. E. H. Strain; Jr., Jesse Laub, Joanne Gorman; red, Mrs. N. Davison; Jr., Dixie Van Leuven; white, Jr., Verlene Haga.

Class 4, Canned relish—Blue,

Mrs. N. Davison; Jr., Divie Van Leuven; red, Jr., John Van Leuven, Helen Donahue.

Class 5, Marmalade—Blue, Mrs. E. H. Strain, Mrs. Howard Wilson.

Class 6, Juice—Blue, Mrs. E. H. Strain; Jr., Verlene Haga; red, Mrs. N. Davison; Jr., Joanne Gorman.

Class 7, Jelly—Blue, Jr., Verlene Haga, Claudia Biggar, Joanne Gorman; red, Mrs. E. H. Strain, Dave Philpott; Jr., Carol Laub.

#### **Division D—Cranberries**

##### **Decorative**

Class 1, Corsages—Blue, Mrs. Howard Kehl, Dave Philpott, Mrs. F. C. Sell, Mrs. E. H. Strain; Jr., Jesse Laub, Carol Laub; red, Jr., Verlene Haga, Claudia Biggar, Joanne Gorman.

Class 2, Table Decorations—Blue, Mrs. E. H. Strain, Mrs. Howard Wilson; red, Mrs. Howard Wilson, Mrs. Jesse Laub; white, Mrs. Flora Haynes.

Class 3, Misc.—Blue, Mrs. E. H. Strain, Mrs. Howard Wilson.

#### **Division E—Decorative Cakes**

Blue, Mrs. Joseph Turner, Jr.

(Editor's Note—condensed from "Western World," Bandon, Oregon.)

## **RAILROAD FANS AT EDAVILLE**

A special train arrived at Wareham, Mass., September 28 with approximately 300 members and guests of the Connecticut Valley Historical Chapter of National Railway Historical Society to take a bus for Edaville. The group visited the railway exhibition and travelled over the five-mile stretch of narrow guage and saw the cranberry bogs.

## **SOUTHERN AUDIENCES HEAR CRANBERRY TIPS**

Mrs. Janet Taylor, home economics manager, National Cranberry Association, made guest appearances on radio and television week of Oct. 13 in North Carolina and Virginia.

She was demonstrating ways of "mating" cranberries with meat, highlighting cranburger and cranfurter sauces on WFMY-TV, Greenboro, North Carolina; WSJS, Winston-Salem, North Carolina and WDBJ-TV, Roanoke, Virginia.



Dr. Ui of the University (right) was a guest at the Cranberry Experiment Station, East Wareham October 22, where he was especially interested in the work on nematodes by Dr. Bert M. Zuckerman with whom he is shown. (CRANBERRIES Photo)

## “Cranberries” Of Wisconsin

(Reprinted from Special Bulletin  
No. 70)

Wisconsin cranberries are marketed over much of the United States. The state's fresh cranberries harvested in 1957 were sold in the terminal markets of Los Angeles and San Francisco on the Pacific Coast and in Denver, Colorado and Dallas, Texas. Terminal markets at Atlanta and Birmingham in the South, receive Wisconsin cranberries as do the Philadelphia, Pittsburgh, Detroit, Cleveland, Cincinnati and Louisville markets. In general, the mid-west is the largest market-consumption area for Wisconsin cranberries. The terminal markets at Chicago, Minneapolis - St. Paul

Kansas City and St. Louis receive large shipments of the berries.

Trucks are now the major means of moving Wisconsin cranberries to market. These vehicles carry the fruit to many distant market areas. Railroad transportation has played an important part in the movement of the state's cranberries in the past and is still used to some extent particularly on long hauls to distant markets.

Railroad shipments of cranberries in the United States has shown a downward trend for the past several years according to reports of the Market News Service. The nation's recorded cranberry rail shipments declined from 1048 carlots in 1948 to 243 carlots in 1956.

Rail shipments for each of the producing states also show declining trends. For example, recorded

shipments of Massachusetts cranberries, by rail, decreased from 923 recorded carlots in 1948 to 209 carlots in 1956. Wisconsin's recorded rail shipments of the berries declined from 477 carlots in 1948 to 33 recorded carlots in 1956. New Jersey's rail shipments since 1949 have steadily declined and in 1956 only one carlot was recorded. Wisconsin's rail shipments in 1956 were reported as originating in Wisconsin Rapids, Babcock, Springbrook, Phillips, Wyeville, Warrens, Mosinee, Milston and Augusta, all in or near producing areas.

## FROZEN FOODS

(From Agricultural Research)

A fast-growing frozen food industry is developing high-quality products with the help of USDA's Western Utilization Research and Development Division, Albany, Calif.

Results of this 8-year-old study are aiding the development of industries that process, preserve, and market an important share of our farm products. The work is being done with wide industrial cooperation.

In the early days of the \$2 billion frozen-food industry, research and experience established 0° F. or lower as a practical operating temperature. But rapid growth of the industry has brought to notice a number of questions that need to be answered.

### Industry Has New Questions

For instance, what kinds of chemical, physical, and microbial changes occur in frozen food between 0° F. and higher temperatures? How fast does each one of these changes proceed under various conditions? How important is each type of change in the total quality value of the food?

This is how ARS research is finding the answers to these questions:

Scientists are analyzing the quality factors of freshly packed, commercially frozen foods. These factors include vitamins, flavor, color and texture. Then their rates of decline under commercial conditions are measured.

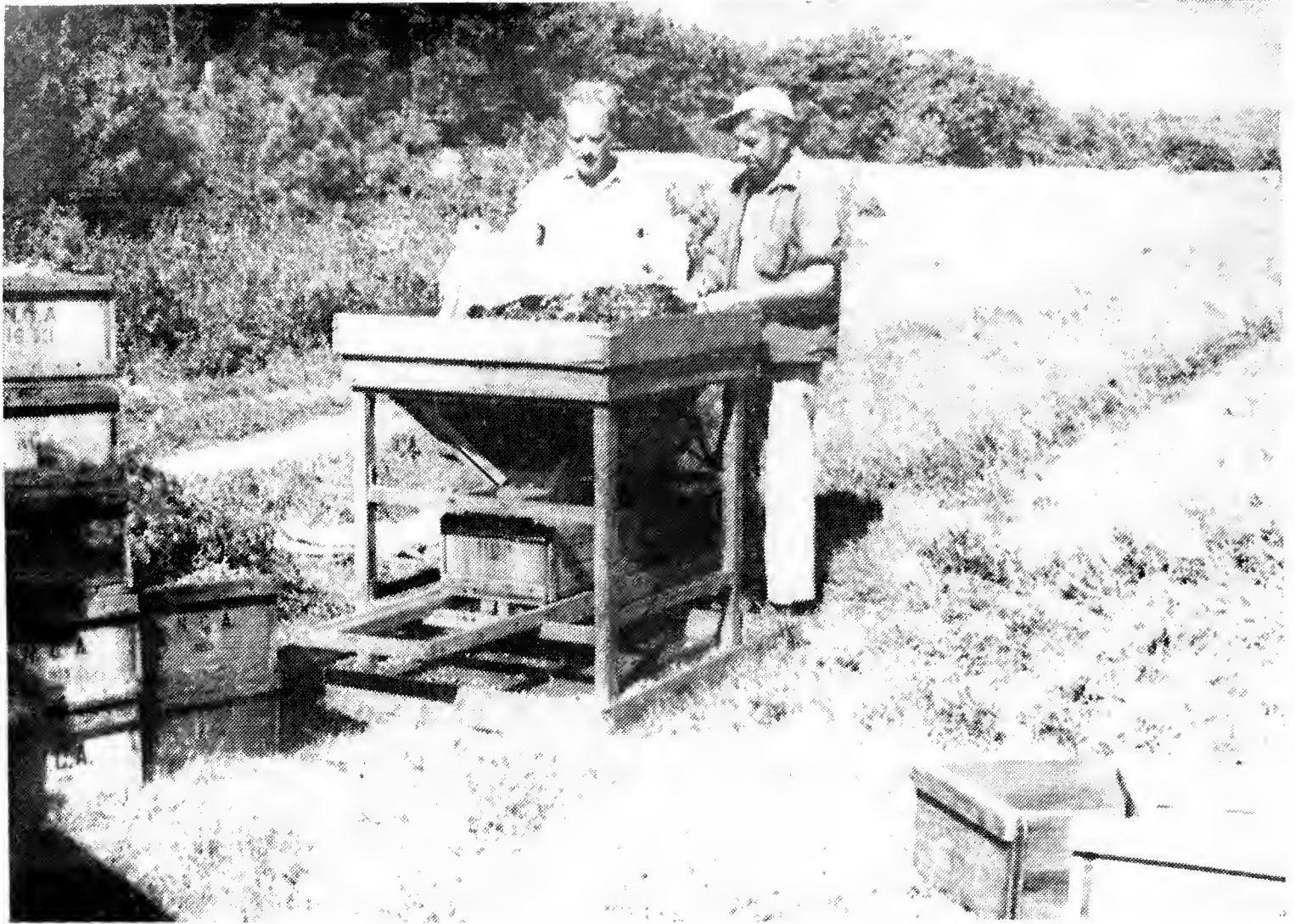


Photo shows harvesting scene at the Arthur Laine bog, East Wareham, with cranberries being winnowed by Ray Laine and Arne Checkman. (CRANBERRIES Photo)

## NCA Committees Are Appointed

George C. P. Olsson of Plymouth, Massachusetts, President of National Cranberry Association, announces appointment of special committees, and their elected chairmen, made up of members of the cooperative's Board of Directors.

Shrinkage and plant facilities: chairman, Chester W. Robbins, Onset, Mass.; secretary, Marcus M. Urann, So. Duxbury, Mass.; William S. Haines, Chatsworth, N. J.; Charles L. Lewis, Shell Lake, Wisc.; Leonard G. Morris, Long Beach, Wash., and Elmer E. Raymond, Jr., Braintree, Mass.

Fresh Fruit: chairman, Lewis; secretary, Urann; Tony Jonjak, Hayward, Wisc.; Russell Makepeace, Marion, Mass.; Morris, and Lawrence S. Pink, Middleboro, Mass.

Salary and pension: chairman, Richard J. Lawless, Wisconsin

Rapids, Wisc.; secretary, Thomas B. Darlington, New Lisbon, N. J.; Walcott R. Ames, Osterville, Mass.; Carroll D. Griffith, So. Carver, Mass.; David E. Pryde, Grayland, Wash., and Raymond, Jr.

Marketing agreement: chairman, William E. Crowell, Dennis, Mass.; secretary, Bert Leasure, Chicago, Ill.; Griffith; Lawrence S. Cole, No. Carver, Mass.; John E. Cutts, Vincentown, N. J., and James Olson, Bandon, Ore.

Fact finding: chairman, John M. Potter, Port Edwards, Wisc.; secretary, Olson; Ames; Alden C. Brett, Belmont, Mass.; Frank P. Crandon, Acushnet, Mass., and Haines.

Advertising and marketing: chairman, Miss Ellen Stillman, Hanson, Mass.; secretary, Makepeace; Crandon; Pink; Leasure and Pryde.

A Board of Directors for Ocean Spray of Canada was elected by

National Cranberry directors at their recent meeting in Boston with Darlington as president. Other members of the Canadian board are: Makepeace; Pryde; Raymond, Jr.; Urann; Potter, and Norman Holmes, New Westminster, B. C., Canada.

## Cranberries Top Forecast

The USDA October estimate of the current cranberry crop has been increased from a total of the original August forecast of 1,076,500 to 1,108,500. There is an increase in Massachusetts from 570,000 to 595,000 barrels.

New Jersey estimate dropped from 88,000 to 85,000. Wisconsin is up from 335,000 to 340,000. Washington is up from 49,500 to 56,000, Oregon dropped from 34,000 to 32,500.



## IS THE TIDE TURNING?

LAST month we wrote "The Battle Is On," meaning that harvesting and marketing of the 1958 crop and the disposal of remaining 1957 barrels was in progress. Now, it would seem we are at least winning a skirmish or two this year, and maybe the battle to check the decline in cranberry prices.

NCA which is handling about 75 percent of the crop has closed the 1957 pool with an announced 35 percent increase in returns to growers. Checks are expected to go out in November to growers in an amount exceeding \$10.00, of which amount \$8.60 has already been paid. The 1956 pool paid \$8.10 per barrel.

An independent distributor in Wisconsin returned for its growers for last season a net return, money which growers could actually put in the bank, amounting to \$10.47 a barrel.

The market in mid-October seemed to be holding well for 1958 fresh fruit.

Perhaps the upturn is really here, and the tide is turning.

---

## A PRIZE CRANBERRY RECIPE

A HOUSEWIFE of Wareham, Massachusetts, the town popularly known as the world center of cranberry growing has achieved a new distinction for the cranberry. Mrs. Elsie Fraher became one of the 100 finalists in the Pillsbury Flour national bake-off in New York City, with a cranberry tart recipe.

We tasted one of her products. It was excellent. Many women throughout the country will read her recipe. A salute to Mrs. Fraher for adding to the sales potential of fresh cranberries!

---

## FASTER HARVESTS

THE picking machines are proving one thing, at least this Fall. This is, that they are much faster in getting the crop off than are hand scoopers. Harvest began late in many areas, particularly in Massachusetts, but it caught up fast. Given any kind of favorable weather future harvests will be completed in a much shorter time. This is progress due to mechanization.

CLARENCE J. HALL  
Editor and Publisher

EDITH S. HALL—Associate Editor  
Wareham, Massachusetts

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CHARLES C. DOUGHTY  
Cranberry Specialist  
Long Beach, Wash.

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### Oregon

GRANT SCOTT  
Coquille, Ore.

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### Massachusetts

DR. CHESTER E. CROSS  
Director Mass. Cranberry Experiment Station  
East Wareham, Mass.

BERTRAM TOMLINSON  
Barnstable County Agricultural Agent  
Barnstable, Mass.

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### New Jersey

CHARLES A. DOEHLERT  
P. E. MARUCCI  
New Jersey Cranberry and Blueberry Station  
Pemberton, New Jersey

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A PAPER manufacturer (cover stock) is now putting out "Cranberry Pink." We hope this will make printers think of cranberries.

# SERVING THE WISCONSIN GROWERS

## Frost From The Fields

(Continued From Page 6)  
and development.

### Hail Damage

The marshes damaged by hail the first part of the month were busy salvaging what berries they could. Salvaged berries were being shipped directly to the processors. It is now estimated that at least fifty percent of the berries will be un-salvageable. Without a doubt this past season has been the most damaging from hail in growers' memory. Marshes that suffered frost damage in late August were trying to salvage some of the undamaged berries with considerable difficulty. Buds from the frost areas are being checked to determine if they were hurt by the frost.

### Picking Machines

Weather for the most part was good during harvest with only one day lost in the southern marshes. An estimated one third of the crop was harvested by the end of the month. If the good weather prevails, harvest should be completed by the middle of October. Harvest time on most marshes is being cut down annually with the use of additional picking machines. Vine condition seems to improve annually with the use of mechanical pickers and wiregrass stands are being cut down from the effects of the pickers. A study of production records on those marshes which have used the pickers longest in Wisconsin show crops have increased since pickers have been used, although not necessarily the results of the machines. Fall combing has now been virtually eliminated with the fine combing the machines are doing.

## LATE MASSACHUSETTS

As of the first three weeks of October (21st), the crop was about 95 percent in. Several of the larger growers were still picking, but probably all smaller ones were through. Quality, as berries came from the field, was con-

sidered generally good.

Frost losses were estimated by Cranberry Experiment Station as 3,000 barrels, this mostly occurring on the night of the 5th. Warnings were sent out also on the 6th, 7th and 13th. This fall has proven to be not a bad frost season. There were also frosts on the 18th and 19th, but no general warnings were sent out in view of the few berries left on the vines.

The month to the 21st had averaged just over two degrees a day colder than normal. There was, however, a sharp reversal in the rainfall pattern. There had been only .47 inch to the 21st, with precipitation for the month normally 4.02. Reservoirs and other water supplies were well up and no trouble was being anticipated at that time for winter flooding. Many flooded for after-harvest trash cleanup and vine recovery.

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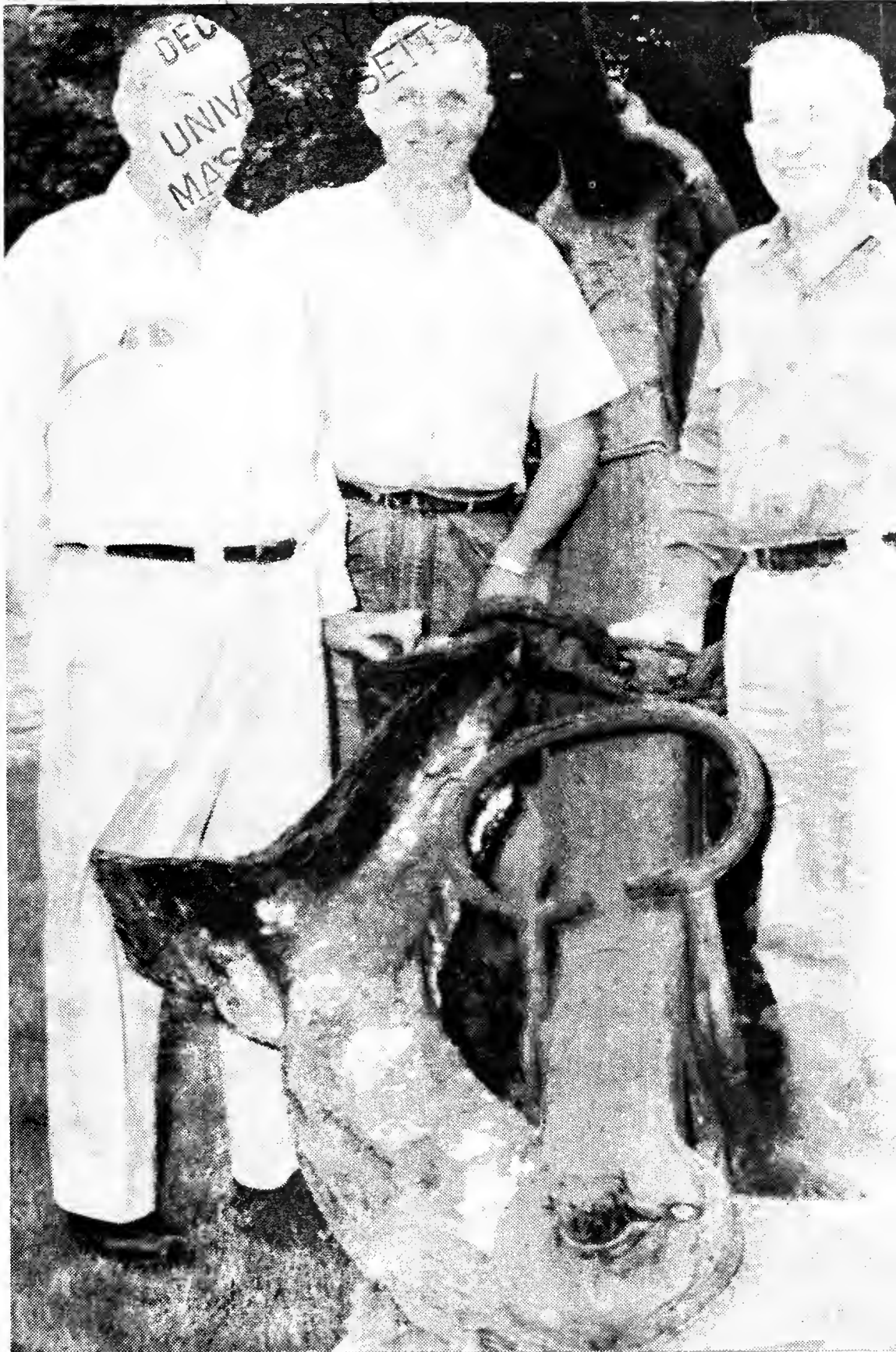
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THE McLELLANS, Hanson, Massachusetts, Cranberries and the Sea. (Story by [unreadable])  
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## FIRE DESTROYS MASS. SCREENHOUSE, BERRIES

Fire destroyed the screenhouse of the Goddard Cranberry Company in the Manomet section of Plymouth, Massachusetts, the night of November 3. A passing motorist spotted the blaze, but the building was virtually leveled before firefighters could make the long run from Plymouth.

Ernest Goddard, son of Harrison Goddard of the company, estimated the loss at \$13,000. There were 300 barrels in storage, loss approximately \$3,000, and \$10,000 in building and equipment.

This was the second fire loss for the Goddard Company in five months, the first being at its Middleboro warehouse, which was severely damaged earlier.

## Northern Wisconsin

There will be approximately 50 acres planted in the Eagle River section of north-central Wisconsin. Thunder Lake (Vernon Goldsworthy) will put in 10 acres, Ralph Sampson 10 acres, Drever and Nelson 10 acres and Edward Querry 20. There will also be spring planting at Manitowish Waters and some planting and expansion in the Hayward area, northwestern Wisconsin.

Early November had brought snow to the north region but not in very large amounts.

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## Sanding

(From The Cranberry Industry in Massachusetts, Bulletin No. 157, 1957.)

Ninety-five percent of reports (of growers) contained sanding information on 96 percent of the total state acreage. The amount of acres sanded during the years 1953-1955 or 56 percent of the total state acreage were 7,552.2, 56 percent of total. Fifty-five percent of the growers sanded with wheelbarrows, 26 percent with jalopies, the rest with railroads, tractor-trailers, etc.

However on an acreage basis only 46 percent was sanded by wheelbarrow, and 42 percent by jalopies.

As compared with ten years ago, less sanding was done during the period of this survey, partly because of economic conditions, partly because the bogs did not need sanding so badly as immediately following World War II. Some preliminary research has been done toward eliminating the apparent need for sanding, but without concrete results as yet.

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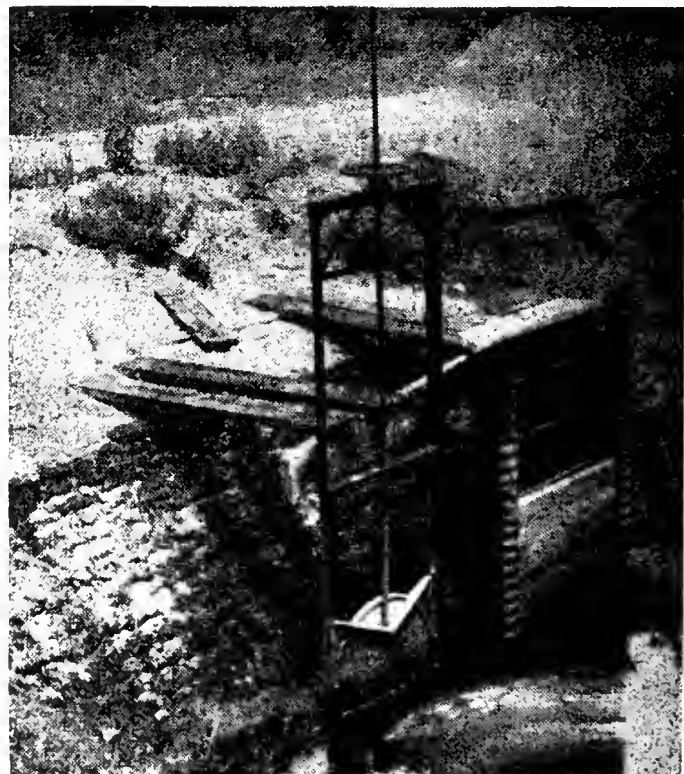
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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



## Extremes of Weather

The 1958 cranberry season will be remembered as another of the extremes so often associated with New England. In place of hurricanes and drought, this season broke all existing records for rainfall. For the six-month growing period from May through October, 27.69 inches of rain was recorded at the Cranberry Experiment Station as compared with 12.90 inches measured during the same period in 1957 when severe drought conditions were experienced. The normal rainfall for the above months is 20.50 inches. Our weather records show that the preceding winter and spring months follow the same soggy pattern.

We have already exceeded our yearly average by over 10 inches with November and December precipitation yet to be recorded or a total of 51.62 inches from January through October. The yearly average is 44.31 inches. One final comment on weather: hours of sunshine are definitely less than last year's record and temperatures are well below normal. Further reference to these weather facts will provide some interesting comments at a later date, particularly the sharp decline of the hours of sunshine and their possible effect on the 1959 crop.

## New Warning System

The Massachusetts harvest was nearly completed November 1. Our new system designed to make the frost messages more useful met with considerable favor, based on reports received from growers. We plan to continue the new system next year. Just for the record, 15 general frost warnings were released this fall compared with 20 in 1957, 20 in 1956, 3 in 1955, and 5 in 1954. These figures include

both afternoon and evening forecasts. Water supplies for frost protection were more than ample in most instances with the result that damage was relatively light—an estimated 3000 barrels. The writer would like to again commend George Rounsville for his splendid work as our frost forecaster during 1958. We are also indebted to the U.S. Weather Bureau, our cooperative weather observers, the telephone distributors, and the radio stations that have cooperated in making the frost warning service effective.

## Feeling In Trade Improved

Our quality control studies are progressing very nicely. Fresh cranberries are being screened, packaged and displayed at regular intervals, both here at the Cranberry Experiment Station and in local stores. These test lots include zineb-treated and untreated fruit and are being displayed with and

without refrigeration. We hope to obtain useful information on the effect of zineb on the shelf life of fresh fruit handled under various conditions. As a part of this study, the writer visited markets in Boston, Cincinnati and Detroit during late October and early November in order to check the condition of cranberries at the terminal market and retail level. Chain store buyers, jobbers, brokers, wholesalers, commission men, produce managers, merchandisers and market officials were interviewed.

Samples of cranberries were purchased in approximately 10 representative stores in each of the above cities, and carefully examined in terms of condition. Detailed results are not available at this time, but it can be stated that the condition of fresh fruit based on this quick sampling method was considerably better than expected. The feeling in the trade is definitely improved over the last three years, due primarily to the fact that prices have been reasonably firm this fall, at least to the present (November 13). This has resulted in healthier markets, improved relations with the trade, and we hope better returns to growers.

## Market Reports

The weekly cranberry market report, prepared for the fresh fruit

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outlet by John O'Neil's office in Boston, is not reaching growers in sufficient numbers to warrant its continuance. We checked very recently with the Market News Service of the U.S. Department of Agriculture which prepares and

publishes this useful report and learned to our dismay that of the 103 individuals requesting this report, only 28 are growers. If the information contained is not serving a useful purpose in acquainting growers with movement by

rail and truck, price and terminal conditions in leading markets in United States, plus a comparison of movement on a weekly basis with a corresponding week the year previous, then it should be discontinued. However, growers and shippers are reminded that a cranberry industry committee supported by the Cape Cod Cranberry Growers' Association petitioned the U.S.D.A. for such a report several years ago. The request was granted, and this report has been issued for at least five years. It is available to all who are interested and may be received by merely writing to John O'Neil, 408 Atlantic Avenue, Room 703, Boston, Mass., requesting that his name be added to the mailing list. In order to keep this mailing list up to date, it is necessary each year for those receiving such information to request that his name be continued on the above list. Some may have overlooked this important detail.

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#### Late Fall Suggestions

Now that the harvest is completed and prospects for better returns to growers seem to be a definite possibility, we offer a few suggestions on late fall management. There is still time to fertilize the thin areas on bogs or areas where the crop was down due to the lack of vigor of the vines and uprights. Woody plants, such as hardhack, meadow sweet, bayberry, maple and other brush should be pulled or dug out along with tussocks of rushes and sedges in order to improve the harvest operation next season. Ditches need to be cleaned on many properties to permit better drainage, thus discouraging the growth of water weeds. The importance of the fall cleanup flood should not be overlooked, particularly this season where water supplies are ample for this important task.

One final note—no word has been received concerning the clearance for Amino triazole for pre-bloom use on bogs. However, we have been assured that our station will be notified prior to the revision of the pest control charts as to whether it can be used during the pre-bloom period.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of November 1958 - Vol. 23 No. 7

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FRESH FROM THE FIELDS

Compiled by C. J. H.

## MASSACHUSETTS

### October Dry

October rainfall total (Cranberry Station) was 2.26 inches, as compared to a normal 4.02, reversing the trend of all previous months of the year, with two exceptions. It was actually a very dry month, only .41 inches to the date. A storm on October 27 brought 1.77 inches.

### Could Affect 1959 Yield

The amount of rainfall in October is important in the size of the crop for the following year. The shortage of rain should indicate a smaller production in 1959, but there was a good deal of frost melting in October (even though the frost loss still remained at 3,000 barrels at end of month), and this may have kept the vines sufficiently moist to overcome the drop in precipitation. With plenty of water, most growers who could flooded bogs after harvest for a wash clean-up. It is also felt that machine picking did less damage to vines, so that lack of October rain may be offset as a factor in the 1959 yield.

### October Chilly

The month as a whole was more than two degrees a day colder than normal, a minus 70 inches for the 31 days. Much of this chilliness took place from the middle of the month on. The year to November first has been minus 10 degrees of normal.

### November Picking

Less than a handful of growers were still picking as usual into early November.

## WISCONSIN

### October Weather Normal

October was normal in temperature and precipitation. This was the first month of the 1958 season when weather conditions were normal. The first few days of the month were unseasonably cold, followed by typical Indian summer weather for the balance of the month. Precipitation came the third week, with some southern marshes receiving two and one half inches. Adequate water supplies are now insured for winter flooding. Average rainfall for the cranberry areas for the year now shows a deficiency of 2.75 inches and ground water level remains 1.90 feet below normal. The extended forecast for November calls for below normal precipitation and above normal temperatures. Average temperature being 32.1 degrees and precipitation 1.99 inches.

### October Ended Harvest

With ideal weather conditions the majority of the marshes had completed harvest by the middle of October. A few of the larger properties completed harvest the latter part of the month. Only a few days were lost during harvest due to rain and the remarkable effect was the absence of any extremely cold weather. As most marshes had added additional picking machines, the elapsed harvesting time per individual marsh was cut appreciably.

### Quality Excellent

Berry size increased considerably in the southern marshes the latter part of September and the first two weeks in October. This

factor helped increase the size of the state crop and to bring crops up to pre-estimates. Berry size in the north continued below normal, due to the late cold growing season. Color was excellent and quality above average in all areas. Several properties in the south averaged over two hundred barrels to the acre and a number of the larger marshes had their largest crops on record.

### Half Shipped Nov. 1

It was estimated that half of the state crop had been shipped by Nov. 1, the bulk going processing. Fresh shipments were picking up the latter part of October and were expected to pick up materially the first part of November. The fresh fruit market was reported holding and growers were optimistically looking forward to better price returns.

### New Color Film

The new colored cranberry film on the Wisconsin Cranberry Industry made by the Dept. of Agriculture Journalism of the University of Wisconsin, in co-operation with the Wisconsin State Cranberry Growers Association, was completed the last of October. The film which is twelve minutes in length was prepared especially for TV, although prints will be circulated throughout the midwest area to schools, county agents, home agents, etc. Several marketing agencies in the state are purchasing copies for distribution in the trade.

## NEW JERSEY

### Rain Hampers Harvest

A continuation of the wet wea-

ther in New Jersey throughout October hampered the cranberry harvest, which was later than usual on most properties.

Rainfall during the month totaled 5.17 inches, which is almost two inches more than normal. This brought the total precipitation in 1958 to 56.08 inches, which is already more than has ever been recorded for an entire year in the Pemberton area. The previous high was 53.64 inches in 1952. Other years in which the total exceeded 50 inches were 1938 (51.25), 1940 (51.20) and 1948 (50.24).

#### October Temperatures Normal

In regard to temperature, the month averaged out at 54.6 degrees F., just about normal. Extremes recorded at the weather station at the Laboratory were 86 degrees on October 10 and 29 degrees on October 6. There were only three frosty nights here on the upland, the 6th, 7th and 14th.

#### Expect 85,000 Bbls.

The 1958 harvest had few surprises. The crop in New Jersey is not expected to vary much from the 85,000 barrel estimate. A few bogs had record crops but this was more than offset by frost failures. Early Blacks did not have the extreme rot condition which was feared would result from the ex-

cessive rainfall. According to Walter Fort's observations the excellent 1958 Howes crop was the best he had ever seen in quality. The trend toward machine harvesting continues to be strong in New Jersey. Economy and the general improvement of bogs are points cited in favor of this method.

## WASHINGTON

### Yield Is Up

Cranberry harvest in Long Beach is finished except for Cranguyma Farms and two or three others. The yields in the various bogs both here and in Grayland varied considerably. Some bogs had more berries than they had expected others had less. The yield of the two areas in Washington will be a little more than was originally expected. The estimated yield from the Long Beach area is around 15 thousand barrels. Grayland and the North Beach areas will have approximately 40 thousand which adds up to approximately two thirds the crop which was produced in 1957. Clatsop county in Oregon has sent in 270 barrels. Practically all the crop in Grayland is in so the above figures are fairly accurate.

### Fresh Demand Exceeds Supply

The fresh market demand for

West Coast berries is very good and more berries could have been sold as "fresh pack" if there were more available.

### Sprinkler Research

The bogs which had sprinkler systems going all night during the May 12th freeze have produced yields in spite of the frost. Those bogs which did not have sufficient water to sprinkle continuously received damage in varied degrees from very severe to moderate. This demonstrates the need for continuous frost protection during periods of low temperature in the blossoming season. It seems that as long as some water is available for freezing the temperature can be held at or near 32°. If all the water that is on the vines freezes then the temperature immediately drops quite rapidly. The problem now is to determine by investigations in plant growth chambers just how much water is needed for a given length of time and temperature. The lowest temperature at which the sprinkler systems will furnish protection is not definitely known. This also is one of the problems which needs to be determined. It appears as though the low point was reached during this freeze. The low temperature at the State bog was 25°. The lethal temperature of course changes with the blossom development. If the Experiment Station obtains all the information it should have then the lethal temperature for each stage of blossom bud development will also need to be determined. This is a rather large order, however, "Chuck" Doughty, Director, feels sure that he can obtain at least part of it in the next year or two.

The weather has been very good this fall. There has been comparatively little rain with quite a lot of sunshine. Maximum temperature for October was 81° on the 16th. The minimum temperature was 29° on the 23rd. There had not been a real killing frost up to Nov. 11. The minimum relative humidity was 38% on the 24th and 25th.

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# Cranberries In North America

by

F. B. Chandler

Research Professor, Cranberry Station  
East Wareham Mass.

In the Sept. issue the entire article "Cranberries in North America" was devoted to acreage as expressed by total acres, size of holding, maximum acreage, and some of the acreage changes that have taken place. This month the changes in varieties will be shown, first by states and then the overall picture. To fully develop this picture, the early surveys and other literature will be used.

Eastwood writing in 1860 described three great varieties—Bell, Bugle and Cherry. These, of course, were berry shapes and not varieties as we know them today.

The first survey made in Massachusetts of the cranberry industry did not give the acreage by varieties, but the last survey gives the acres and percentage of total acres by varieties for 1934, 1946 and '56. This shows an increase in percent of the total for Early Black for each survey up to 62.3 percent. On the other hand, Howes show a decrease in each report to 3.25 percent. McFarlins have also decreased to 0.8 percent and other varieties to 4.4 percent. Of the other or minor varieties, there are only two which have increased in acreage, Round Howes and Foxboro Howes, yet Dr. Franklin left notes indicating there were a number of varieties which yielded better than Early Blacks or Howes.

In Wisconsin in 1924, 55 percent of the acreage was planted to Natives; and in 1956, 58 percent was planted to Searles. In about thirty years Wisconsin made a great change in the variety of cranberries grown. The percentage of acreage listed in 1924 was Searles 10 percent, McFarlin 15 percent, Natives 55 percent and others 20 percent. Through a study of the Wisconsin State Cranberry Growers' Association Reports it is possible to read more about the change in varieties than in some states. Rogers in 1933 wrote "The variety of vine to plant is problematical. Searles, Jumbo, McFarlin and Natives do well." A study of the new plantings by varieties shows an increasing number of acres after 1933 set to Searles, and a decrease

ing number of acres planted to McFarlin and other varieties. When the varieties set on remade bogs are studied, it appears that 1935 was one of the years when bogs were changed from Natives to Searles. The last survey from Wisconsin lists the intended bearing acreage by varieties up to and including 1961. This showed intentions to increase Searles by 480 acres from 1956 to 1961. During the same time, McFarlins would increase 110 acres and Howes 20 acres, and Natives would decrease 20 acres.

From Bain's survey of the cranberry industry in 1928, we realize that the Searles was third in importance and apparently had just advanced from fourth place. From the list of varieties grown at that time in Wisconsin, it is evident

that Wisconsin tried many of the then better varieties from the east as well as selections from their own state. The opinion of many research workers from 1945 on has been that Searles was a variety better suited to Wisconsin than any other variety has been for its section. The data on the change from Natives to Searles in Wisconsin would substantiate the opinion that Searles was well suited to Wisconsin. The change to Searles has been due to its high yield in all locations in Wisconsin.

The percent of acreage set to cranberry varieties has shown the greatest change in New Jersey. The estimate of the acreage in 1924 was 50 percent for Jerseys (Natives), Howes 24 percent, Early Blacks 13 percent, and 13 percent set to other varieties. In the survey of 1933, Jerseys had dropped to 34.8 percent, Howes had risen to 32 percent and Early Black to 19.1 percent. The total cranberry acreage for New Jersey was about the same for both of these surveys but was much less for 1955. In the latter survey, Early Blacks had risen to 72 percent, Howes dropped to 14.1 percent and Jersey to 11 percent. A study of the approximate acres gives a different picture.

New Acreage in Wisconsin Planted to Different Varieties by Years

Year	Varieties			
	Searles	McFarlin	Natives	Others*
1933	15	26	7	12
1934	25	40	5	23
1935	30	14	2	1/2
1946	36	8	5	3

\*Most of other varieties were Howes

Approximate Acreage of New Jersey Cranberries by Varieties and Years

Variety	Year		
	1924	1933	1955
Early Black	1,430	2,281	2,580
Howes	2,640	3,834	510
Centennial	330	357	65
Jersey	5,500	4,161	385
Others	1,100	1,311	60
Total	11,000	11,944	3,600

ure, (see table). Early Blacks have shown a slow, steady increase in acreage, while Howes showed an increase and then a great decrease. The greatest decrease is in the acreage planted to Jerseys, but Centennials and other varieties also showed a decrease. The decrease in acreage has been in the varieties that are affected most with false blossom.

Brown in 1927 wrote that McFarlin and Howes were the most popular varieties in northern Oregon (Clatsop County). In southern Oregon Searles lead in popularity, followed by Bennett and McFarlin. At this time, southern Oregon (Coos County) had relatively small acreage but now it is the principal growing section in Oregon. In 1955, McFarlin variety was planted on 77 percent of the bearing acreage. Stankavich, an Oregon selection made in 1917, was second most planted with 9 percent. Howes, Searles, Bennett and "Black" are also grown in Oregon.

Crowley wrote in 1929 that about three-fourths of the crop came from McFarlin. Howes ranked second at that time and a number of other varieties were planted. By 1955, McFarlin had even a greater lead in Washington, 88 percent of the acreage or 95 percent of the crop.

In Canada, the variety varies with the location. In Nova Scotia, the predominant variety is Natives, in Ontario Searles, and in British Columbia, McFarlins.

The maximum yields recorded of the principal varieties are all over

300 barrels per acre. There are a few growers in Wisconsin who get this amount on a whole section with Searles and a few in Oregon and Washington who get over 300 barrels on whole sections from McFarlins. These growers do not average this every year, but five year averages for some growers will go over 100 barrels per acre. It appears that Searles and McFarlin are the best producers of cranberries in North America at present. Breeding has produced potentials for new varieties for all sections.

#### Sources of Information

In addition to the literature listed in the preceding article, the following were used.

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Subjects to be in later issues under the title "Cranberries in North America": Fertilizer, Frost, Harvest, Insects and Diseases, Soils, and Water.

Most people are anxious to earn money—others merely anxious to get it.

Average Yield of Cranberries per Acre in Wisconsin by Varieties and Years

Variety	Year		
	1948	1952	1956
Searles	99.4	66.9	103.0
McFarlin	76.3	41.1	82.1
Natives	71.1	37.5	63.8
Howes	90.2	50.4	91.8
Berlins	77.3		
Bennett	77.0		
Prolific	29.6		
Others	65.2	39.9	94.3
Total	85.0	54.9	91.8

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ADDRESS

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# *Three Hanson (Mass.) Brothers Engage In Cranberry Growing And Nautical Careers*

**The MacLellans In This Respect Remind Of Early Cape Sea Captains Who Turned To Cranberries—All Are Careful, Competent Bog Owners, Archie Long Employee Of NCA**  
by

**Clarence J. Hall**

We all recall the old jingle of a century or so ago concerning the Cape Cod Sea Captains who one by one "Put by my chart and glass, and took to raisin' cranberry sass."

There is something of a parallel today in the cranberry growing of three Massachusetts brothers. However, paradoxically, they do not come from the Cape but from inland Hanson. They are the MacLellans, one still going to sea, two no longer, but all have bogs, and eventually will retire entirely to growing. One already has done so this year.

Best known in the Massachusetts cranberry world is James Archie MacLellan, who is plant manager for National Cranberry Association at Hanson. He is not known as James, but universally as Archie, and has been with the national canning cooperative, now of course, handling fresh berries as well, "through all its cycles and phases," as he puts it, since 1929. He served a four year hitch in the U. S. Marines, spent mostly in sea duty in the Caribbean area. His vacations today, usually after harvest and shipping consist of a two week voyage on a freighter out of Boston to the same general region.

Retired is the elder, Commander Norman D. from the U. S. Coast Guard after 31 years of duty. Still seafaring is Captain Ernest W., currently in command of the Grace Lines, Inc., passenger-cargo ship, Santa Olivier, 450 feet, deadweight 12,000 tons.

## **Produce 2000 Bbls.**

Together they own about 23 acres and produce approximately 2000 barrels. This may be expected to increase as the bogs are relatively new or rebuilt. Not a large acreage or large production, but the properties are classed among the better managed in Massachusetts.

All three brothers are 100 percent members of NCA. Bogs are separately owned and managed, but there is an atmosphere of the "Three Musketeers", of "all for one and one for all." They all pitch in with various tasks to help the others out, for instance

Norman is the top man on handling gasoline pumps for bog flowage. Archie, as the pioneer grower of the brothers, and the man who has been ashore all the time, has acted as unpaid supervisor and advisor for all three properties. Norman is now ashore himself, but Captain Ernest will still spend some years at sea.

## **Archie**

Archie first went into cranberries, by building a bog in 1940, one of three acres which has now been increased to seven. This is in Hanson off Main St. It was built on 30 foot deep peat, formerly mostly a maple swamp. All the MacLellan bogs have a deep peat bottom, as many bogs in Hanson do have. This is flowed from Wampatuck Pond, water pumped on by gasoline and returned by gravity. Although Archie began his work with present NCA in 1929 he had done cranberry work summers while going to school, as had also Norman. They were both coopers of cranberry barrels as was their father Angus.

As far as he knows Archie believes he was the first to drive a shovel on a bog with its crane, resting on mats to remove stumps, instead of using the older method of blasting by dynamite. His second property, five acres is in Halifax. He bought this and rebuilt it.

His vines are all Early Blacks. His top crop was 1200 barrels in 1957 and his average is approximately 85 barrels to the acre. These are beautiful, neat pieces of property, ditches are sharply clean.

He does all his own weeding, being one of the few of those careful growers who go about the bog in stocking feet, not to injure vines, or trample berries.

Archie, while not a commercial bog builder has the reputation of being a good builder. He bought another bog on Indian Head Street, Hanson, which is flowed from Indian Head Pond, with an electrical pump. This is a bog of three acres, on deep peat, set ¼ acre to Early Blacks the rest Howes. This is now the property which Commander Norman has retired to, and is operating.

It is an old bog, and it followed the contours of the land, and as the Commander says, it "has the most coastline of any bog" the MacLellans own.

The bog of Captain Ernest is on Lakeside Road, Hanson, and is flooded from Oldham Pond by gas pump. It was the property of the late Sam Drake and bought in 1950, rebuilt and largely managed by Archie. This is set to ½ Early Blacks and ½ Howes. It has averaged 75 barrels to the acre.

Archie has a Darlington-St. Jacques picker and Ernest two Westerns.

## **Respect Early Growers**

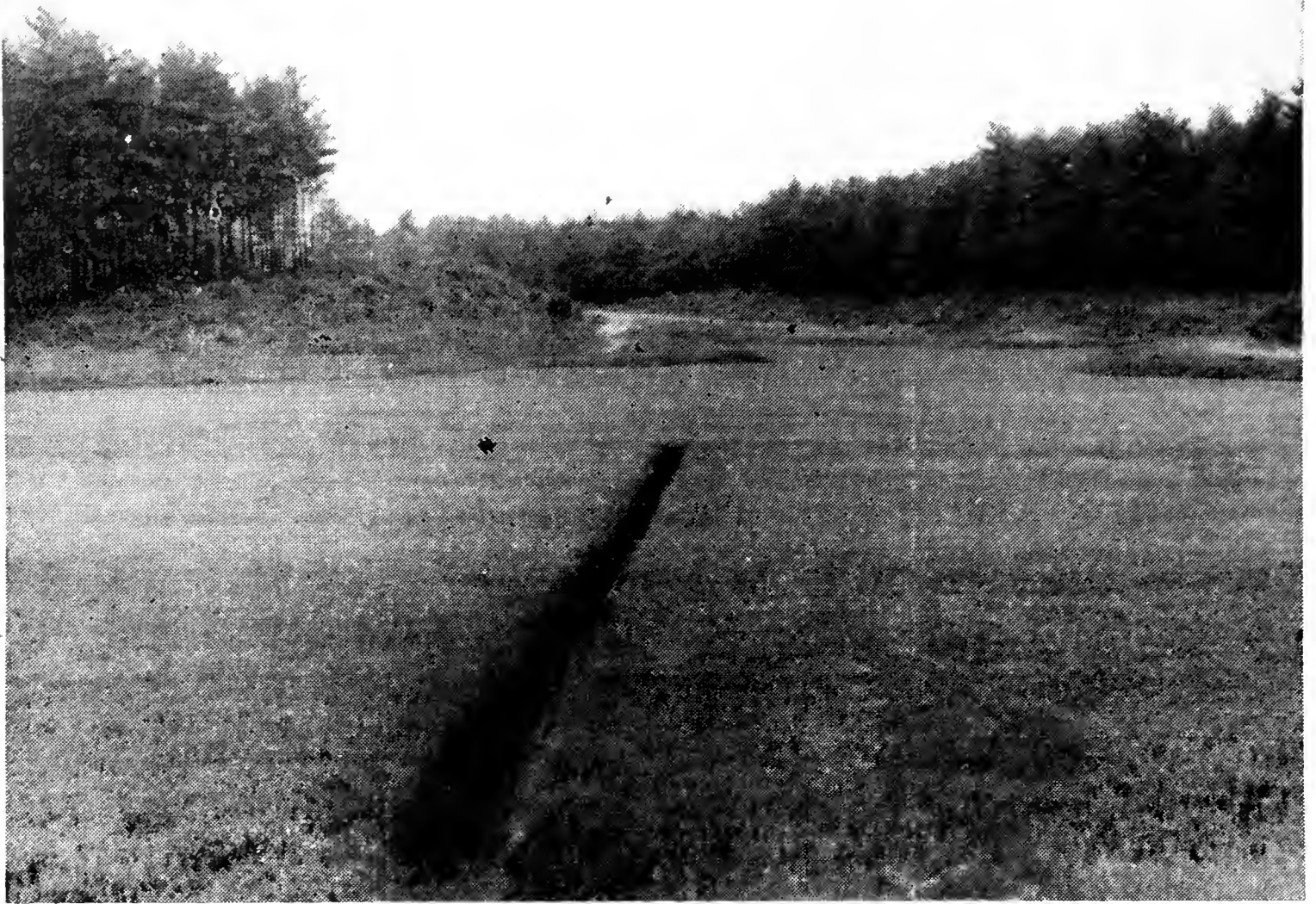
All three brothers, especially Archie, who is admittedly the most experienced grower, have a lot of respect for the fundamental knowledge of the early Massachusetts growers. "You might say we ourselves are 'old-style' growers," he says. But we believe in adapting our practices to modern knowledge as it comes out and seems to be practical, to us. Every bog is different.

"We still stick to hand weeding

---

## **OUR COVER**

Archie, Norman and Ernest. The MacLellan brothers are standing by a huge anchor, which was dredged up from Nantucket Sound. It is believed to be of German make and from a vessel lost in the Sound many, many years ago. It is on the lawn at the home of Norman, where it has attracted much attention, been photographed for newspaper articles and studied by authorities on maritime matters.



Showing one of the nearly weedless bogs of the MacLellans, note sharp sided ditch.  
(CRANBERRIES Photo)

—we think it is best. We clean our ditches by hand and we sand, using wheelbarrows and manual labor in spreading. We fertilize, use a lot of 5-10-5. We do not have to get vine growth as the bottoms are peat and not sand.”

Archie and his brothers agree that important in cranberry growing is “to do the right thing at the right time.” That applies to weeding, use of chemicals, fertilizers or anything else. “Timing is vital.”

He continued, “We had rather lose sleep any frost night, than flow when it is not necessary. We have a certain temperature which we watch and we don’t start putting the water on until that point is reached. We hold off until the last possible minute and then if conditions are still dangerous we do flood. We seldom leave water on two or three days. We take it off and put it back. We have a relatively good water supply at

all points. We were a little short in the drought of 1957, but we usually have enough.”

All three were born in Hanson, where their father, as well as a cooper was retired as chief engineer of the Hanson plant. Cranberries and cranberry growing were nothing unknown to them.

Archie puts in all his spare time, evenings, week-ends, holidays, working on his bogs. He has a full-time man, as does Capt. Ernest. Norman is now doing his own work. Archie has always lived in Hanson, except when he put in the four years in the marines, from 1923 to 1927. He was attached to the famous old U. S. S. Rochester, then based at Balboa in Panama. He was on what he calls “banana” duty covering much of the Caribbean Islands and South American ports. For a time he served as assistant warden at the Naval Prison at Brooklyn.

It was because of this marine

training that he became acting chief and almost complete staff of the Hanson police department, on a part time basis. This was during the war and he said he felt it was his patriotic duty to help out. He was also the first president of Plymouth County Police Officers’ Association. Then he gave up police work entirely, it not being as much to his taste as cranberry activities.

He has worked up through all the degrees of Masonry to 32nd and is a Shriner. His lodge is Wampatuck of Hanson. He is a charter member of the lodge. He is a member of the Hanson Congregational Church, as are all three, Norman now being treasurer. He has been a member of the Hanson Finance Committee for nine years.

He belongs to the Cape Cod Cranberry Growers’ Association and is a member of the South Shore Cranberry Club, meeting



at Kingston.

In his duties as plant manager of the main Hanson plant, he is in charge of shipping fresh and processed berries. In this capacity he is the NCA representative with whom many of the growers come in contact when they come to NCA headquarters.

#### Norman

Norman began his career by entering the maritime service, but wound up in the coast guard, just the opposite from Ernest. For a time he was stationed at the Woods Hole base on the Cape as commanding officer of the buoy department. He commanded 75-footers and well recalls the days of the rum runners.

He spent about a year in Greenland, doing duty on an ice breaker and supply ship. "I didn't see any cranberries growing there," he says, "but there are a surprisingly lot of crops grown. It can be cold, but I've seen it a lot warmer in winter than back home. There are the long summers, the long days with only an hour or two of twilight darkness."

He was honorably discharged from the Coast Guard C. G. C. Acushnet at Portland, Maine this year.

#### Ernest

Ernest entered the employ of the Grace Line as an ordinary seaman and worked his way up to captain. His command, prior to the Santa Olivier was the Santa Ana, a freighter. The famous line covers ports in the Caribbean and South America, particularly on the S. A. West Coast, as far as Columbia, Ecuador and Chile.

He has been with the line 25 years last summer. One of his runs was from New York to Chile bringing back bananas.

During World War II he was torpedoed three times, his ship sinking on each occasion. The first time he was chief mate on the Santa Rita, and that time he spent eight days in a life boat. Four seamen were lost. This was two days out from Philadelphia bound for Panama. The second time was on the Santa Catalina, a Liberty ship and they were in Mona pass (called Submarine Alley) between

Puerto Rico and the island of Hispaniola. The third time was in the Indian Ocean, near India on the Jose Navarro. The crew was in lifeboats for 24 hours. "D-Day," the invasion, saw him doing service from Hull, England.

#### All To Retire To Cranberry Growing

When you get all three brothers together, which hasn't been too often possible, with their nautical knowledge and familiarity with far-away places, the conversation is apt to be an odd combination of the maritime and agriculture. But on most things they seem to agree. One is that they all intend to retire to cranberry growing. Another is that they do not intend, at least under present conditions, to expand their holdings any. They feel they have enough, cranberry income in retirement—when and if cranberry prices increase. They will find satisfaction in growing cranberries.

"Perseverance" is the answer to growing cranberries says Captain Norman. And all have made successes in careers, other than growing cranberries where this trait counted.

Norman's fifteen year old son spent last summer in active cranberry bog work, attested to by clean, sharp ditches of the property.

"Cranberry growing," says Captain Ernest, "might be described this way, a matter of work, worry, weather, worms and water."

Which again smacks of the nautical as well as cranberry cultivation. This "cranberry reporter" must confess that at times during the interview the far-reaching experiences of these three Hanson brothers in trying to set their remarks down straight, had him "all at sea" himself.

---

## Cranberries Advertising Pays Big Dividends

## Ocean Spray Howes \$4.20 A Case

National Cranberry Association announced its opening price on Late Howes November 13, this being \$4.20 a case or \$16.80 a barrel. Blacks were opened at \$4.00 or \$16.00 a barrel, which price in the main has been held.

This is a smaller differential between Earlys and Lates than it was in former years, but still an increase.

Shipments for Thanksgiving trade began the week of November 3rd, increased week of the 10th and by the 17th will be in full swing.

---

#### RAINFALL STUDY

To attempt to find out more about how nature makes rain, a group of scientists left Woods Hole, Massachusetts recently. Precipitation of course, is a vital factor in any form of agriculture, cranberry growers using more water than most types of farmers. The scientists will concern themselves primarily with the collection of sea particles in the air, one of several hygroscopic nuclei necessary for the formation of rain. The sea salt nuclei are deposited in the air by the action of breaking waves, it is reported.

The group took off in the Oceanographic's research aircraft for a flight in the tradewind area over the Caribbean. The group has also done considerable research on the subject of artificial rainmaking. This study is not concerned with artificial precipitation, but is trying to find out what makes natural rain.

(Agricultural Research)

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#### POMOLOGIST TRANSFERRED

Professor John John S. Bailey, who has been stationed at the Massachusetts Cranberry Experiment Station as pomologist has been transferred to the University of Massachusetts, Amherst. He and Mrs. Bailey were feted before leaving by a farewell party at the East Wareham Methodist Church.

# Oregon Cranberry Industry Shows Greatest Progress In Last Decade



Continuing a series of articles sponsored by the Cranberry Institute, presenting statistical data about each of the major cranberry-producing areas. The second is Oregon, with comments by Jack Dean, prominent Bandon cranberry grower.

Charles Dexter McFarlin of Massachusetts may not have started a "Cranberry Rush" when he first planted Cape Cod cranberry vines in Coos County in 1885, but he did develop a cranberry variety that is Oregon's favorite and produced in greatest volume.

For 20 years, McFarlin's original plantation, bearing fruit to this day, represented Oregon's cranberry industry. It wasn't until 1906 that other growers followed his wake and began testing the cranberry productivity of Oregon's spagnum moss. Greatest strides have been made in the last decade with plans for more acreage in the near future.

Because of this late start in cranberry cultivation, Oregon's cranberry bogs are comparatively recent, and by the same token, many of its growers are newcomers to the industry.

Bandon grower Jack Dean is one of these newcomers. Adding to his acreage each year, he now has 10 producing acres with a yield that has gone over 130 barrels an acre. Mr. Dean's policy has been to build what he can put in and take care of himself. "A bog," he says, "should be large enough to support the necessary equipment for efficient operation, but small enough to be family operated." His energetic helpers are Mrs. Dean and his father, working together as a well-organized team, with his only additional help at harvest time.

A former director of National Cranberry Association, Mr. Dean was not a candidate in the last election because of the demands of his expanding cranberry operations. By becoming a cranberry

grower, full time, Mr. Dean is finding results well worth the concentrated effort.

Most Oregon cranberry growers have small holdings, about 4 acres or less, but although part-time growers, their bogs are well equipped and their yield per acre is high.

Oregon reached its peak yield in 1940 when the average was 87.9 barrels per acre. This historic climb from 21.4 barrels in 1930 can be traced on the chart and statistics listed on the opposite page.

It can be noted that the 140 cultivated acres, which produced 3,000 barrels in 1930, expanded to 490 acres in 1957 with a crop of 41,000 barrels.

As in the preceding month's article on Wisconsin, 1939 is used as the reference point for easy comparison. The 140 acres harvested that fall and the yield per acre of 42.1 barrels are considered 100%. Although Oregon's yield took a turn upward in 1940 to reach its highest point of 87.9 barrels per acre, there was no appreciable increase in acreage until 1946 when it was 230 acres, 164% or 64% higher than 1939. The yield in 1946 was 65.7 barrels, 156% or 56% higher than 1939.

1957 acreage, the last recorded by the Department of Agriculture on the chart, was 490 acres which is 350%, a 250% increase over

1939. The 1957 yield was 81.6 barrels or 194%, a 94% increase over 1939.

November crop figures from the U. S. Department of Agriculture place the Oregon 1958 harvest at 31,000 barrels. This is 1500 barrels lower than the October estimate and 10,000 barrels lower than last year.

McFarlins compose about 77% of the bearing acreage, and Oregon's other varieties are Stankavich, Howes, Searls, Bennetts, Blacks and Centennials. It is the McFarlins that help give Oregon its high yield since they are larger than many other varieties, produced in volume, and about the same size as the Searls.

The average freezing point of McFarlins is 29° and bogs are equipped with alarms to warn growers when the temperature is reaching the danger point.

Rain water, held by narrow dikes, provide flood water in the winter and over 70% of Oregon bogs have this flood control.

Irrigation systems are made necessary because of the dry summers and growers irrigate 3 or 4 times a week or when necessary. Heavy rains in the fall make water harvesting practical and the water reel is in general use. Some 3,000 barrels of berries were dry picked this fall for the fresh market and these were harvested by Western picker, and a few hand scooped. Oregon growers deliver to National Cranberry Association which received the dry picked berries in chaff, but the water scooped berries are cleaned by growers who have devised ingenious methods of removing the leaves and debris.

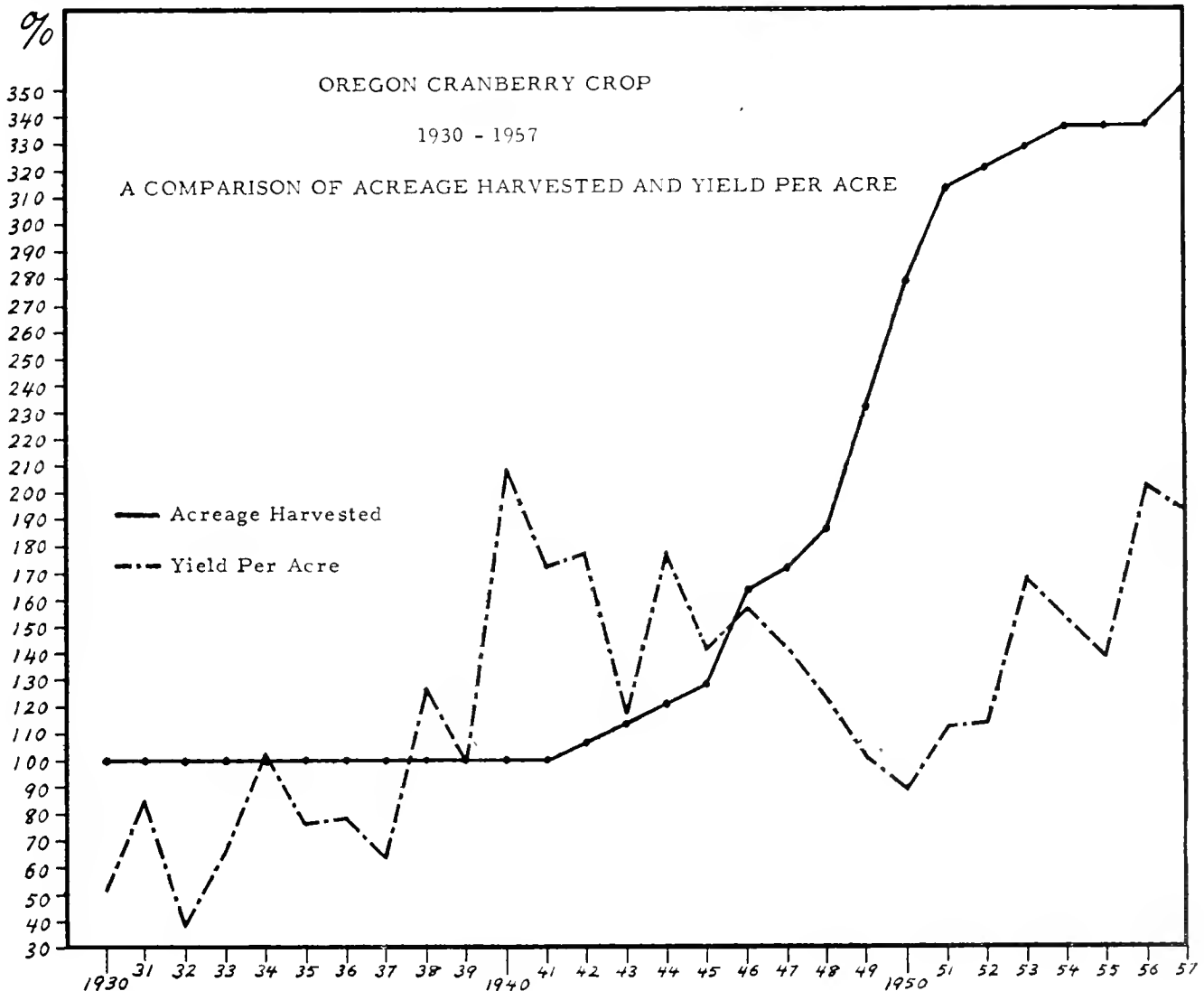
Being a newcomer has not limited Oregon's progress. Even small bogs are well equipped with the necessary machinery for present day production and harvesting. Oregon's yield per acre is on a par with Washington's and the west coast states are second only to Wisconsin.

Oregon's future points to in-  
(Continued on Page 16)

**OREGON CRANBERRY CROP\***  
1939 = 100%

Year	Actual Acreage Harvested	% Acreage Harvested	Actual Yield Per Acre	% Yield Per Acre
1930	140	100	21.4	51
1931	140	100	35.7	85
1932	140	100	16.4	39
1933	140	100	27.9	66
1934	140	100	42.9	102
1935	140	100	32.1	76
1936	140	100	32.9	78
1937	140	100	27.1	64
1938	140	100	53.6	127
1939	140	100	42.1	100
1940	140	100	87.9	209
1941	140	100	72.9	173
1942	150	107	74.7	177
1943	160	114	49.4	117
1944	170	121	74.7	177
1945	180	129	59.4	141
1946	230	164	65.7	156
1947	240	171	59.2	141
1948	260	186	51.2	122
1949	325	232	42.5	101
1950	390	279	37.7	90
1951	440	314	47.3	112
1952	450	321	47.8	114
1953	460	329	70.2	167
1954	470	336	63.8	152
1955	470	336	58.1	138
1956	470	336	85.1	202
1957	490	350	81.6	194

\*Figures from the United States Department of Agriculture



\*Figures from the United States Department of Agriculture

(ADV.)

Thirteen



NOVEMBER is turkey month. It is also at the Thanksgiving dinner that cranberries are most consumed. This has been so since the time of the Pilgrims. While it has not been proven that these colonists at Plymouth ate cranberries and turkey

at the first Thanksgiving dinner this does not matter. Certainly for many, many generations turkey and cranberries have been traditional Thanksgiving dishes. A salute to this noble bird in November. (CRANBERRIES Photo)



## TIDE TURNED—WE DON'T KNOW YET

"IS THE TIDE TURNING?" we wrote as an editorial last month. We meant, of course, is the cranberry depression over.

Now, in mid-November it does seem that cranberry matters are definitely looking up. Prices have been held steadier by the majority of shippers. This in spite of the fact that the U. S. crop has not decreased in latest USDA estimate.

The industry may be working its way out of its problems fairly well, and certainly the prices of fresh and canned sauce as a whole have been more stabilized this year than in a number of years and growers probably will get returns which will be considerably higher. It may be that growers from now on can look for better prices.

It seems there is an entirely different and better situation developing in the cranberry industry. We hear murmurs of encouragement from many. There is no jubilation as yet—growers have had false enthusiasm for too many years to be unduly optimistic.

Thanksgiving is the major market of the year, with NCA handling about 50 percent of the fresh crop. If prices can be made to hold up during this buying period November will be a true Thanksgiving month for the growers. Ending of fresh market is now a rather nip and tuck race.

## "CRANBERRIES IN NORTH AMERICA"

ONCE AGAIN we call attention to the series of articles "Cranberries in North America," by F. B. Chandler. We believe this to be a remarkably concise study into which has gone an immense amount of research. There are over-all facts which have never been brought out before in a single series.

Most growers probably knew that more Early Blacks were being planted than Howes. Many probably did not know the extent to which berries known simply as "Natives," were formerly grown and sent to the market. Probably very few growers knew before the article in this issue that the most prolific producers in North America at present are the Searles, originating in Wisconsin and the McFarlins, originating in Massachusetts.

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(For any who missed and desire the first of the series, September issue, there is a limited number of back copies available.)

# SERVING THE WISCONSIN GROWERS

## OREGON INDUSTRY

(Continued From Page 12)  
creased acreage by 1960, which is expected to bring Oregon up to Washington. Most of this will be an expansion of present holdings as Oregon growers join Jack Dean and other prominent growers to make cranberries a full-time business.

Source: "A Survey of Oregon's Cranberry Industry," April 1957 by F. B. Chandler.

## Berry Estimate Rises Again

November United States Department of Agriculture report issued yesterday shows a still increased cranberry crop. Preliminary estimate was for 1,076,500 barrels for the United States; estimate is now 1,127,000. The figure for 1957 was 1,050,000 and the five year average was 953,250.

In this latest estimate, Massachusetts has gone from 570,000 original to 610,000. Massachusetts average is 550,000.

New Jersey has remained the same with the original estimate of 88,000. Wisconsin has increased to 340,000 (same as October estimate) from the original 335,000.

Washington has gone up from 49,500 to 58,000. Oregon is the only state which has gone down with an original estimate of 34,000 to 31,000, but this is much higher than the five year average of 22,790.

In Massachusetts this year the crop in Barnstable County, or Cape Cod proper was up over last year and previous seasons adding to the increase.

## NEW SCREENING SET-UP

Charles Nelson, Naheotta, Washington, had a couple of Grayland folks build him a screening set-up for this fall. He dumped into a shaker-viner equipped with a strong blower. This eliminated vines and leaves.

From there the berries climb by elevators to a large storage hopper which feeds into the separator. From the separator the berries go by elevator into a sacking hopper. His operation is a three-man one. Charlie picks steadily while the

vines are dry. A neighbor, Joe Rowe, transports the berries from the field, screens berries and fills sacks. His wife does the sorting.

Hoppers eliminate the necessity of having a person on the job continually. It appears to be a system which makes very efficient use of space. His berries go into a side door and an "L" and end up right at a loading point on the end of the building. ("The Cranberry Vine," South Bend, Washington.)

## Late Massachusetts

The first thirteen days of November were nearly normal in temperature, but this was due mostly to a warm Nov. 12th., otherwise month was running chilly. Temperatures to the 13th were minus 12.

Rainfall to that date as measured at State Bog was 1.73 inches, with the average for the month 3.46, so first half was about normal.

Sunshine factor for October was a plus 20, which while not too important in size of crop of 1959 will add to the under-normal amount for the year as a whole to

date. November sunshine is an important factor in size of crop for succeeding year.

One or two growers still had not completed harvest to the 13th.

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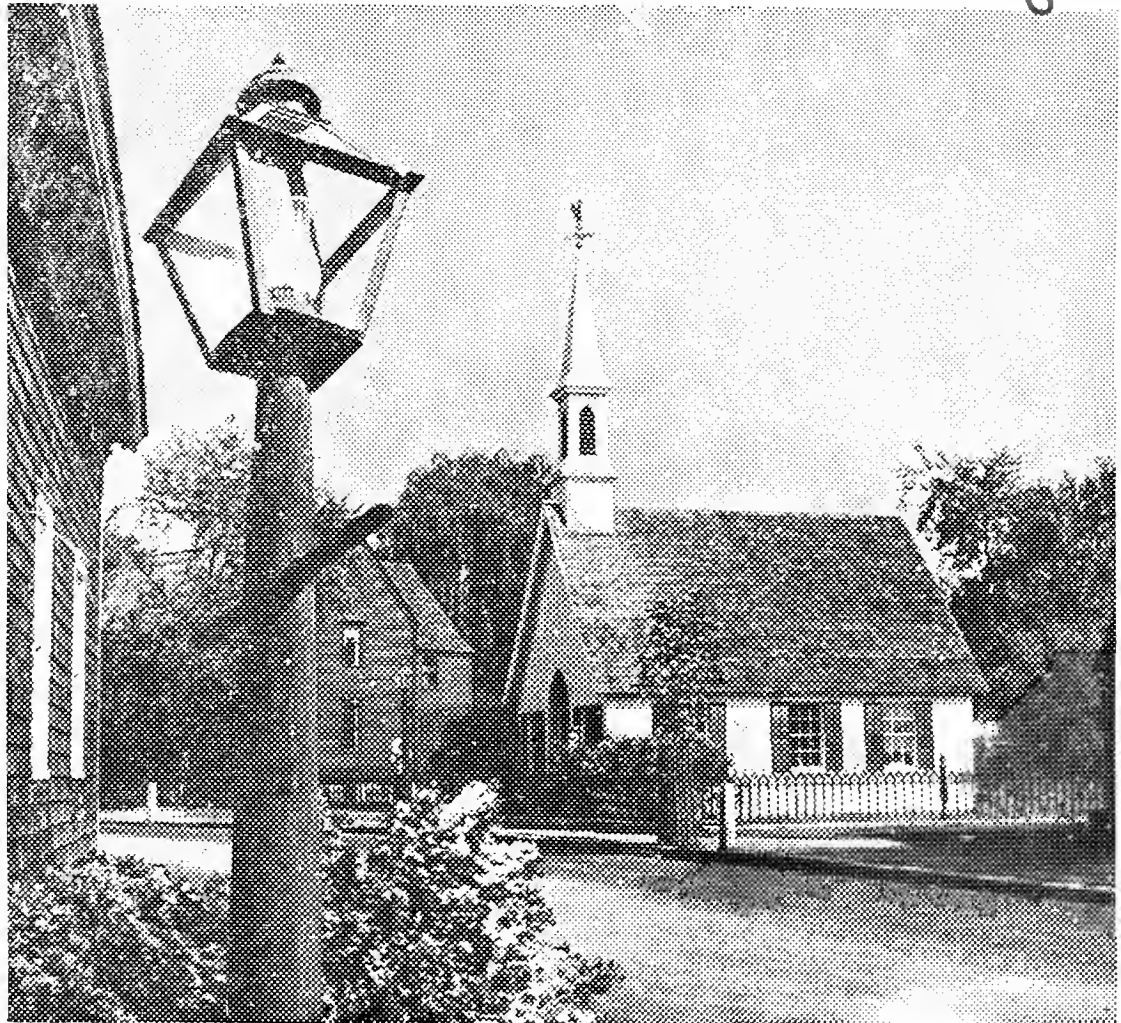
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**CONTINENTAL**



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### *British Columbia Growers Organize*

Still another cranberry association has been formed, this being the British Columbia Cranberry Growers' Association. It held its second monthly meeting in November and has a dozen members.

President is Joseph Dawson; vice-president, Hines Kennelle; secretary-treasurer, Mrs. Phyllis Muir. Executive committee consists of the three officers and Norman V. Holmes.

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## Norman Holmes Visits East

Norman V. Holmes, New Westminster, British Columbia, formerly of Carver, Massachusetts and now growing cranberries at Lulu Island, Vancouver with "Fritz" Shaw and James Thomas also formerly of Carver was a visitor in Massachusetts in mid-November. He has recently been named a director of Ocean Spray of Canada, Limited, a subsidiary of National Cranberry Association and was at the meetings of directors of both cooperations at Boston November 20, and 21.

Holmes says interest in both cranberries and blueberries is increasing in Vancouver Island (Lulu Island) and new acreage is going in. He flew east from Seattle in a trifle under seven hours. While East he shot two deer in Maine and had recently shot a moose in British Columbia.

He continues to be pleased with living conditions and cranberry production in the Vancouver region.

### DR. CHANDLER PREPARING BULLETIN

Dr. F. B. Chandler, Mass. Cranberry Experiment Station has nearly completed a bulletin to be called "Cranberry Varieties of North America". It will be submitted to the University of Massachusetts for publication. This, as the title indicates is a long and comprehensive study of varieties, well known and lesser known, and their characteristics.

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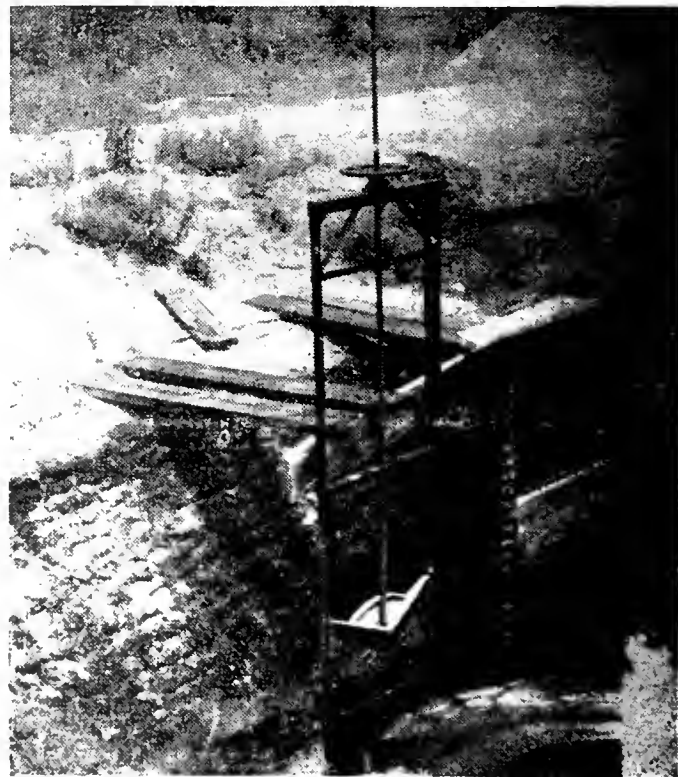
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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



Editor's Note—The following article entitled CRANBERRIES was prepared by the writer of this column for the Outlook Edition of Farm Economic Facts which will be published by the University of Massachusetts in early January. Since very few growers receive the above publication and may be interested in the viewpoints expressed, it is presented below for their consideration:

## The 1958 Crop

Weatherwise, Mass. cranberry growers experienced another of the extremes so often associated with New England. In place of hurricanes and drought, this season broke all existing records for rainfall. A total of 54.62 inches of rain has been measured at the Cranberry Experiment Station from January through October, which already exceeds the yearly average of 44.31 inches by over 10 inches. The number of frost warnings released during the spring and fall months were substantially above normal. However, ample water supplies were available to protect the bogs by flooding so that frost damage was negligible.

In spite of these unfavorable conditions, Massachusetts growers have equalled their second crop in history, exceeded only by the record production of 1953. The New England Crop Reporting Service estimated in November that the Massachusetts cranberry crop was 610,000 barrels, which is 8 percent greater than the 563,000 barrels harvested in 1957, and 11 percent above the 10-year average of 550,500 barrels. Weather conditions retarded coloring of the

berries and delayed the start of the harvest and initial fresh fruit shipments by approximately two weeks. Berries were above average in size and the general keeping quality by mid-November exceeded expectations.

## Trends and Outlook Acreage

The cranberry acreage in Massachusetts reached its peak in 1948 and 1949 when approximately 15,000 acres of bog were being cultivated in the state. Since that time the commercial acreage has gradually decreased to 13,000 acres according to the latest U.S.D.A. figures. It is interesting to note that this is the smallest acreage reported since 1905. The downward trend in acreage is expected to continue at a declining rate as marginal bogs are grad-

ually abandoned during this period of economic adjustment.

## Size of Bog Holdings

The number of bog holdings or ownerships has declined steadily from a peak of 2,148 in 1924 to 962 in 1956. The average size of holdings, on the other hand, has increased steadily from 6.5 acres in 1924 to 13.7 acres in 1956. The trend to larger ownerships is consistent with other agricultural enterprises within the state and country.

## Production

Cranberry production in the state has increased slowly but steadily in spite of a decrease in acreage. Production in 1905 from 13,000 acres of bog was 165,000 barrels, or an average of 12.7 barrels per acre. In 1958, the estimated Massachusetts crop is 610,000 from essentially the same acreage, or an average of 46.9 barrels per acre. Production of 605,000 barrels or more was realized for the first time in 1948 when a crop of 605,000 barrels was harvested. During the last 10 years this figure has been exceeded in 1950 with a crop of 610,000 barrels, a record of 690,000 barrels in 1953, and the present crop of 610,000 barrels. The upward trend in production

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is expected to continue if returns to growers show a reasonable improvement.

#### Labor

Adequate supplies of seasonal as well as full-time workers continue to be a problem. Puerto Ricans are imported each season to help supplement the local harvest labor supplies. Industries with higher wage scales are attracting many key workers from the bogs. The major alternative is greater mechanization of the entire industry as a means of reducing the tremendous amount of hand labor involved in the production, screening, packaging and processing of cranberries. Definite progress has been realized in this area as evidenced by the increased use of low-gallonage ground spray rigs operated by one man, aerial applications of fertilizer and pesticide concentrates, increased use of picking machines, installation of new automatic packing and processing equipment, and the efforts of a full-time agricultural engineer who has recently completed his first year of work at the Cranberry Experiment Station.

#### Marketing

There is general agreement that the key to the problem of correcting the industry's economic position rests in the field of marketing. The returns to growers for a number of years have been discouragingly low; in fact, below the cost of production in many instances, due primarily to burdensome surpluses in freezers. Corrective steps, however, are being taken to reduce these inventories which are now at manageable levels. Aggressive marketing, merchandising and promotional programs have been developed and are now in operation to move a greater volume of cranberries. Special emphasis has been devoted to the increased consumption of a new vitamin C-enriched cranberry juice. Rigid quality control programs have been developed and are in operation for both fresh and processed outlets. As a result of these programs, surpluses have been

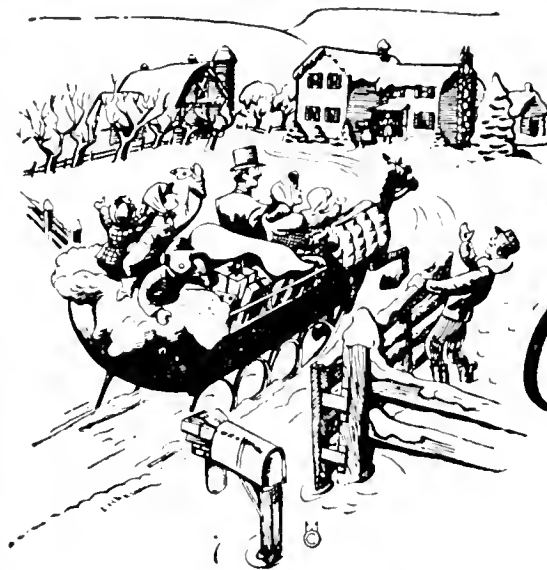
reduced as indicated earlier and returns to growers for the 1957 crop are expected to show a substantial improvement over 1956—the first in a number of years. There is every indication that the cranberry industry in Massachusetts is making steady progress in its recovery from prolonged economic ills.

#### Dr. Cross Comments

The following timely weather notes were prepared by Dr. C. E. Cross and are presented as follows:

"The Weather and the 1959 Crop Prospect—The 1958 crop is in and it looks now as though it would be the second largest

(Continued on page 14)



## Holiday Greetings

Over the river and through the woods... as families everywhere gather in close harmony to enjoy this warm and wonderful season, we would like to express our wishes for a joyous holiday to one and all.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of December 1958 - Vol. 23 No. 8

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## FRESH FROM THE FIELDS

Compiled by C. J. H.

### MASSACHUSETTS

November turned out to be a warmer than normal month, despite a very cold ending. The first portion of the month was warm, extending into the mid-part. The month ended with a plus of 67 degrees, (Boston Weather Bureau) or daily average of 46.6 degrees, slightly more than two a day.

Last two days brought full winter cold, with temperatures down to around 15, a slight dusting of snow on November 30 morning. A little ice formed on puddles, and ponds. There was even a little skim on sheltered salt water.

#### Mild Winter?

There was a warm April and this with a warmer than average November is considered to indicate a winter milder than usual. This is a formula worked out at Mass. Cranberry Station and Boston Weather Bureau was quoting odds 4-1 that winter of '58-'59 will be warmer. Boston records show that in four years out of five, with warmer Novembers, this is so.

#### Rainfall Normal

Rainfall for the month was practically normal, 3.38 inches as compared to average of 3.40. Precipitation was also rather well spaced. Few bogs were flooded for winter as of December 1st, but there will be no trouble in winter flowage.

#### Fall Work

Fall operations were about at a normal for recent years in sanding and other post-harvest work. However, for the first time in several years growers are talking of rebuilding bogs which had been

allowed to deteriorate.

#### State Average Up

With 610,000 barrels the state average for production crept up a little. Based on current estimated production average will be nearly 47 to the acre.

Probably about 75 percent of the entire fresh crop had been shipped by end of the month, Blacks, practically all before Thanksgiving and some shippers were short by the end of the month.

### NEW JERSEY

#### November Mostly Mild

Except for the last week, November in the cranberry belt of New Jersey was quite mild. Only on the last day of the month did the daily maximum fail to go to at least 50 degrees and 14 days were

in the comfortable sixties. Very cold nights from the 23rd through the 30th however, brought the average temperature down to 46.9° for the month, which is only .7° above the normal mean for November.

#### About Normal Rain

The total rainfall during the month measured 2.53 inches, which is about an inch (.93) less than normal. This was only the third month of this year during which the rainfall has been below normal. June and September were the other months which also had deficiencies. The total rainfall for the first eleven months of 1958 now amounts to 58.61 inches. This is a new annual record, already exceeding the previous high of 1952 by 5 inches. The normal annual rainfall is 43.16 inches.

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### Growers Meet

On November 25 a group of cranberry and blueberry growers attended the Cranberry-Blueberry Advisory Committee meeting at the New Jersey Experiment Station in New Brunswick. Discussion of plans for future research centered mostly on new cranberry varieties, nutritional studies, rot control, fundamental studies of organisms causing cranberry rot and problems connected with developing the Switlik Research Bog. Blueberry problems were also discussed, special consideration being given to keeping quality of the harvested fruit, the new variety program, marketing problems, nutrition, and viruses. Growers attending the meeting included John Bertino, Stanley Coville, Jack Cutts, Tony DeMarco, Walter Fort, Duke Galletta, Fred Genard, William S. Haines, Ed Lipman, Fred Scammel and Vinton Thompson.

year, Ted Boardman reported as being one of those to make additions. He has two and one half acres of newly planted bog this year and is getting another two acres ready to plant.

### Experimental Plots

Experimental plots designed to test various weed killing chemicals on cranberry bogs were put on in the Bandon area the first  
(Continued on Page 16)



**Merry Christmas**

Let the joyous holiday bells ring out our bright and happy Christmas greeting to all our wonderful friends and patrons. May this season of cheer find you enjoying all the health and happiness in the world. May your Merry Christmas be rich in all the best in life.

**DECAS BROS.**

WAREHAM, MASSACHUSETTS

**GROWER and SHIPPERS of  
CAPE COD CRANBERRIES**

### OREGON

#### Harvesting Ends Mid-November

Harvesting wound up generally in mid-November but with a few still picking to nearly Thanksgiving. Most of the growers agree that the frost damage last spring is the main culprit to make production smaller than that of 1957. Another cause was that early in the picking season along came temperatures upward of 85 degrees and caused scalding conditions where sprinklers did not bring temperatures down.

#### Late Fall Frost

Conversely, in the latter days of the harvest season Southwestern Oregon experienced a sharp change in weather. There were two nights of wintry conditions which brought temperatures down to around 20 degrees. A few growers had frozen fruit as a result of the freeze. But most of the few berries left were to be water picked and were already under water so no extensive damage was done.

#### New Acreage

Several new bogs are being planted in the Bandon area this



Our holiday greetings to all our grand friends and patrons. May the joys and good cheer of the season be yours to overflowing.

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WOBURN, MASSACHUSETTS



# ***New NCA Cooler Storage Testing Fruit Hold-up And Late Demand Pilot Operation At Onset, Mass. Plant Has 10,500 Boxes of Assorted Berries— “Airborne Cranberries”***

An experiment is being carried on by NCA at its Onset, Massachusetts plant that can be watched with much interest. This is to hold fresh cranberries in cooler storage after harvest for a number of months.

The purpose is two-fold; first to test the ability of the fruit to remain in good quality into the year following picking, and, second, to find out if there is a demand for fresh cranberries in January, February, March and April.

There are now 10,500 harvest boxes (one-third barrel capacity) or approximately 1500 barrels so being held. Two cooler rooms on the ground floor of the Onset plant

have been equipped at a cost of approximately \$75,000. One room is kept at a controlled 50 degrees and the other 35; humidity in both is 85 percent.

Berries were first brought in September 18th. These included late and early drawn water fruit, some milled and some in the chaff, Early Blacks and Howes. There are special lots from the Cranberry Experiment Station, East Wareham.

Tests were conducted to determine how long it took to reduce temperatures from field heat to cooler temperatures. There are weekly tests to determine which variety, or berries in chaff or mill-

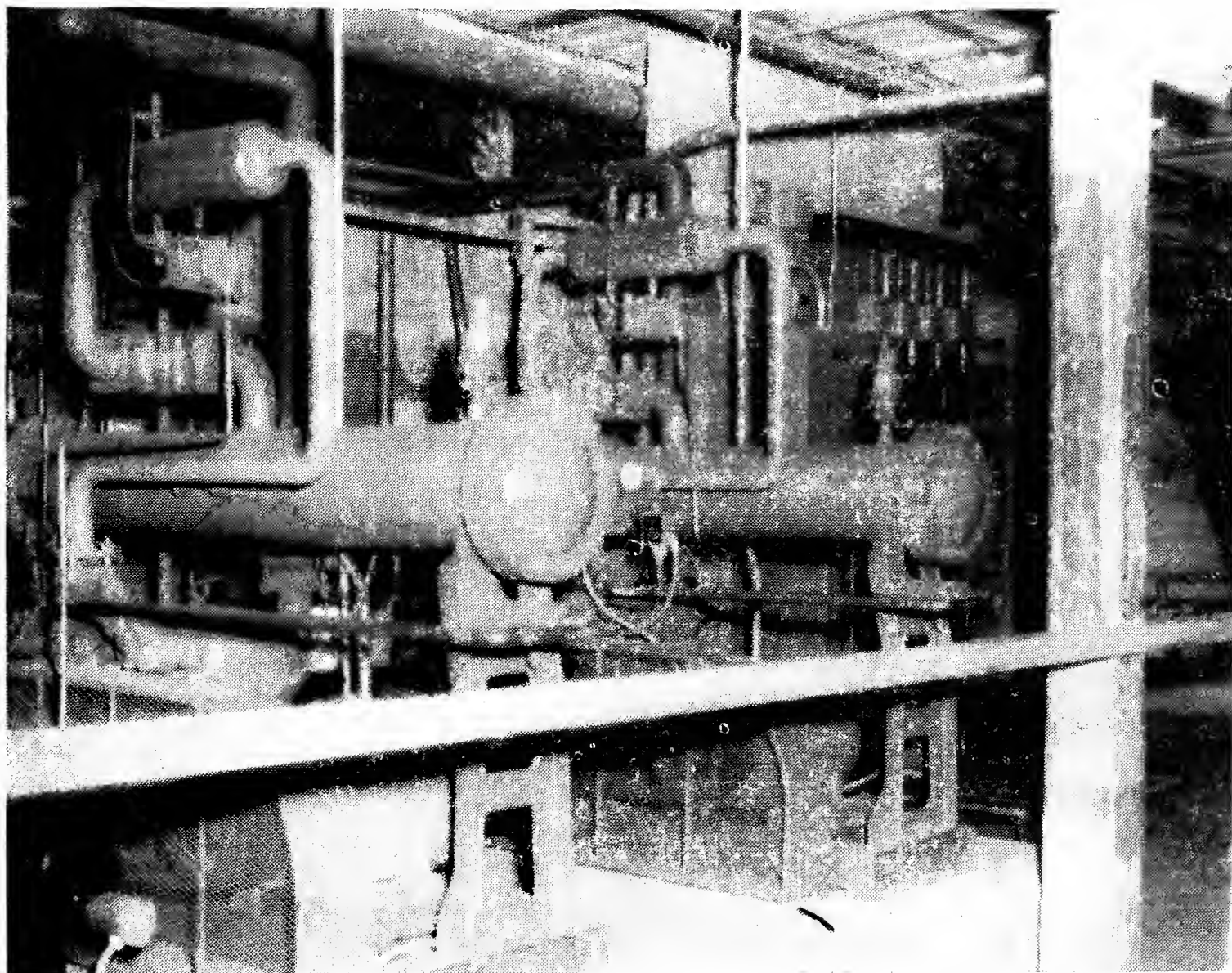
ed stand up best. Also there are weekly tests to determine percent of rot. Another test determines loss in berry weight through evaporation.

These are conducted by Robert Pierce, West Wareham, in charge of fresh fruit operations at the Onset plant and by Arthur L. Griffin, Wareham.

In still another experiment polyethelene is spread over some of the harvest boxes.

Determination as the experiment progresses is that the fruit has kept remarkably well in comparison with ordinary greenhouse storage.

The installation includes pumps and compressors similiar to those in a modern supermarket or in apple coolers. The cooling gas used is Freeon which, in case of a line break is not poisonous to humans or will not contaminate the fruit.



Showing coolers supplying the chill to storage rooms. Entrance to cooling rooms is at right. (CRANBERRIES Photo)

In overall charge of the pilot operation is Maynard Holmes, Manomet, who is in charge of production for National.

The entire experiment was first brought up by fresh fruit shrinkage of NCA fruit, and, of course, all growers and shippers have always had this problem. It was first brought up by Chester Robbins, Onset, chairman of NCA's ways and means committee, and approved by NCA directors and Ambrose E. Stevens, general manager.

Mr. Robbins says this experiment may open up unexpected avenues to better storage of fresh cranberries, and lead to entirely new lines of thought, even in marketing.

## Airborn Cranberries

A man-hour saving, in cranberry storage, which Mr. Stevens says is now proving its worth, is an air conveyor system for freezer berries which has been in operation at the Onset, Massachusetts plant since 1956. A second similar system installed in freezer storage at the North Harwich, Massachusetts NCA plant was in use this past fall. A description of berries are "airborne" at the Onset plant is here given.

The air-conveying system has provided a 90% reduction in the cost of handling frozen cranberries. The streamlined system, which moves the berries from a storage freezer to the plant where "Ocean Spray" products are made, needs only two men working half time to supply the 1,000-barrel a day capacity of the canning machines. In addition, berry damage formerly caused by the use of shovels and hand labor has been cut in half.

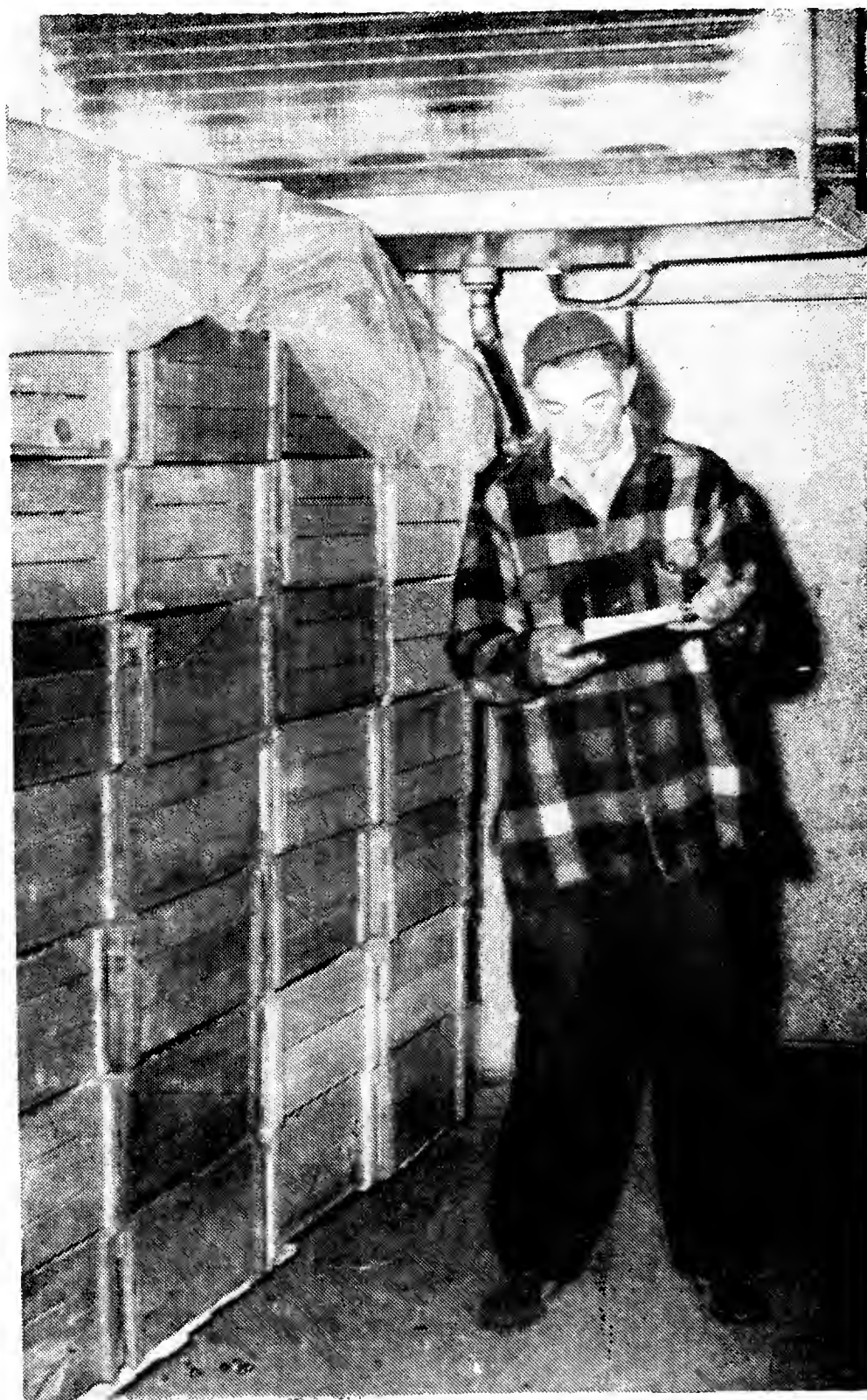
The year-round processing of a seasonal product introduces the problem of storage. In the case of cranberries, this storage had to be in a freezer. Construction of a 60,000-barrel storage freezer in 1954 alleviated the heavy cost of transportation and away-from-the-plant storage, but created new in-plant handling difficulties.

### Nine-Man, Six-Step Handling System

A complex handling procedure, using nine men eight hours a day, was barely able to move the quantity of berries needed to keep the machines supplied. The six steps meant duplicated handling and wasted time and energy: (1) half-barrel containers were filled manually with frozen cranberries in the freezer; (2) these containers were stacked on 20-box carts; (3) the carts were placed on a truck;

(4) the truck moved 500 feet from the freezer building to the cannery; (5) boxes were unloaded from the truck; and (6) the cranberries were emptied from the boxes into the pre-process storage bin. Furthermore, the empty boxes had to be moved, stored and maintained.

A rotation of workers had to be arranged so that the men would not have to remain in the extreme cold of the freezer (-15° to -5° F.) for more than one-half hour at a



Inside a cooler room Arthur L. Griffin, Wareham makes daily check beside blower at entrance to room. Note cellophane over boxes at left. (CRANBERRIES Photo)





Mario Lince, Plant Manager at Onset.

and flexible hose in the freezer, two men move enough frozen cranberries in four hours to supply the daily needs and keep the 200-barrel emergency storage bin in the canning building full at all times.

Frozen cranberries are drawn into the conveyor through the intake nozzle, guided by one man. They are then whisked a distance of 400 feet through the conveyor pipe to an Airstream Receiver which separates the berries from conveying air. A rotary feeder

discharges the berries from the receiver into the pre-process storage bin. From here they are cooked, canned, labeled and sold either as whole cranberries or cranberry sauce.

The entire Dracco system is made of stainless steel, assuring freedom from contamination and corrosion at all times. The smooth interior of the conveying line minimizes damage to the berries. The blast of air keeps the inside of the system clean. Restrictions on men working in the freezer no longer waste man-hours.

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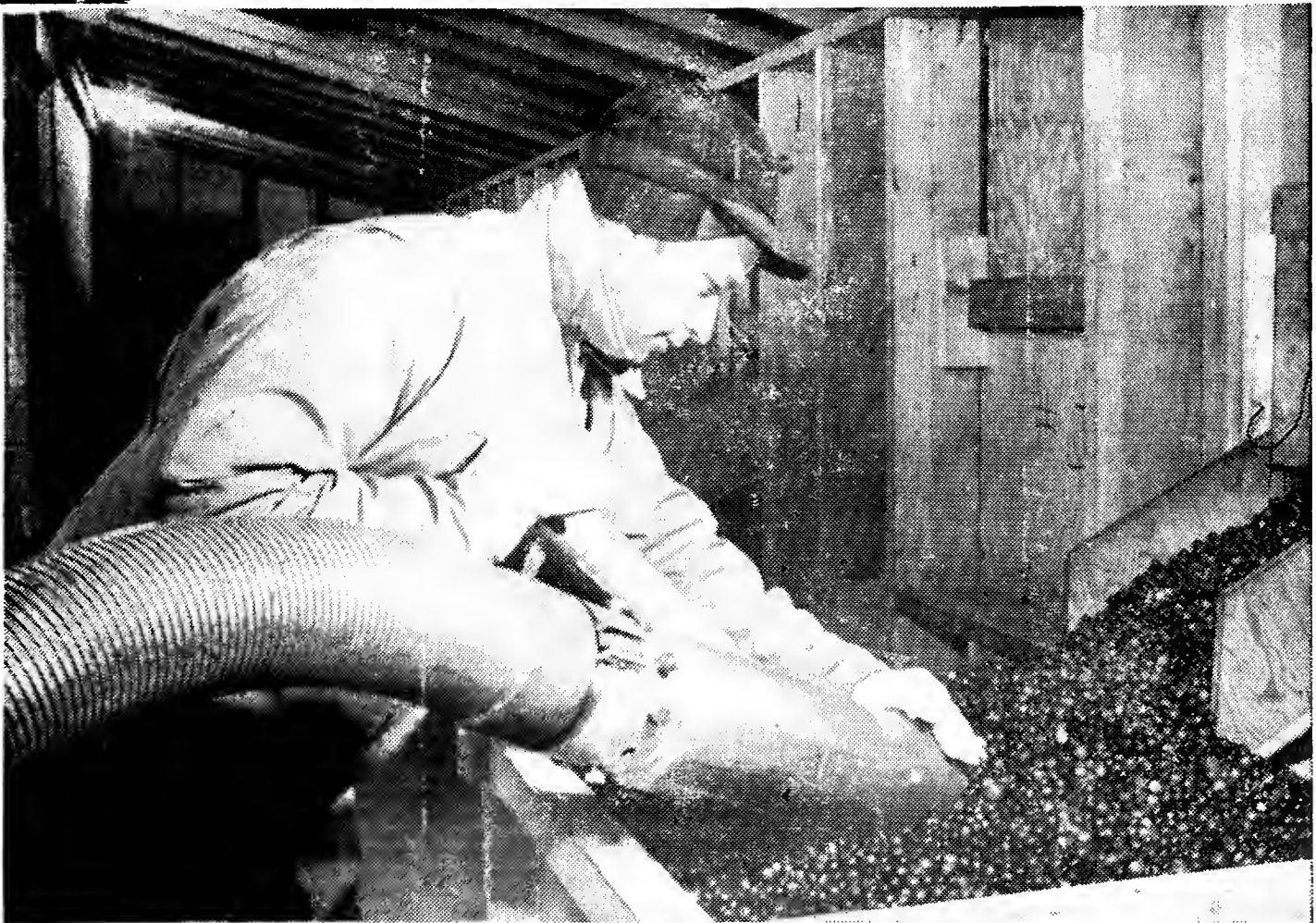
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### New Two-Man, One-Step Automatic Handling System

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Workman with intake nozzle in freezer.

# Cranberries In North America

by  
F. B. Chandler  
Research Professor, Cranberry Station  
East Wareham, Mass.

Last month the entire article under the above title was on cranberry varieties. Fertilizer, sanding, and bees are the topics to be discussed this month.

## Fertilizers

Fertilizer has been used by cranberry growers for many years but information pertaining to its use has not been sought in all surveys. The survey from Wisconsin has an interesting statement—"The differences in yield per acre are not explained by the rate of fertilizer applied alone." This statement probably comes as a surprise to those who hope that increasing yield is as simple as buying and applying fertilizer. While fertilizers are important for maximum yields and good quality, unquestionably the proper use of water is as important as fertilizer.

From the surveys conducted in 1956 it appears that from 47 to 85 percent of the growers use fertilizer, and that they apply from 150 to 300 pounds of fertilizer per acre. This information has been arranged in a table. The Washington survey had a large amount of information. It shows a difference between the Long Beach and Grayland sections. In Long Beach 37 percent of the acreage was fertilized, while in Grayland 59 percent was fertilized. In the Long Beach area over half of the fertilized acreage received fertilizer supplying from 10 to 20 pounds of nitrogen. In Grayland over 40 percent of the

acreage received fertilizer carrying 10 pounds or less of nitrogen. In the Grayland area, about a quarter of the fertilized acreage received from 10 to 20 pounds of nitrogen per acre, and another quarter of the fertilized acreage received from 20 to 30 pounds of nitrogen. Some of the Washington acreage received over 30 pounds of nitrogen per acre.

The Washington survey has a table on the ratio of nitrogen to phosphorus applied to cranberry bogs. This shows that Grayland growers use more phosphorus than Long Beach growers do. Some of the fertilizers had three times as much phosphorus as nitrogen, some had more phosphorus, and about 17 acres were fertilized with superphosphate alone. The Oregon survey reported a 6-20-20. Washington reports 23 percent or 225 acres fertilized with nitrogen alone, while Massachusetts reports only 7 percent or about 773 acres.

## Use Tripled

Massachusetts had a special circular in 1936 which gave the amount of fertilizer used in 1935 as 295 tons, and the recent survey reported 906 tons of fertilizer used in 1955. In other words, fertilizer use has tripled in 20 years. At the same time, the analysis of the fertilizer has been increasing from 15 units in 1935 to 40 units in 1955. This shows an increase in yield at the same time, but the increase may partly be due to better water

management.

The Massachusetts survey reported the use of fertilizer by grades and counties. The use of fertilizer in 1955 showed an increase over 1946 in all counties but Dukes. Some increases were slight while others were considerable—Plymouth about twice and Bristol about six times. When use is studied in relation to the fertilizer grade or ratio, it shows Massachusetts cranberry growers are using more fertilizers with phosphorus twice as high as nitrogen now than they did in 1946. Massachusetts shows an increase in nitrogen alone, and this warrants some explanation. In 1946, nitrogen alone came mostly from nitrate of soda. In 1955, nitrogen alone came mostly from urea (NuGreen is one source, there are others). The urea was used with dieldrin to control root grubs and stimulate vines at the same time.

British Columbia used about 4½ tons of fertilizer. On bearing bogs the growers applied a fertilizer high in phosphorus, but on new bog they used considerable ammonium nitrate.

Split applications of fertilizer were reported in the surveys from Wisconsin, Oregon and Washington.

## Sanding

Sanding is a practice which varies a great deal from section to section. In Massachusetts most growers practice it with some regularity but some have not sanded for 15 years and are producing better than the state average crops. In Oregon some growers sand rarely while others sand regularly. In British Columbia, most of the acreage is without sand as sand encourages weed growth. Sanding is a common practice in Wisconsin cranberry culture and 76 growers sanded 1300 acres from 1954 through 1956. Wisconsin also had 425 acres of new bog sanded. The Massachusetts survey reported 7522 acres sanded, or 56 percent. Information on sanding was supplied by 95 percent of the grow-

Percent of Growers Applying Fertilizer, Amount of Fertilizer applied per acre by growing sections and yield per acre in 1955 and 1956

Section	Percent of Growers using Fertilizer	Approx. lbs. of fertilizer applied (on bogs using it)	Yield in 1955 (State ave.)	Yield in 1956 (State ave.)
Oregon	60	300	55	80
Wisconsin	85	280	79	92
Massachusetts	71	191	41	34
Washington	48	150	48	65



ers.

Sand is sometimes moved hydraulically in Long Beach, Washington. The sand may be moved from a nearby location which is to be a water hole for a sprinkling system, or it may be moved up to two miles. The sand in Grayland is trucked to the railroad where it is loaded on cars. All of the sand in Washington may be called beach sand and it is very fine.

In Oregon, sanding was done on all sizes of bog operations, but more acres were sanded in the large holdings. In all groups about 11 percent of the bearing acreage were sanded. In Oregon, two growers sanded by boat.

**Honeybees**

Not all of the surveys gave information on honeybees, but what was published is interesting. The need for bees to pollinate the cranberry has been shown by Farrar and Bain. Their article is very good and a paragraph is quoted from it:

“Certain other assumptions are worthy of consideration. Under good cranberry culture there may be from 13 to 40 million blossoms per acre. A full-strength colony of 50,000 bees could provide, under favorable weather conditions, 500 million bee visits to flowers during a 3-week blossoming period. Under favorable conditions one strong colony would seem to suffice for 1 to 2 acres; under unfavorable conditions five to ten such colonies per acre might be needed. However, many so-called colonies of bees are capable of providing not more than one-sixth the number of field bees available from a

full-strength colony.”

Honeybees, as most people know them, are not seen much in the cranberry section of Washington. From the reports in Massachusetts and Oregon the growers with the larger holdings are the ones that have most of the honeybees. In Oregon the growers that had bees used about a hive per acre, while in Massachusetts there was a hive for each 2.6 acres where bees were kept. Most Oregon growers owned the bees, but 83 percent were rented in Massachusetts.

In addition to literature previously cited, the following were used: Tomlinson, Bertram and Henry J. Franklin. Cranberry Fertilizers. Mass. Extension Special Circular 31. June 1936. Farrar, C. L. and Henry F. Bain. Honeybees-as pollinators of the Cranberry. Cranberries Vol 11, No. 9, p. 6-7, 22-23, January 1947.

**FINE FRESH FRUIT  
CLEAN-UP**

National Cranberry Association opened its price on Late Howes Nov. 17 at \$4.20 a case and that price has held consistent into December. Blacks were largely gone by that date. There has been what amounts to a fine clean-up of the fresh crop this season.

All, or most independents, were booked solid for their last fresh fruit by week of December 8. National was quoting \$4.20 on Mass. Howes in limited quantity, on Wisconsin Howes, and \$4.00 on Wisconsin Searles and McFarlins.

**SOME STATISTICS  
ON THE 1958 CROP**

A consideration of the harvest statistics of the 1958 crop, (with final “historic” figures yet to come) reveals it turned out to be the second largest crop on record with estimated 1,127,000 bbls., as compared to the ten-year average of 953,790 and the second largest for Massachusetts with 610,000, as against an average of 550,500.

Massachusetts produced 54 percent of the total harvest, in spite of a late start but with mostly favorable picking weather and little frost loss.

Wisconsin produced 340,000 barrels or 30 percent of total, which was 20 percent larger than last year and second only to the record of 1956 which was 358,000. State 10 year average is 243,800.

New Jersey regained third place with 88,000 barrels from Washington or 8 percent of total.

Washington and Oregon fell considerably below their record crops in 1957. Washington is expected to have harvested 58,000 barrels as compared to the 10 year average of 49,860; while Oregon produced 31,000 as against 41,000 last year with an average of 22,790. Percentages of total for those states are, respectively 5 and 3.

**“CRANBERRY BOULEVARD”**

There may soon be a “Cranberry Boulevard” in Southeastern Massachusetts. A movement is afoot to change the prosaic name of a portion of Route 28 from Boston to Cape Cod. This is being lead by a group of merchants along present State 28.

A new Route 28 thoroughfare is to be built. To avoid confusion in the two routes suggestion is that present Route 28 from Middleboro to Buttermilk Bay at Buzzards Bay be so named. Bogs lie along this route.

Visitors from North, South or West heading for Cape Cod would immediately be reminded of cranberries as they travelled along Cranberry Boulevard through the Southeastern Massachusetts cranberry area.

**Use of Fertilizer by Massachusetts  
Cranberry Growers and Cranberry Production**

Year	Tons of Fertilizer Used	Analysis	Units	Bbl./A
1935	295	5-6-4	15	24.2
1946	728	(5-8-7 7-7-7)	20 21	37.6
1955	906	(7-7-7 8-16-16)	21 40	40.7

# Increased Yield Offsets New Jersey's Decline In Cranberry Acreage



Continuing a series of articles sponsored by the Cranberry Institute presenting statistical data about each of the major cranberry-producing areas. The third is New Jersey with comments by Enoch F. Bills, cranberry-blueberry grower and historic figure in cranberry industry.

On December 15, the Board of Agriculture of New Jersey's Burlington County cited Enoch F. Bills for service to agriculture. Manager of National Cranberry's processing plant in Bordentown, Mr. Bills is also one of New Jersey's outstanding growers of cranberries and blueberries, and the Bills family have been historic figures in New Jersey's cranberry industry since the family bogs were first built in 1890.

Cranberries are native to New Jersey and cultivation dates back to 1825 when Benjamin Thomas built the first bog in the Pemberton area. Several large bogs were planted in 1850 and the greatest expansion followed the Civil War.

The Bills bogs were started by Frank Bills, and Enoch Bills grew up in the industry as New Jersey crops were reaching their peak. They went as high as 200,000 barrels in the early 1920's, but an outbreak of fake blossom, insects and three successive summer droughts in 1929-31 forced a decline in production. This was further magnified by the depression years that followed when low-yielding acreage was abandoned.

Since that time there has been a slow decrease of acreage harvested but, with recent improvements in yield per acre, New Jersey continues to hold its place as third ranking state in cranberry production.

The 1958 crop, estimated at 88,000 barrels, is sizable considering weather conditions. Heavy rains in the summer caused many vines to be underwater during bloom and a frost on June 6 cut back the crop prospects.

Machine picking hastened the harvest this fall which began Sep-

tember 10 and was completed by October 15 with the result that no berries were lost to frost. The Darlington picker, invented by Thomas B. Darlington of New Lisbon, is the most widely used mechanical picker in New Jersey, but probably less than half the New Jersey crop was machine picked. The Haines and Haines Bogs in Chatsworth, largest plantation in the state and one of the largest producing plantations in the country, was almost entirely hand scooped.

As late as 1920, nearly half the cranberry acreage in New Jersey consisted of vines originally taken from wild swamps, resulting in a combination of varieties marketed under the name of Jerseys.

At the present time, the common varieties in New Jersey are the Early Blacks and Late Howes, introduced into New Jersey in 1890, and the Wilson, Beckwith and Stevens, named by the U.S. Department of Agriculture in 1959.

Burlington is the top cranberry-producing county with about 59% of the total acreage harvested. Ocean and Atlantic follow in second and third place, and there are some 1,000 acres scattered in Camden, Cape May, Cumberland, Gloucester, Middlesex and Monmouth.

The average New Jersey plantation has less than 10 acres with about 18 growers having 50 acres or more. About 20% of the New Jersey crop is sold fresh with the bulk being processed.

New Jersey's production record in acreage harvested and yield per acre can be traced on the opposite chart with 1939 as the reference point of 100%. The drop in acreage harvested from 10,800 acres in 1930 to 2,800 acres in 1958 has been offset by the increase in yield per acre from 13.5 barrels to 27.5 barrels over the same period to produce crops that hold to an \$5,000 barrel average.

You will note that acreage has declined about 70% since 1939 but yield per acre has increased 164% as improved cultural practices and controls for frost, insects and diseases have been developed.

New Jersey growers are fortunate to have the cooperation of the Department of Agriculture and the New Jersey Agricultural Experiment Station to help them improve their methods. New Jersey also has a Frost Warning Service to alert growers of pending drops in temperature.

Most bogs are equipped with flood ditches for frost protection, but few growers have sprinkling systems. May, June, September and October are the danger months. Water supplies are plentiful and flooding presents no serious problem.

Although New Jersey cranberry growers, like Enoch Bills, combine cranberries and blueberries since both fruits require similar soil conditions, their interest and enthusiasm is with cranberries and improving methods and the quality of their fruit.

Mr. Bills states that the quality of New Jersey fruit showed marked improvement this season and receipts at the Bordentown plant were well above receiving standards.

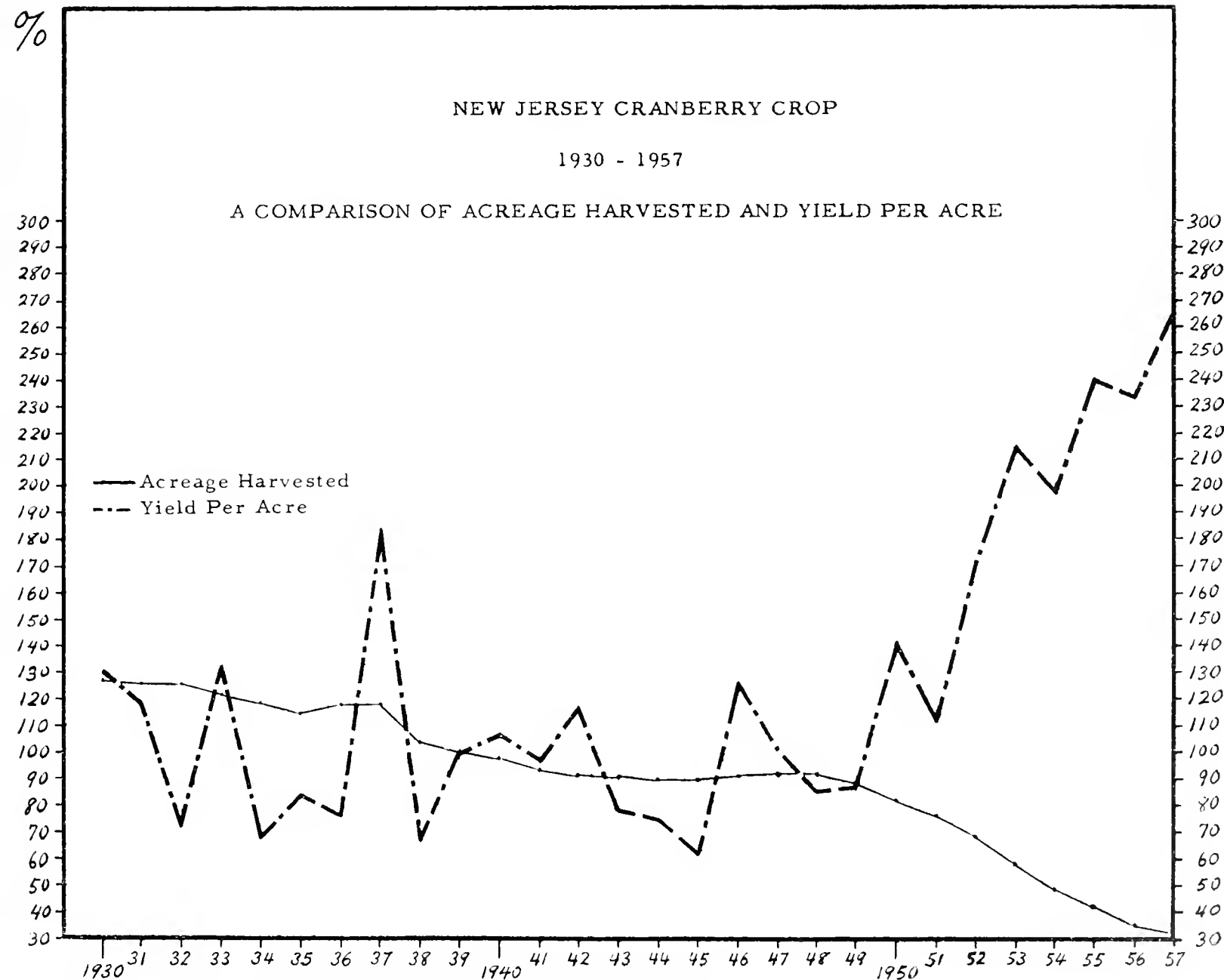
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# NEW JERSEY CRANBERRY CROP\*

1939 = 100%

Year	Actual Acreage Harvested	% Acreage Harvested	Actual Yield Per Acre	% Yield Per Acre
1930	10,800	127	13.5	130
1931	10,700	126	12.3	118
1932	10,700	126	7.5	72
1933	10,400	122	13.7	132
1934	10,100	119	7.1	68
1935	9,800	115	8.7	84
1936	9,500	118	7.9	76
1937	9,200	118	19.0	183
1938	8,800	104	7.0	67
1939	8,500	100	10.4	100
1940	8,200	97	11.0	106
1941	8,000	94	10.0	96
1942	7,800	92	12.2	117
1943	7,700	91	8.1	78
1944	7,600	90	7.8	75
1945	7,600	90	6.4	62
1946	7,700	91	13.1	126
1947	7,800	92	10.5	101
1948	7,800	92	8.8	85
1949	7,500	88	8.9	86
1950	7,000	82	14.7	141
1951	6,500	76	11.7	112
1952	5,800	68	17.9	172
1953	5,000	59	22.4	215
1954	4,200	49	20.7	199
1955	3,600	42	25.0	240
1956	3,000	35	24.3	234
1957	2,800	32	27.5	264

\*Figures from the United States Department of Agriculture



\*Figures from the United States Department of Agriculture

(ADV.)

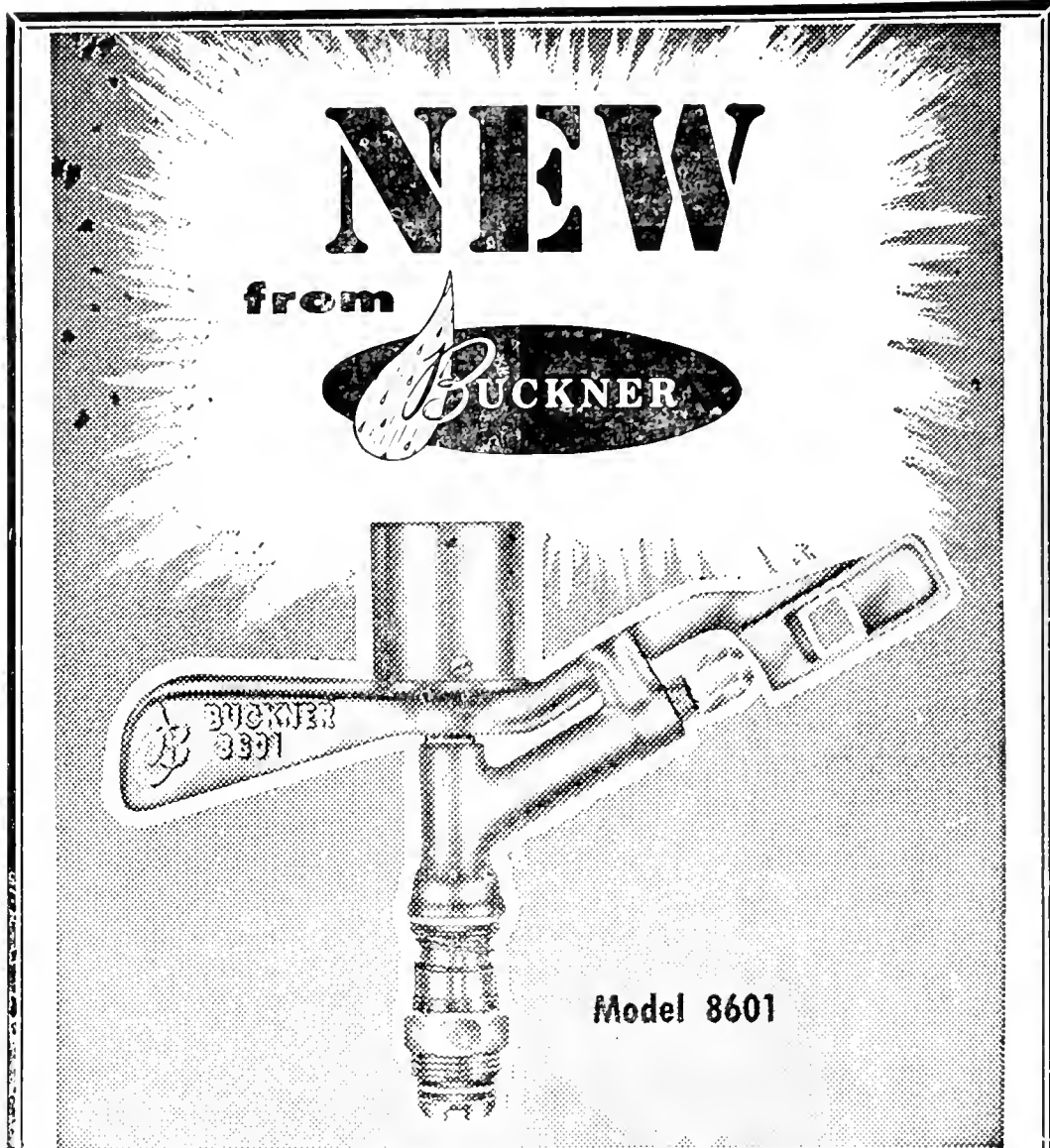
## BEATTIE

(Continued from page 4)  
crop on record. It appears reasonable that the chief factor behind this large crop was the excessive sunshine of the '57 growing season. Late-water bogs did particularly well in 1958, and even those bogs that were sanded in the spring of 1958 produced unusual crops. It would appear that the reserves of plant food built up by the abundant sunshine of '57 carried the vines through a rigorous winter, counterbalanced any harmful effects of the spring-time late-holdings, and were still capable of nourishing the development of our second-largest crop.

### 1959 Prospect

What is the prospect for '59? We have had a dark, wet growing season in comparison with that of last year. The sunshine of 1958 is about 500 hours less than that of the year before, and presumably the reserves of plant food in cranberry vines are proportionately lower. This would indicate that the potential crop for 1959 is decidedly down. It means, too, that if these reserves are tapped to supply oxygen during the period of winter flooding or during April and May late-holding of 1959, that the crop of 1959 will be reduced even further. In other words, the writer feels it is especially important this winter to expose the cranberry vines whenever they do not need flood protection against winterkilling. Furthermore, he feels that late-water bogs in 1959 will be especially likely to produce light crops.

There is one bright spot in this picture, despite the cold of early December. Dr. Franklin stoutly maintained that when both April and November are warm, the following winter is likely to be open. Both April and November, 1958, were decidedly warmer than normal, and according to "Doc" we should be looking forward to an open winter. If this should happen, we can take heart that such great crops as those of 1933, 1937, and especially that of 1957, were produced after open winter.



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## REASON FOR A "MERRY CHRISTMAS"

IN OUR October issue there was an editorial saying a skirmish in the battle to sell cranberries at a fair price had been won—in November we wrote "Is the Tide Turning?" Really what we said or thought is of no vital importance. But it is important that now, in December, the cranberry industry has started to come back as a successful business.

That is not simply our own opinion, but that of many others. We hear it from all sides, from growers, from distributors.

This has been a year of a much more stabilized market. NCA, handling about 50 percent of the fresh fruit crop, has consistently held its price, as have independents to a great degree. In most recent years everybody has been at times, slashing prices.

The trade, which is a mighty factor in successful marketing may again feel that cranberries are a commodity worth handling—in a stabilized market. With confidence restored, future marketing should be successful.

It should be remembered this was accomplished with the second largest crop on record.

It now seems likely that growers can move with more confidence, since there will again be money in the pocket. Bogs can be rebuilt from the state of forced neglect too many are in—long-wanted equipment bought, which will further increase efficiency.

We join in wishing Cranberry Growers a joyous Christmas, the merriest financially and in hope, of recent years.

---

## INSTITUTE ARTICLES

WE SHOULD call attention to the articles currently running, prepared by the Cranberry Institute, this month concerning New Jersey. This series, like that of Dr. Chandler on "Cranberries In North America," is factual, instructive and well worth studying. We cannot know too much about the over-all of our industry. To really know the facts from all areas helps us to become better growers and with more knowledge of what to expect from future markets.

While speaking of the Institute, we would put in a heart-felt plug for its sup-

CLARENCE J. HALL

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EDITH S. HALL—Associate Editor

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New Jersey Cranberry and Blueberry Station

Pemberton, New Jersey

---

port. This is the single unit which can speak for the entire body of cranberry growers. It can be of value to every grower in a multitude of ways.

(Continued from Page 6)

week in November. Jim Olsen is cooperating with Extension Service in releasing a part of one of his bogs for this use.

## WISCONSIN

### November Hot, Cold

November was a month of extremes in temperature in the state. The first three weeks of the month brought readings ten to fifteen degrees above normal, while the last week found temperatures zooming to fifteen to twenty degrees below normal. Strong persistent winds accompanied the frigid temperatures. This was the first outbreak of Arctic air to spread over the state since last February. Below zero readings were registered the last three days of the month, with a minus fifteen in the north on the night of Nov. 19th. The last time below zero was registered was on Feb. 19 when minus 8 degrees was recorded.

The below zero reading on the 27th marked the 14th such reading since the beginning of the year. Negative readings were recorded nine times in February and four times in January. High reading for the month was 62 degrees on the 14th. In all the temperatures for the month averaged normal and precipitation was near normal. Rain on the 17th brought over one inch in some areas. The year to December 1st has been minus 175 degrees of normal and minus 2.87 inches of precipitation. Ground water levels remain minus 1.80 feet of normal. The outlook for December is for below normal in temperature and from normal to above normal in precipitation. Averages for December are nineteen degrees and 1.15 inches.

### Prices Holding

Berries moved rapidly for Thanksgiving, with an estimated fifteen percent of the states crop left to ship as of December one. Fresh berry prices were reported holding favorably for the holiday

season. Some Searles berries were on hand the end of the month with most of the tonnage in warehouses being McFarlins and Howes.

### Winter Flood Early

With the quick drop in temperatures the last of the month growers quickly flooded up their young plantings and water was also put on producing beds. Frost was reported in the depth of four inches by Nov. 29th and ice quickly formed to the depth of five inches by the first of December. This was one of the earliest dates in recent years for putting on the winter flood. All marshes reported sufficient water supplies for winter flooding.

### Sanding One-Third Acreage

Most growers were planning on doing some sanding this winter. An estimated one third of the states total acreage is expected to be sanded this winter. Considerable sand is also planned for dams, dykes and roads. This large amount of work is a reflection of better price returns on the 1957 crop and expected good returns on the 1958 crop.

The winter meeting of the Wisconsin State Cranberry Growers Assn is tentatively set for January 16th at Wisconsin Rapids.

### Geo. Bennett

George Bennett, 78, long time grower at Watermill, near Tomah passed away suddenly November 26th.



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in stabilizing the fresh and processed cranberry market nationally.

As competitors in both the fresh and processed field, we believe we may be a better judge than many growers of the stabilizing influence National Cranberry Association had on the market this year, which means higher prices to ALL growers, whether they are members of National, or not.

We predict the cranberry industry will see good prices in 1959 and all growers can look to the future with optimism.

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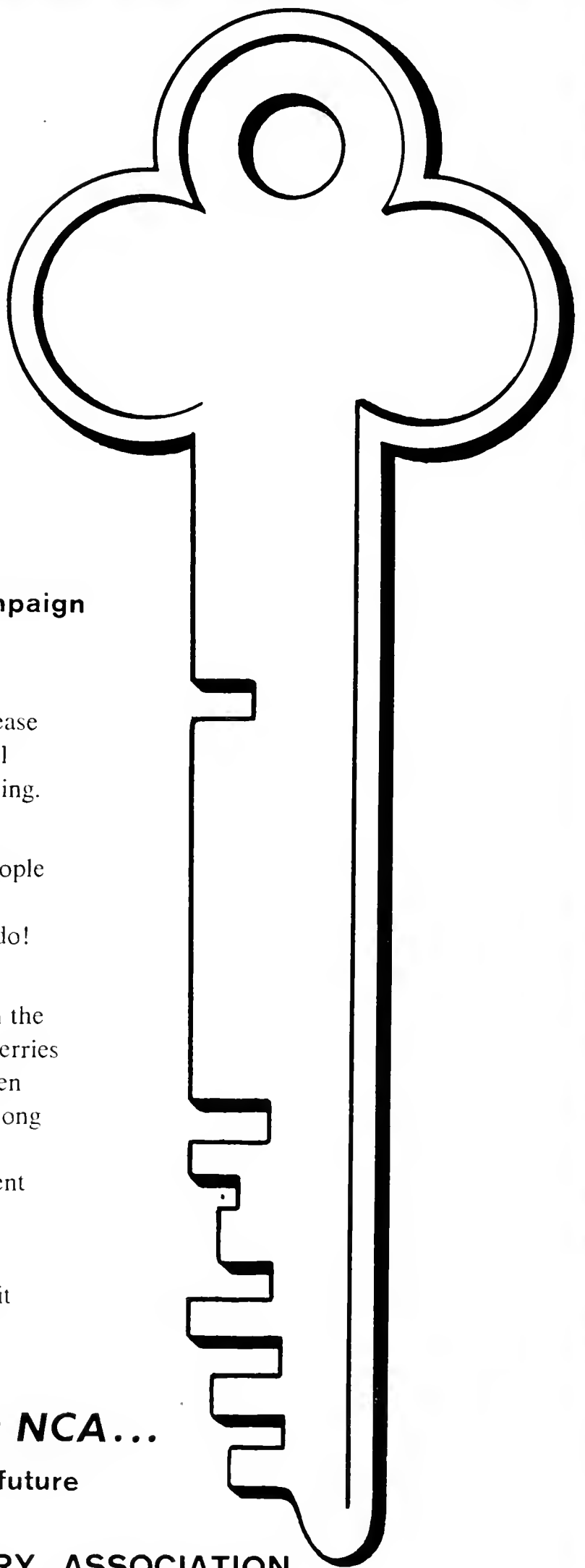
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***The future looks great for NCA...***

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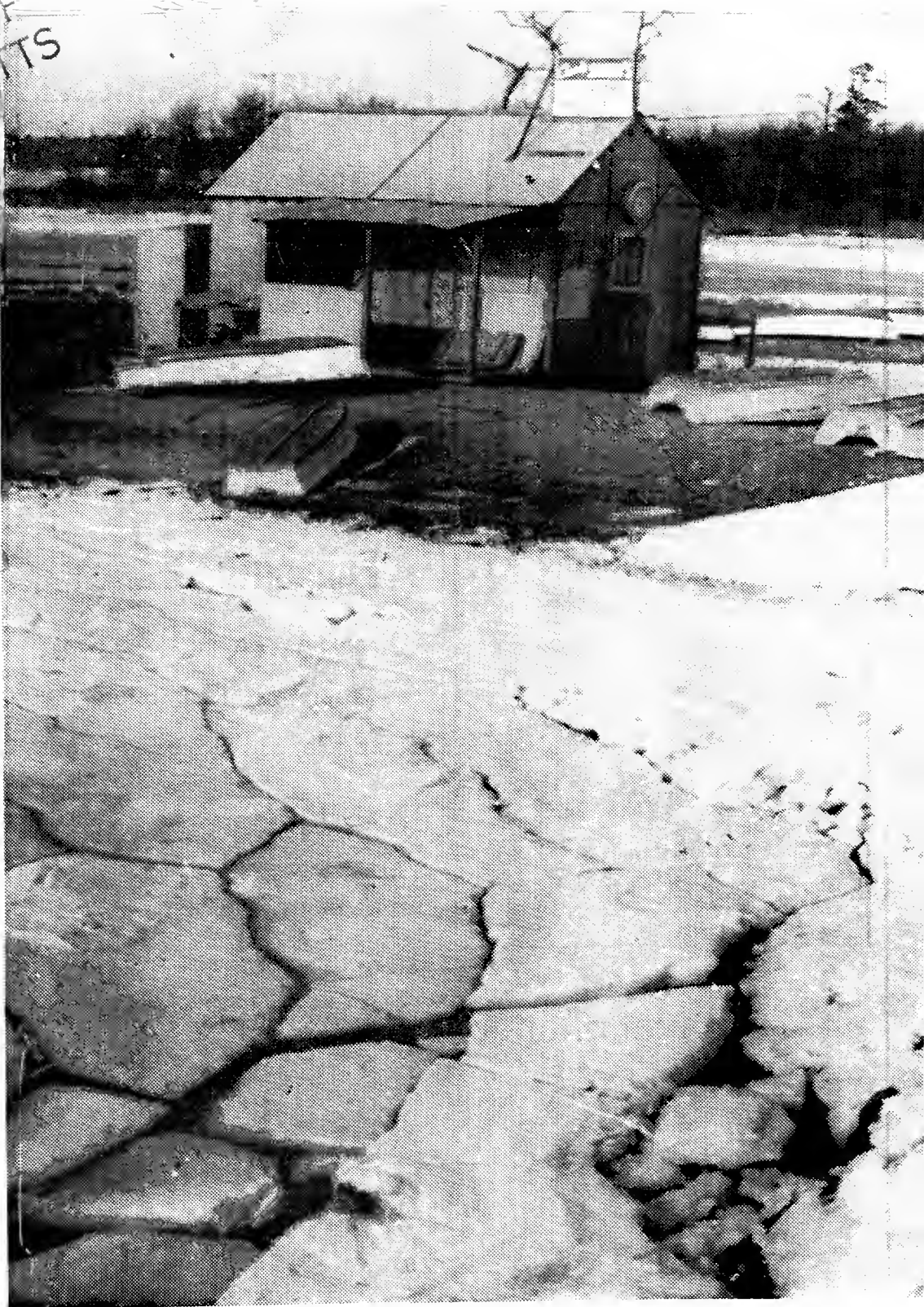


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WINTER of 1958-59 is so far an icy, bitter one in Massachusetts. Weweantic River, Wareham, a number of bogs being flowed from upper this river. (CRANBER

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# Great Research Worker Retires, Henry F. Bain of Wisconsin

Henry F. Bain was born in Knoxville, Tennessee, and received an A. B. degree from the University in that state and an M. S. degree from Brown University. He served in the army, following which he was an inspector for the United States Department of Agriculture.

His cranberry career began in 1922 on the west coast where he worked on the bogs in Northern Oregon and Washington. After spending four years on the coast, he went to Wisconsin as a cranberry specialist for the State Department of Agriculture.

In 1928, he became senior pathologist with the U. S. Department of Agriculture, working in Beltsville and New Jersey on

cranberry breeding. In 1944, he returned to Wisconsin as technical consultant to some cranberry producers. He is now retiring from active duty to do some of the things he has wanted to do for many years.

During Mr. Bain's studies of cranberries he was author or senior author of two U. S. D. A. bulletins, junior author of a number of others, author of three Wisconsin bulletins, and published a large number of articles in Wisconsin State Cranberry Growers Association, American Cranberry Growers Association, Journal of Agricultural Research, Botanical Gazette, and American Journal of Botany.

Mr. Bain's researches covered a large number of fields. Besides pathology, his major field, he had many publications on blossoming and fruiting. These included temperature studies, weather observations (particularly winter conditions), and studies of cranberry uprights. While he was not trained as an entomologist, he made many observations on insects and wrote a bulletin on their control in cranberry bogs. He made many cranberry crosses and produced some of the new seedlings. He studied mycorrhiza and adventitious shoots. He wrote a bulletin on the harvesting and handling of cranberries, wrote on water harvesting, and probably published the first article on storage losses.

Mr. Bain has published some very valuable surveys of early information; namely, "Cranberry Culture in the Pacific Northwest," 1926, "Cranberry Insect Survey and Control," 1927, and "Cranberry Industry in Wisconsin," 1929. These contributions have been in addition to those in botany and pathology, the field in which he was particularly trained and in which he has done much work.

The late L. M. Rogers, a noted cranberries researcher said of Mr. Bain: "He is one of the very few scientific men who have a good practical knowledge of cranberry culture, and I want to congratulate the Wisconsin Department of Agriculture in being able to retain him here while working on cranberry problems." Mr. Rogers, although originally of Massachusetts, also did work in Wisconsin.

For these many contributions, Mr. Bain, the cranberry growers, fellow research workers and other friends, thank you and wish you a very happy retirement.

— A Friend

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**MASSACHUSETTS CLUBS  
MEETINGS SCHEDULES**

Massachusetts cranberry clubs winter meetings are scheduled as follows:

January 13, with supper at 6 p. m., meeting at 7, with speakers Ambrose E. Stevens, general manager and executive vice president of National and H. Drew Flegal, director of advertising and public relations, plus Dr. C. E. Cross, director of Massachusetts Cranberry Station. This will be at "Wimpies", Osterville, rather than Bruce Hall, as probably will all the meetings of this group. Same hours will prevail. Lower Cape, at the East Harwich Church, the 14th. Same program.

January 20th, Southeastern Club, Rochester Grange Hall, 2 p. m., followed by supper, as is the custom. Same evening, South Shore at Reed Community Hall, Kingston, same program beginning at 7, with no supper as is the custom.

February 10, Upper Cape and Lower Cape; Feb. 11. South Shore Feb. 17; Southeastern Feb. 18. Same hours, same places

March 10 and 11, Upper and Cape; March 10 and 11 for Upper and Lower respectively. March 17, South Shore and Southeastern March 18. Same places, same hours. These dates happen to be the same as in February.

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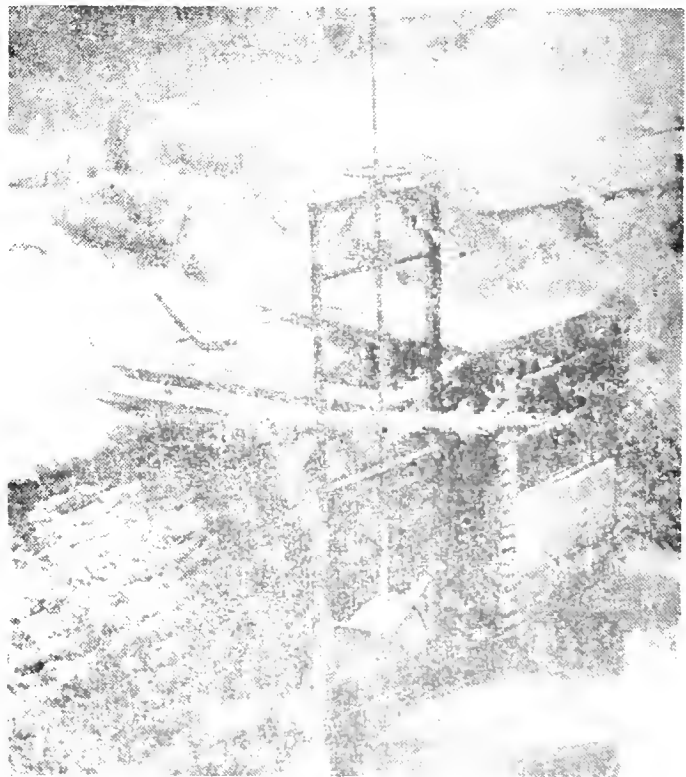
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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



## Two Decembers

The contrast in weather patterns for December 1958 compared with December a year ago is rather startling. For example, temperatures averaged 6.3° per day below normal this past December compared with a balmy 7.4° per day above normal enjoyed in December 1957. The lowest temperature recorded at the cranberry Experiment Station was 9° below zero this past month compared to a 15° above zero a year ago. Rainfall was well below the normal of 3.90 inches with only 1.98 inches measured at our station, compared with 6.26 inches for December 1957. Incidentally, the total rainfall for 1958 was 59.98 inches, the second wettest season in our history, exceeded only by the record established in 1953 of 63.22 inches.

## Winterkill?

Winter killing conditions, as we understand them, certainly existed January 5-7. Near zero temperatures and gale winds were experienced during this period, and with a substantial depth of frost in the ground—6 inches on the State Bog—it will be surprising if there isn't some damage to exposed bogs. Oxygen deficiency conditions, on the other hand, had not reached the critical stage as of January 7, but a few more cold nights plus a snow-storm in the cranberry area could change the picture very rapidly.

## Marketing Studies

The last test lot of fresh cranberries was packed and displayed December 23rd in local stores and on our own racks at the Cranberry Experiment Station. All lots included zineb-treated and untreated fruit and were displayed with and without refrigeration. As pointed

out earlier in the season, we hope to obtain useful information on the effect of zineb on the shelf life of fresh fruit handled under various conditions. As a part of our quality control studies, a second and final trip was made to Cincinnati and Detroit early in December in order to check the condition of cranberries at the terminal market and retail levels. The same representatives of the trade interviewed in November were again visited in December. Samples of cranberries were purchased in approximately 10 stores in each city and carefully examined in terms of condition. We can state at this time that the condition of fresh cranberries, based on this spot sampling technique, was much better than expected. But more significant was the greatly improved relations of our industry with the trade substantiating the observations made by

the writer after his November trip. This was due primarily to the fact that prices have been reasonably firm this past season and the movement and cleanup after the holidays have been excellent. A complete report of these studies will be made at the February club meetings.

## 1959 Educational Program

The Cranberry Advisory Committee met at the Cranberry Experiment Station December 3rd to assist the Extension Service in the preparation and development of an education program for 1959. There was an excellent representation present from the cranberry clubs, Cape Cod Cranberry Growers Association, Cranberry Institute, service organizations, County Advisory Committees, county agricultural agents, University of Massachusetts, and the Cranberry Experiment Station.

The discussion this year focused on the need for improvement in harvesting and screening methods, continued efforts to improve the quality of our pack, both fresh and processed through rigid quality control program, and special attention to greater mechanization. Progress in these fields was noted but considerably more work will be required before the solution of these problems is realized.

Growers might be interested in

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some of the other points discussed and action taken. The group present requested that the picking machine schools be held again in late August. They also suggested that the cranberry clubs include in their programs a discussion of methods of training bogs for machine picking through possibly more attention to pruning, sanding, fertilizing, and drainage programs designed to level the bog's surface and grow the type of vines or uprights adaptable to machine picking.

It was further pointed out that attention should be given to the practice of leaving too many vines and weeds in the boxes at the time of harvest, as well as the practice of leaving too little. These extremes often result in rapid breakdown of the fruit, according to experienced screen-house observers. It was suggested that the problem be thoroughly discussed at the winter meetings by those qualified — possibly through the medium of a panel discussion. The desirability of a pesticide mail questionnaire to determine the effectiveness of the station's recommendations met with approval. There was agreement that many more growers should subscribe to the fresh fruit market reports issued weekly during the fall months. Unless there is greater interest in this regard, the group was informed that these reports would be discontinued.

These and a number of other important subjects were discussed in some detail at the Cranberry Advisory Committee meeting. The suggestions and advice of this committee were most helpful and are sincerely appreciated. The following members were present: Louis Sherman, F. Maynard Gifford, Arthur Handy, Ferris Waite, Ralph Thacher, Robert Hammond, Maurice Makepeace, Anthony Briggs, Raymond Morse, Robert St. Jacques, Darrell Shepherd, Robert W. Kleis, Frederick E. Cole, Dominic Marini, Oscar Johnson, Harold Woodward, Chester E. Cross, John S. Norton, Joseph Kelley and J. Richard Beattie.

#### Staff Members Participated

Dr. Bert Zuckerman attended

conferences in New York and Delaware in December which dealt with the development of cooperative research projects designed to further the study of nematodes and virus diseases. Dr. Zuckerman has already initiated studies in these fields and has accumulated considerable information, particularly on nematodes, during the past year.

Dr. Chester Cross participated in the Northeastern Weed Control Conference held in New York City early in January, as well as a weather conference concerned with climatology and its relation to agriculture held during the same period.

## Year-End Crop Statistics

Final United States Department of Agriculture estimate of the 1958 cranberry crop remains the same total for the country, 1,127,000 barrels. Only changes were that Washington dropped from 48,000 barrels to 47,000, while Oregon gained 1,000 to 32,000.

The total production of 1,127,000 was seven percent above last year and second only to the rec-

ord of 1953. Massachusetts and New Jersey had larger production while Washington and Oregon fell off. Massachusetts production was eight percent above 1957 and 11 percent above average.

Yields per acre per state were figured as:

New Jersey, 35.2 barrels; Massachusetts, 47.3; Wisconsin, 82.9; Washington, 63.3; Oregon, 61.5.

Acres harvested totalled 20,920. New Jersey, 2,500; Massachusetts, 12,900; Wisconsin, 4,100; Washington, 900, and Oregon 520.

Season average price per barrel of the five states was \$11.80. The highest price per barrel was in Washington with \$12.20. Lowest was Wisconsin with \$11.30. New Jersey price was \$12.00; Oregon, \$12.00 and Massachusetts, \$11.90.

## MEDICAL BENEFITS FOR NCA EMPLOYEES

National Board of Directors has approved a plan to provide uniform coverage by Blue Cross and Blue Shield for year-around employees wherein the employees pay one half the cost and NCA the other. Plan became effective January first. Cost to NCA is given as about \$11,000 or one and a third cents per barrel.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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## FRESH FROM THE FIELDS

Compiled by C. J. H.

### MASSACHUSETTS

#### December Rugged

December was one of the roughest Decembers in years in the Massachusetts cranberry areas and for that matter in all New England, and much of the country. Minus degrees at year end totalled more than 200 or approximately seven a day below normal. Lowest recording at State Cranberry Station was 9 below on the morning of the 14th and one the day before the mercury read 3 below. There was one recording of one above, two of two, many others in the single figures and many in the low teens.

#### Year Rainfall Heavy

Rainfall for the month was light, only 1.98 inches with normal being 3.90. Of this 7.45 was snow. However, rainfall for the year as a whole was quite another story, total for the twelve months being a whopping 58.98 inches. Normal precipitation for the year in the cranberry area is 41.31. Rain, until September had been the most abnormal on record, or at least for many years; then the trend changed.

Ice at end of month was 5-6 inches thick with frost in the ground up to 10 inches. Even salt water bays and rivers were frozen thickly. Some growers took advantage of the conditions to sand on ice, while others spread on the vines. Not all bogs were flooded even though there was ample supply, some of the area had a considerable snow cover. To the end of December it was estimated there had been no winter-kill. Many bogs which were not flooded looked very healthy. Many

clear, although bitterly cool days, kept up a good sunshine factor, which of course would add to the crop potential for 1959.

### WISCONSIN

#### December Long Cold

December brought the longest cold siege in more than a decade. The first three weeks of the month were very cold and a slight warming trend the last week prevented breaking all-time records. Daily mean temperatures averaged seven to ten degrees below normal. From the 5th to the 17th there were below zero readings consecutively in some parts of the state. Precipitation was below normal in all areas, with light snow on the 14th and 24th. The extended forecast for January is for near

normal temperatures and below normal precipitation. Normals are about fifteen degrees and an inch of precipitation.

#### Review of Weather of '58

In reviewing the weather of the past season it turned out cold and dry. Temperatures averaged the coldest in February and December and warmest in October. Coldest temperature of the year was 40 below in Douglas County on February 16th and warmest 98 degrees on August 30th in southern Wisconsin. Precipitation was deficient in all areas, with the southern area being the driest. Deficiencies averaged between three to six inches in the cranberry areas. Ground water levels were 180 feet below normal at years end. A record number of 17 tornadoes were reported

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Several damaging hailstorms struck during the growing season, with the most damaging one occurring the night of Sept. 3rd. in the Mather-Warrens area. Two hard freezes occurred in June in northern Wisconsin on the nights of June 5th and 13th, causing considerable damage. Frost on the night of August 24, when the temperature dropped to the middle twenties caused damage, especially in the Mather area where water supplies were very short. Other weather news was the fast freeze up the last of November accompanied by very strong drying winds. Marshes were flooded up and froze down the quickest in many years. An early spring saw most winter floods removed in early April. June and July were especially cold.

#### Much Sanding

Sanding operations were progressing in all areas by mid-December. Severe weather had formed as much as twenty inches of ice on the reservoirs. Frost depth in the sand pits was reported at 24 inches. Deep frost in the pits may handicap sanding operations.

#### Robert Rezin, Sr.

Robert Rezin, Sr., 68, prominent grower near Tomah, died Dec. 5th at a LaCrosse, Wis. hospital following surgery. A member of a prominent, pioneer cranberry growing family, he also served as a director on the NCA board 1954 through 1957.

#### Cranberry Man Sworn In

Philleo Nash, president of the Biron Cranberry Co., Wisconsin Rapids, was sworn in as Lt. Governor of the state of Wisconsin in inauguration ceremonies at the State Capitol, Madison, Jan. 5th. Mr. Nash who served as an advisor to Presidents Roosevelt and Truman, defeated the incumbent candidate Republican W. P. Knowles, in last November elections. He is the first Wisconsin Rapids man to be elected to a major state office. Mr. Nash's many cranberry friends wish him every success in his new office.

#### Fresh Fruit Cleaned Up

The last of the fresh fruit berries were shipped the latter part

of December. Very few berries were reported in the state after mid-December. Prices remained good up to cleanup. Overall the keeping quality was the best in many years. Final figures show that Wisconsin produced 340,000 barrels of berries on 4100 producing acres, for an average of 82.9 bbls per acre. The cold weather during the entire growing season in the north, coupled with the more than normal number of hail storms, prevented a bumper crop. At year-end growers were looking forward to 1959 with continued optimism.

## OREGON

#### 20 New Acres

At a meeting of the Southwestern Oregon Cranberry Club, an informal summary was taken among the members and it was conservatively established that the cranberry industry in Southwestern Oregon had increased itself by about 20 acres of newly sanded bogs this last year. The new plantings involved about 8 growers.

## NEW JERSEY

#### December Weather - 1958

The past month was the second coldest December in the 30-year

weather recording history at the Cranberry and Blueberry Research Laboratory. The average temperature was 28.9° F., which is 7° warmer than normal and only 0.8° higher than the record for this month, which occurred in 1955. One unusual feature was the string of ten consecutive days (Dec. 7 through 16) during which the temperature was constantly below freezing. There has been only one more greatly prolonged freezing period in December in the past 30 years. In 1935 the temperature did not rise to 32° for the last eleven days of the year.

With respect to precipitation, the past month had only 1.40 inches, which is less than half of the normal 3.03 inches. Snow threatened on four days but only slight traces were recorded, as only the outside fringes of these storms touched us.

#### Annual Weather Review

The past year was the wettest and one of the coolest on record here. Excessive rain occurred in eight of the months and the yearly total was 60.01 inches, about 17 inches more than normal. During the important growing months of May, June, July and August there was a total of 24.56 inches, about eight inches more than normal. This was in contrast to the driest

(Continued on Page 16)

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# Harvest Methods, Fungicides and Keeping Quality

by Dr. Barr M. Zuckerman

PLANT PATHOLOGIST CRANBERRY EXPERIMENT STATION

With the advent of machine-picking on a large scale, problems heretofore unknown to the Massachusetts cranberry industry have appeared some of which affect the keeping quality. Two questions that have arisen are (1) Do machine-picked berries hold up as well in storage as scooped berries and (2) how do fungicide-treated machine-picked berries compare with those similarly treated but picked by scoop? Many growers and shippers have formed opinions on this and related questions based on their own experience, and hence, a pattern of beliefs is taking form.

Over the past two years data has been gathered on these subjects and an analysis is reported herein. The information is presented with a minimum of interpretation, for the preliminary nature of these studies makes any attempt in this direction premature. It is hoped that the grower by comparing these results with his own experi-

ence, may reach a better understanding of the problems and so be in a better position to plan his operations.

## Machine-picking vs scooping

In 1957, 30 lots of berries from 10 pieces of bog were collected for comparative tests of the quality of machine-picked vs. scoop-picked berries. In each case, samples were taken by stopping the machine and removing a quart or two of berries from the top of the picking box or bag to represent the machine-picked sample. The scooped sample was then harvested from the unpicked area to the side of and slightly to the rear of the machine. In this manner, variations of quality due to differences in bog location and condition were minimized.

Berry breakdown counts were made a few days after harvest, and again at approximately 6 to 12 weeks following harvest. Berries harvested by four types of picking machines were studied,

but since all the berries harvested by machine behaved in approximately the same manner, no comparison between machines is reported in this paper.

Counts made five days after harvest showed slightly more field breakdown in the machine-picked samples (3.4%) than in the scooped samples (1.9%). TABLE 1 gives the figures for breakdown in berries held for 6 and 12 weeks in common storage. Assuming all berry samples comparable, these are the figures which indicate the effect of picking method on keeping quality.

A statistical analysis of the figures in Table 1 shows that the probability is greater than 99 in 100 that machine-picked berries show more break-down in a 12-week storage period than do scooped berries.

It should be noted that in the preceding paragraphs reference is made to the breakdown of berries without characterizing this breakdown as due to bruising, to rot organisms or to a combination of the two. In addition, no consideration is given here to the problem of whether or not bruising accelerates the action of de-

TABLE 1 Comparison of keeping quality of berries which had been scoop-picked with those that had been machine-picked.

Sample No.	Breakdown 6 Weeks		Breakdown 12 Weeks		Total*	
	Machine	Scooped	Machine	Scooped	Machine	Scooped
1	6.1	1.8	24.9	15.6	31.0	17.4
2	3.7	0.4	20.8	9.2	24.5	9.6
3	5.7	0.9	38.5	9.3	44.0	10.2
4	1.9	1.0	23.6	13.3	25.5	14.3
5	4.5	0.3	22.2	14.9	26.7	15.2
6	12.9	6.2	9.9	4.2	22.8	10.4
7	17.1	5.5	11.0	10.7	28.1	16.2
8	8.4	3.9	17.0	16.2	25.4	20.1
9	2.8	3.5	9.5	9.8	12.3	13.3
10	5.4	3.6	12.9	7.3	18.3	10.9
11	10.7	5.3	13.9	8.4	24.6	13.7
12	2.0	1.3	11.4	8.9	13.4	10.2
13	11.7	8.8	23.2	23.9	34.9	32.7
14°	11.7	7.2	7.8	11.0	19.5	18.2
15°	9.1	3.6	—	—	9.1	3.6
Ave.	7.6	4.4	17.6	11.4	24.0	14.4

## Breakdown

\* Does not include field rot which had been removed.

° Sample 14 which was water-picked and Sample 15 which was not counted after 12 weeks in storage were not included in the statistical analysis.

cay organisms present in the berries at the time of harvest.

A study made in 1958 sheds some light on these questions. In this experiment berries treated with zineb by ground concentrate rig and untreated berries were machine and scoop-picked on the same section of the State bog. Ten scoop-picked samples, each about 1000 berries in size, were sorted by hand and held in paper bags for a storage period of seven weeks. Machine-picked berries were held in field boxes and shrinkage determined on a weight basis through screening of three boxes in each lot at 1, 3, 5, and 7 weeks. Field breakdown and losses during the 7-week storage period as shown in these two instances are compared in FIGURE 1.

The scooped and machine-picked samples were roughly comparable at the time of harvest. It is of interest to compare the loss figures 7 weeks after harvest. Here it can be noted that only a small amount of breakdown occurred in

scooped berries, whether treated or untreated. And there was only a slight difference in the breakdown of treated and untreated berries which had been machine-picked.

The amount of breakdown in this experiment, as with those reported in 1957, appears to be related to the picking technique. Another point to be noted is that fungicide treatment apparently did not greatly reduce the amount of breakdown in machine-picked berries. If we assume that the lines in FIGURE 1 represent breakdown caused by two primary agents—the machine and fungi—it appears as though the fungicide treatment had the same effect in decreasing breakdown of both machine and scoop-picked berries; and that this effect was on breakdown due primarily to decay organisms. Additional work is planned to prove or disprove this hypothesis. A third point of interest is that fungicide treatment apparently would not have been profitable in this

case, if results were judged on a single year's basis.

#### Conclusion

This section should be entitled "Exclusions", for in it I wish to list some possibilities for error in the studies reported in this paper.

1. In scooping the samples, we are perhaps more gentle: therefore, bruise the berries less than would a commercial cranberry scooper.

2 Some of the bogs from which data was gathered were being picked by machine for the first time.

3 More samples are needed over a period of years.

All three of these items may be important in the results here reported. An effort will be made to overcome at least the last two considerations. Work is planned for next year to give additional information on this subject.

#### CLARIFICATION

In the Cranberry Institute article last month, our attention has been called to a statement which might lead to confusion. Statement was:

"At the present time, the common varieties are the Early Blacks and Late Howes introduced in New Jersey in 1880, and the named by the U. S. Department Wilcox, Beckwith and Stevens of Agriculture in 1950".

New Jersey Cranberry and Blueberry Laboratory says in regard to the last three varieties, actually these varieties are still in the experimental stage and there are probably not more than 10 acres planted to these in the entire state.

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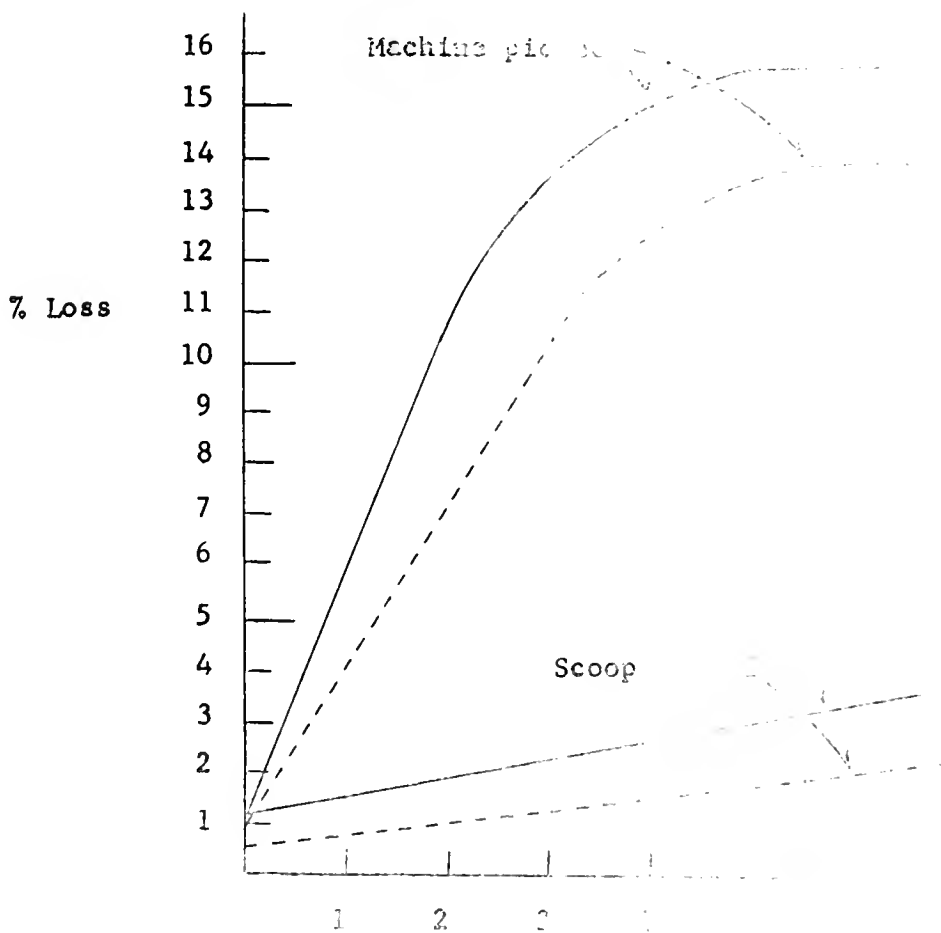


Fig. 1. A comparison of fungicide treated and untreated Early Blacks, machine and scoop-picked, State Bog, 1958.

----- = Fungicide treated  
 ————— = Untreated

# Cranberries In North America

by F. B. Chandler

RESEARCH PROFESSOR, CRANBERRY STATION, EAST WAREHAM, MASS.

Fertilizers, sanding and bees were the subjects of the last chapter of "Cranberries in North America". The section this month will be on water, with such subjects as winter flood, sources, methods of supplying water, lift, irrigation, and drainage.

## Winter Flood

Massachusetts, in all four surveys, has divided bogs into four classes: dry bogs, winter flowage only, winter and some frost flowage, and full flowage. The dry bog has no winter protection and no frost protection. In 1924, 1520 acres, or 11 percent of the acreage, fell in this category but only 459 acres, or 3.4 percent, fell in this category in 1956. The full flowage bogs have full protection for winter and for frost. In 1924, 6300 acres, or 45 percent of the Massachusetts bogs, fell in this category, and 8340 acres, or 62 percent, fell in this category in 1956. In 1956, the acreage under permanent sprinklers had increased to about 250 acres, or 2 percent. Permanent sprinklers may give both winter and frost protection. While this shows considerable improvement in 30 years, it still shows that all Massachusetts bogs are not protected.

Similar information is not available for New Jersey. In Wisconsin, the bogs are all flooded for winter. Many growers do not flood until the temperature is low enough to freeze the vines in ice in less than 48 hours after the water is put on. In Oregon, only 276 acres, or 73 percent of the bogs, have marginal dikes; therefore, no more can be flooded. Usually water for flooding is an accumulation of rain. In Grayland, Washington, none of the bogs were flooded, while in Long Beach, quite a few were flooded but with no regularity.

## Sources

In Cranmoor District of Wisconsin, Bain found in 1928 that there

were 7 acres of ponds or reservoirs per acre of marsh. The 1949 and later surveys report as an average for the state 17½ acres of reservoir per acre of marsh. This is probably next to the best water supply for cranberry growers. Many of the Lulu Island growers in British Columbia may get water from the Frazier River, an unlimited source. In Wisconsin, beside ponds and reservoirs, creeks, rivers and surface water were listed as sources of water. See Table I. This table probably lists the sources available anywhere except artesian wells of which there are a few in Massachusetts. Rainfall is a source in all sections. In Grayland, Washington, a water district is being formed and this will assist with water supply as well as drainage.

## Method of Supplying Water

The method of supplying water is summarized in the 1956 Massachusetts survey by acres for 1946 and 1956. This reports that over half of the Massachusetts bogs receive their water by gravity (57 percent in 1946 and 64 percent in 1956). About 10 percent of the acres had water pumped by electricity and about 30 percent of the acres were pumped with a gasoline engine. In Oregon and Washington, pumping is nearly always done with electricity be-

cause it is inexpensive and available. Most of the pumping in Wisconsin is done with electric pumps.

## Lift

A paragraph from the Oregon survey reports the maximum lift. The paragraph follows: "Some growers lift water many feet to a sump hole. Many growers lift water 40 feet, a few 100 feet. The greatest lift was 200 feet, and it took 2,800 feet of pipe to take the water from the stream to the sump. As flow in some of these streams is low, the pumps may operate continually to keep the sump filled. When needed, water is pumped from the sump to the sprinkler system." The 1934, 1946, and 1956 surveys from Massachusetts have a great deal of detail on the lifts for that state. The lifts ranged up to 24 feet in 1934, up to 31 feet in 1946, and up to 35 feet in 1956. The number of pumping plants reported in these surveys was 399, 488, and 458 respectively.

## Irrigation

Irrigation means different things in different sections. In Massachusetts, irrigation usually means filling the ditches. In Wisconsin, it means putting water over the surface, or flash flooding; while on the west coast it means sprinkling. Probably irrigation varies more from section to section than any other cultural practice. Three of the surveys gave data on irrigation, this information with estimates for the other sections are

TABLE 1

### Sources of Water for Wisconsin Cranberry Marshes

Source	Percent of Area Reported in Surveys		
	1949	1952	1957
Ponds or reservoirs	--	--	44
Creeks	44	40	23
Rivers	23	15	9
Lakes	14	15	9
Surface water	--	--	14
Other	19	20	2
More than one source	--	10	--

in Table 2. A paper on the "Effect of Methods of Irrigating Cranberry Bogs" reports poor lateral movement of water from the ditch through cranberry soils, and that most sprinklers were started on the bogs studied with sufficient soil moisture six inches below the surface.

### Drainage

Very little drainage information is reported in the surveys. In general, Washington has poor drainage because the ditches are plugged with beaver dams. Some drainage in all sections is poor because cranberry growers do not control the outlets. In Oregon, about 68 percent of the growers kept their ditches dry during the growing season, while 11 percent held the water in the ditches after sprinkling. In Massachusetts, over 12,000 feet of plastic tubing has been used for drainage of cranberry bogs. The type of tube and the method of putting it in the soil was developed at Iowa State College. The importance of good drainage was mentioned by White nearly ninety years ago.

A pessimist is a man who resents the fact that the world was made without seeking his advice.

In addition to previously cited literature, the following were used: Chandler, F. B. Effect of Methods of Irrigating Cranberry Bogs on Water Table and Soil Moisture Tension. Amer. Soc. Hort. Sci. 57: 65-72, 1951.

Schwab, G. O. and Don Kirkham. The Effect of Circular Perforations on Flow into Subsurface Drain Tubes. Agr. Eng. 32: 270-274, 1951.

White, Joseph J. Cranberry Culture. Orange Judd Co., N. Y. 1870.

### N. J. BLUEBERRY GROWERS HAVE 27TH OPEN HOUSE

"What Can Be Done to get Better Blueberries in the Market," was the main subject of the 27th annual Blueberry Open House. Meeting was scheduled for the Grange hall, Vincentown, January 8. Meeting was sponsored by the New Jersey Agricultural Station, New Brunswick.

Speakers were scheduled to include; a Welcome by Daniel L. Kensler, Burlington Agricultural County Agent. Others were David J. Burns, Department Agricultural Economics; Benjamin H.

Davis and Allan W. Stretch, both of department of plant pathology; Philip E. Marucci and Charles A. Dechert, both of the Cranberry Blueberry Research laboratory, speaking on "How Can Insect Control Improve Quality?" and "How Can Pruning and Fertilizing Help?" respectively.

New Jersey State Secretary of Agriculture Phillip Alampi spoke of the use of the "State Seal of Quality."

Eugene H. Varney, department of plant pathology discussed "Botrytis Disease On Blueberries," and Lawrence C. Ranters of the same department made comments on new blueberry viruses. Associate Director Ordway Srarns discussed blueberry research needs. "Blueberry Stunt Inspection," was the topic by William Metterhouse of New Jersey Department of Agriculture while William S. Haines, president of the Blueberry Variety Council told of varieties.

### OVERSEAS RESEARCH PROGRAM TO BENEFIT U. S. AGRICULTURE

The U. S. Department of Agriculture is embarking on a broad new program to obtain agricultural research in foreign countries.

The marketing phase of the program is expected to benefit U. S. producers and processors by expanding the markets for their products. The research will seek new knowledge of quality evaluation of farm commodities, better understanding of the biochemical changes that occur in maturing fruits and vegetables, and new information on market diseases, market insect pests, and consumer habits and preferences in foreign countries.

This overseas research will be paid for with foreign currencies accruing in the various foreign countries to the account of the U. S. from sale of surplus agricultural commodities under Public Law 480.

(Agricultural Marketing)

TABLE 2

#### Percentage of Acreage Irrigated by Different Methods

State	Filling Ditches	Flash Flooding	Sprinkling	Tile or Tube	Not Irrigated
Massachusetts	70	14	3	1/10	13
Wisconsin	Small	large*			
New Jersey	similar to Massachusetts*				
Oregon	22		73**		
Washington			69***		
Canada	****		****		

\* Author's estimate

\*\* The Oregon Survey has data on the frequency of irrigation which shows that a little over a quarter of the acreage irrigated was sprinkled every 3 or 4 days. An equal acreage was sprinkled every 7 or eight days.

\*\*\* Grayland 87% and Long Beach 57% in 1955. After the bad frost of 1957, more acreage will probably be sprinkled.

\*\*\*\* In Canada there is little irrigating. In Nova Scotia irrigation is similar to Massachusetts, but in Lulu Island sprinklers are being planned.

• READ CRANBERRIES •



# RESUME OF WISCONSIN WEATHER IN 1958

By  
DR. GEORGE PELTIER

## Little Snow—Spring Frosts

Other than the "big" snow in mid-November 1957, little or no snow cover prevailed during the entire winter. December and January were mild and dry while February was cold and dry, conditions favorable for sanding. March and April were quite mild, sufficiently so that in the southern area the winter flood was removed the first week in April. By mid-April, with temperatures 10 to 14 degrees above normal, all winter floods were removed.

During the latter part of April and the fore part of May, a series of almost nightly frosts in the low twenties resulted in refloods up to mid-May. Some 18 frosts occurred during the month. June continued cool the entire month with a total of 9 frosts in the Cranmoor area. Rainfall continued deficient during June in the southern regions, as contrasted with excess moisture in the north. The same situation carried on into July, delaying full bloom for a week to ten days.

## Harvest Weather Good

August had normal temperatures with clear, sunny days and cool was near normal for the first time in 1958 in the southern areas. September was an ideal growing month. No killing frost occurred. Rainfall was above normal and aided materially in the south in that enough water was available for harvest. October was a pleasant month for harvest. Only one day was lost due to inclement weather. Heat growth units (50 degrees F.) totalled only 1810 for the entire growing season (May through September) as contrasted to the normal of 2143.

## Sections Vice Versa

The weather for the 1958 season can be characterized as cool and dry in the southern areas in contrast to cold and wet conditions in

the north. For the most part, days were sunny and nights cooler than usual. Water remained in short supply until harvest in the south. Pumpage from the Wisconsin River to the Cranmoor area was greater than in past years. The North, however, was plagued with excessive rainfall. Violent thunder storms, tornadoes and hail were much more prevalent than usual in the state.

## Insects Light

Insects reacted to the sub-normal temperatures and appeared a week to ten days late. Leaf miners were observed on several bogs for the first time since 1951. Spittle bugs also showed up in considerable numbers during June. Fireworms (black-headed) caused slight damage. Only two hatches of the first brood were seen, rather than the usual three. Second brood fireworms were scarce and no "brown-outs" were noted. On the whole, fruitworm infestations were light and late, especially the first two flights. The third flight did not appear until the third week in August, resulting in some wormy berries in early packs.

## Rot Loss Less

Due to cool nights with heavy dews, black rot appeared in untreated beds and especially in those with a heavy cover of weeds and grasses. Phomopsis rot, too, seemed to be more noticeable in bogs subjected to hail. End rot, fortunately, has been held to a minimum in storage due to a succession of cool nights and low humidities. Losses from end rot will be much less than in former years.

Unfortunately, weed control with chemicals was held in abeyance during the season because the F. D. A. has been extremely slow in approving of Dalapon and Amino-triazole.

## Good Bud For '59

Owing to the cool, dry summer in the south, berries are somewhat smaller than normal, but the quality is excellent. In fact, the best I have experienced in my 8 seasons in Wisconsin. Finally, fall budding appears to be very good, promising a good crop in 1959 providing all factors are favorable.

## DRAINAGE PROBLEM AT GRAYLAND

Pacific County Drainage District, No. 1 and Grays Harbor District No. 1, both in the Grayland, Washington cranberry area have made application for assistance under the Small Watershed Protection Act. Estimated total cost of the project was \$640,000, of which approximately \$174,000 will have to be provided by other than Federal funds. Cranberry growers in the area have not yet voted on the project.

Project consists in general for increasing the capacity of main north-south drainage ditches, and also provides for east-west lateral channels at one-half mile intervals, plus north-south feeder ditches, following the courses of present roads as much as possible.

A survey has estimated an annual damage from flooding and poor drainage as \$50,000 due to fall storms which interfere with harvest and actual damage due to water-logged soils and the spread of weed seed to bogs from adjacent areas.

On the basis of yields experienced this past year by growers, who had full frost protection, the loss was approximately 30,000 barrels to frost. Had it been possible to control run-off by control structure such as included in the plan a good proportion of this loss could have been avoided.

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# WASHINGTON'S YIELD PER ACRE EDGES CLOSE TO WISCONSIN'S

Continuing a series of articles sponsored by the Cranberry Institute, presenting statistical data about each of the major cranberry-producing areas. This fourth is about Washington, with comments by Frank O. Glenn, Jr., owner-manager of Cranguyma Farms.

In 1883, six years before Washington became a state, a French gardener named Robert Chabot planted McFarlins, Native Jerseys and Cape Cod Beauties in Long Beach to give Washington cranberry production a 2-year start over neighboring Oregon. 75 years later, Chabot's original plantings are marked only by overgrown dikes, but cultivated cranberry acreage in Washington now extends over 950 acres in the Long Beach and Grayland areas. Washington stands fourth place in barrels produced and runs a close second to Wisconsin in yield per acre.

Grayland didn't make its start in cranberry cultivation until 1912 when Ed Benn made a historic purchase of 160 acres for \$5.00 an acre. He sold some of these cranberry tracts to six Finnish settlers and the Finnish influence is still very much in evidence on Grayland's well-kept plantations.

Although vine cuttings were imported for cranberry cultivation there were also native varieties growing wild in Washington, and the Long Beach Cranberry-Blueberry Experiment Station has seedlings with a high production record which are a progeny of crosses made by Dr. D. J. Crowley.

It is said that Lewis and Clark found the Indians gathering native cranberries and John Peter Paul had tried to develop the wild vines as early as 1869.

However, even with this early start, cranberry production was slow in Washington until a land boom early in the 1900's boosted cranberry plantations in the Long Beach area up to 600 acres and Grayland began its development, gradually outdistancing Long Beach in harvested acreage.

From the figures on the opposite page, the progress made since 1950 can be noted. Acreage harvested was expanded from 700 acres to 950 and yield per acre went from a low of 47.1 in 1950 to a record high of 92.5 in 1953. Average for the ten-year period is 66.9 barrels per acre, a close runner-up to Wisconsin whose average was 69.9 for the same decade.

As in the foregoing articles of this series, 1939 has been used as the 100% reference point so that 700 acres harvested equals 100%

and the low yield in 1939 of 17.6 barrels per acre equals 100%. 1957, then, shows a 36% increase in acres harvested and a 400% increase in yield per acre.

Washington cranberry crops averaged 49,860 barrels in the period from 1947 to 1956 and jumped to 84,000 barrels in 1957. However, severe frost late last spring cut the 1958 crop to 57,000 barrels. Some growers lost their entire crop, but others, who had sprinkling systems and used them, saved Washington's record with yields at high as 150 to 190 barrels per acre.

Harvesting methods in Washington vary from bog to bog with water picking predominant in Long Beach using the water reel, and Grayland picking dry, with vacuum and mechanical pickers. This last season, the general trend, however, has been towards mechanical pickers with the Western Picker in first place, and a new Furford Mechanical Picker, developed in the last few years, is gathering disciples.

According to Survey of the Cranberry Industry in Washington in 1956 by F. B. Chandler, Washington cranberry bogs are built on peat which had developed between sand bars or low sand dunes paralleling the shore line. Usually about 1½ inches of this beach sand is spread over the graded peat before the vines are set and about ½ inch is used for resanding. Because most of this beach sand is fine and packs down, drainage has been a problem.

Protection from frost and summer drying is accomplished by irrigation systems, and sprinklers cover about 68.6 per cent of Wash-

ington's bearing acreage.

McFarlins are predominant here, as in Oregon, with a few other varieties in the Long Beach section.

Leading cranberry farm is Cranguyma in Long Beach, owned and operated by Frank O. Glenn, Jr. The plantation was originally developed by Guy C. Myers in 1941 and its total holdings of 1300 acres now has close to 100 acres in bearing.

Manager Glenn works hand in hand with nature and even welcomes stormy weather during harvest time. "The rain helps flood the bogs and the wind helps sweep up the berries," he says, which can be true when harvesting is done by water with the water reel, or egg beater, to stir up the berries.

But Mr. Glenn aids nature in every way and Cranguyma is the pride of the West Coast, with its narrow gauge railroad to quickly transport berries from "shore" to dryer. The miniature tracks take up little bog space and the vines grow right in between the tracks. The rolling stock consists of gasoline-powered speeders, assorted flat cars and other equipment, and as it moves down the track with its precious load of newly harvested berries aboard, it leaves a spray of flood water in its wake.

Cranguyma has one of the largest sprinkling systems in the industry and water needs are turbine pumped from a 30-acre lake.

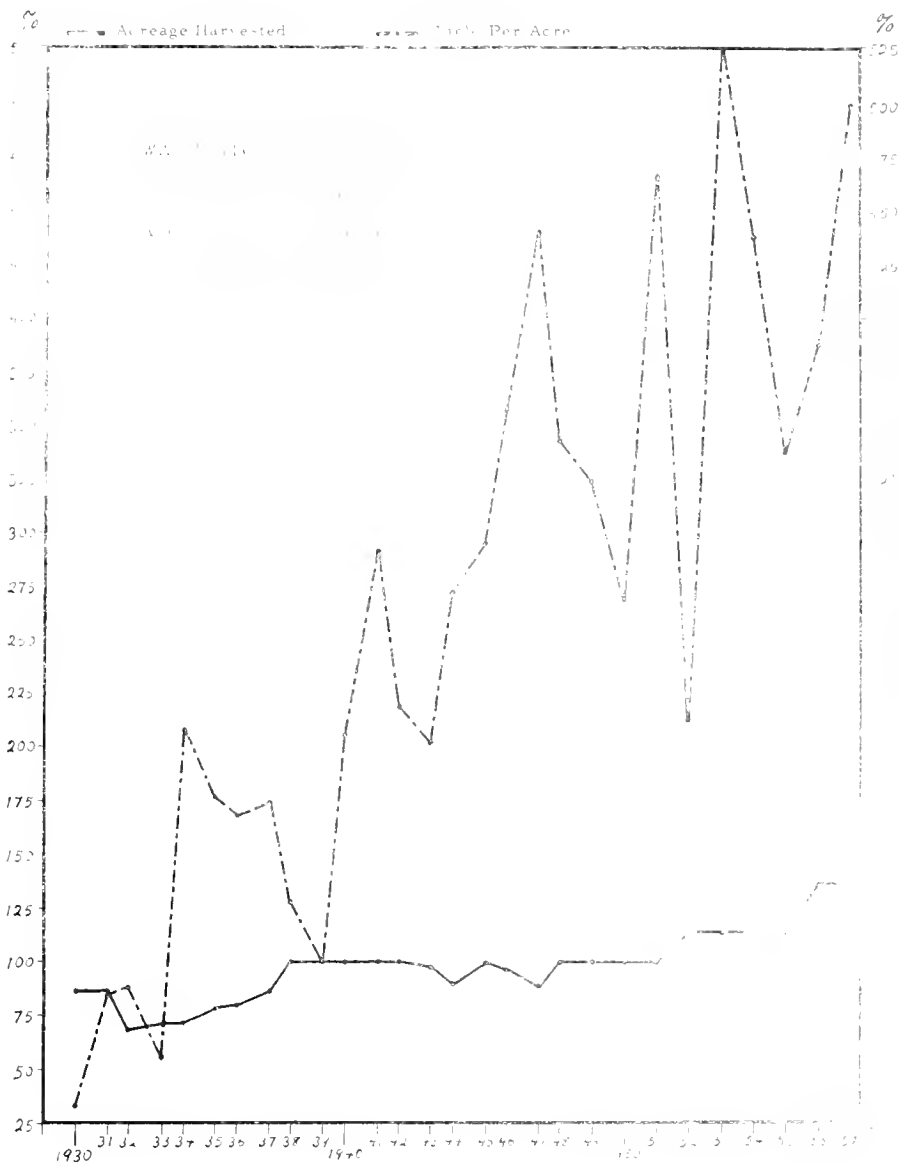
Cranguyma is not a farm alone, it integrates all the processes necessary to bring cranberries to the American dinner table in many new and exciting forms. Sorting and screening operations are side by side with a processing plant and Cranguyma leads the industry in attractive and varied cranberry gift packages.

Mr. Glenn believes in a bright future for cranberries and he's intent on helping them get there.

ADVT.

## BLIND TO FAULTS

Real friendship comes when two people get so thick they can't see through each other.



**WASHINGTON CRANBERRY CROP**  
1939 = 100%

Year	Actual Acreage Harvested	% Acreage Harvested	Actual Yield Per Acre	% Yield Per Acre
1930	600	86	5.8	33
1931	600	86	15.0	85
1932	180	69	15.6	89
1933	500	71	9.6	55
1934	500	71	36.6	208
1935	550	79	30.9	176
1936	560	80	29.8	169
1937	600	86	30.8	175
1938	700	100	22.4	127
1939	700	100	17.6	100
1940	700	100	36.0	205
1941	700	100	51.1	292
1942	700	100	38.6	219
1943	680	97	35.3	201
1944	630	90	47.6	271
1945	700	100	52.0	295
1946	670	96	62.7	356
1947	620	89	77.4	440
1948	700	100	60.6	344
1949	700	100	57.1	324
1950	700	100	47.1	268
1951	700	100	82.1	466
1952	800	114	37.5	213
1953	800	114	92.5	525
1954	800	114	76.9	437
1955	800	114	59.4	337
1956	950	136	68.1	387
1957	950	136	88.0	500

Figures from the United States Department of Agriculture

## Two Wisconsin Harvesters Have Worked For Fifth Generation

Walter Beck And John Swetz  
With Bennett Marshes Since  
1907 And 1914

In Wisconsin two cranberry harvesters have worked for five generations of Bennett marsh owners. One, Walter Beck, now 61 of Vesper, started as a raker with the Bennetts in 1907; the other, John Swetz, 66, of Sigel began work for the Bennetts in 1914.

Marsh was being run at that time by A. C. Bennett, who had founded it in 1877. Both men were, obviously, young at the time. With a few years off for military service they have been at the Bennett marsh Rte. 3 out of Wisconsin Rapids ever since.

A. C. was succeeded by his son "A. E." "Dad" Bennett, widely known in later years as the "grand old man" of the Wisconsin industry. "Dad" Bennett passed on the operations to his son Erman, who turned over the management to his two sons, Irving and Bradley. "Chuck" and "Brad," as they are called, have produced another generation of Bennetts for the marsh. The eldest great, great grandson of the founder is Chuck's six-year-old son, Michael, a first grade pupil at Cranmoor grade school, to carry on the Bennett cranberry traditions.

Swetz recalls the early cranberry harvests when he would come with his grandmother from their farm at Vesper by horse and wagon and then stay at the Bennett place for the rest of the harvest season.

A highlight of the harvest was always a dance held each night in the warehouse. "We really had some hot times," declares Swetz, and Beck has added "We always used to consider cranberry harvest as a vacation."

Both these long-time workers for the Bennetts have farm work to do when not harvesting. Beck has a 40 acre farm in the town of Sigel, while Swetz has 100 acres near Vesper.

Although raking for many years

both men moved into the warehouse and drying crew in about 1935.

It's no problem at all to find people who seem to know everything not worth knowing.

## OCEAN SPRAY OFFICERS

Directors of Ocean Spray of Canada, Ltd. have chosen officers for the year as follows: president, Thomas B. Darlington, New Jersey, vice-president, David E. Pryde, Washington, secretary - treasurer, Kenneth G. Garside; assistant secretary, John F. Harriott, and comptroller, Edward J. Gaughan, all Massachusetts. Garside is also general manager.

The man who's afraid of being spoiled by success should get a job with the weather bureau.



Left to right are Beck, Irving Bennett, Michael, (who at six says he intends to continue the Bennett occupation of cranberry growing), Bradley Bennett and Beck. (Photo and article courtesy of Wisconsin Rapids, Daily Tribune, Wisconsin Rapids.)



## LOOKING TO THE NEW YEAR

1958 WAS THE BEST YEAR for the industry as we all know, in a number of years. Most growers are heartened as to the outlook for 1959. NCA, which controls so much of the total production has announced it expects fresh fruit sales will return not less than \$1.00 per barrel than last year. On the other hand NCA has a storage of 17 percent more berries to dispose of (as of December) than the same date a year ago.

NCA, adds, however, that stocks in trade hands, both wholesale and retail will be much smaller than the previous year as we go into 1959.

But, one of the most important points, we believe and have mentioned before, is that apparently confidence in the trade has been restored. Distributors want to handle cranberries again, with the greatly-improved price stabilization (clean up in general) for the '58 crop.

As pleasant as the season was price-wise, the number of growers who are wildly enthusiastic are small. Most realize that one swallow does not make a summer. There is hard work ahead to be done.

There are days to come when good headwork, capacity to think clearly and look far ahead will be vital. We are definitely in the mechanical age now, in cranberry work. The operation of equipment will require workmen of more skill than formerly. They will be in the class of semi-skilled or skilled workers. Cranberry growers will be in direct competition with non-agricultural industry, for these men. Not only in finding able help, but also in wages.

It seems obvious to anyone that we can expend little lessening in costs on everything, including taxes.

It has been costing money to grow cranberries—as in turning out any product. It appears the cost of doing business is still on the up and up. So savings must be in management, in becoming better and better growers; in the new well-understood expression “more barrels to the acre.”

The small grower who does most of his own work has certain financial advantages, and presumably the larger operations will have advantages in resources and ability to hire real cranberry craftsmen. We fear it may be the middle fellow

CLARENCE J. HALL

Editor and Publisher

EDITH S. HALL—Associate Editor

Wareham, Massachusetts

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New Jersey Cranberry and Blueberry Station  
Pemberton, New Jersey

who must work his brain to the utmost advantage to stay in business. At least for a few years, until the cranberry industry is on a really firm foundation again.

## Fresh From The Fields

(Continued from Page 6)

summer of the previous year, when only 6.46 inches of rain fell during these four months.

The winter months were severely cold and snowy. January and March were considerably below normal in temperature and February and December were the second coldest recorded for these months. There were destructive and paralyzing snowfalls in February and March, including a record breaking 16 inches on March 20 and 21 and 14 inches on February 16. The total snowfall for the year, 44 inches, was also a record high.

The weather was unusually cool throughout most of the year. Ten of the months were below normal in temperature and only April and July were slightly above normal. The average annual temperature was 51.7° as compared to the normal of 54.3° F.

### '58 Brought Damages

The 1958 weather pattern brought troubles to the blueberry growers. The concentration of rainy and cool spells during blossom time caused great damage to this important south Jersey crop. Fungus diseases of the blossoms were induced and reduced activity of bees seriously decreased the pollination. Excessive summer rains hampered harvesting, caused berries to become soft and watery, and interfered with important insect control operations.

Nor were cranberry growers without weather woes. Spring frosts caused appreciable damage in some areas and the deluges in August resulted in flooding of bogs which also caused considerable loss.

### Late Massachusetts

After one of the roughest Decembers on record, January gave a three day respite from cold weather and then winter began a deep-freeze operation with slashing, bitter winds that made major headline news for all New England. By the 7th and 8th there were "ideal" winterkill conditions. Some had possibly already been done a considerable

amount was possible.

Total departure from normal to that date was only 20 minus, but the fact this was not much more was due to warmness of the first three days. Lows as recorded at State Bog were 4 above, 3, 14, and 18 on the 8th. Other spots reported much lower. The biting cold and gale winds, up to an estimated 55 miles per hour were reported at Cape Cod Canal.

Precipitation to that date had been only .78 of an inch of rain or light snow before the bitter cold struck.

### Ice Sanding

Frost in the bogs was up to 6 inches while it was 10 or more on uplands. Ice on bogs was six inches or more. More growers than in December were ice sanding.

### Oxygen Deficiency

No fear of oxygen deficiency was felt to the 8th, but should ice thicken, there come a snow deposit, (no snow remaining at that date) or there be cloudy weather this too, will become a problem.

## INSTITUTE MEETS

Members of Cranberry Institute were scheduled to meet at National Cranberry Association January 13th with a meeting on the 14th. Included in the agenda was the annual election of directors.

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"GIBBY" AND RUTH BEATON, Secretary and Treasurer of Cape Cranberry Growers Association. (Story page 7) (Florence Young Ph

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## 1958 Amazing Year In Jersey

A brief report of the past year in New Jersey from Edward V. Lipman, area manager for National Cranberry Association, calls 1958 one of the most amazing of seasons all things considered, for that state. There was an 88,000 barrel crop in spite of "quite impossible" conditions during the spring, particularly the severe frost on the night of June 6. This caught many growers unprepared, came at a very inopportune time, and was particularly unkind to many smaller growers, some of whom did not have adequate water.

Then there was practically

continual rain throughout the bloom period and in many cases the growers could not drain off in order to get a proper set. While the total crop has been placed at 88,000, NCA received a total of 77,000 from its membership in Jersey.

The report is that it seems certain New Jersey will be in the cranberry business for many years although there will be fewer growers. Growers' operations and production on some bogs are described as "out of this world."

### LONG BEACH RAINFALL NEARLY 7 FEET IN '58

Rainfall during 1958 totalled, as measured at Cranguyma Farms, Long Beach Washington just

short of seven feet, or 82.56 inches. There was a fall during December of 12.02 inches. Rainfall at Seaview, nearby on the Peninsula showed 78.36 inches for the twelve month and 10.31 for December.

Temperatures for the year ranged from a minimum of 24 degrees on November 16th to a maximum of 88 degrees on July 27 and 28.

Heaviest month of rainfall was November with 14.45 seaview. Spring and summer months were light in precipitation, while these were record high months in the East.

Total rainfall during 1957 was 67.11 inches.

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### ANNUAL JERSEY MEETING FEBRUARY 5

American Cranberry Growers Association was scheduled to meet at Fenwick Hall, Pemberton, New Jersey, Feb. 5. This was the annual meeting with election of officers.

Subjects to be discussed included "Status of Some Equipment Proposed for Mowing of Weeds Under Water," "Chemical Control in Ditches," "A Review of Cranberry Rot Control in 1957-1958," "Control of Cranberry Insects," reports of New Jersey State Agricultural Convention, tax committee, Elizabeth C. White Research Fund and water and forestry committee.

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## Wisconsin Meet Discusses Many Pertinent Matters

**Albert Amundson Elected  
Pres. of State Growers  
Association for 1959**

The 73rd annual meeting of the Wisconsin Cranberry Growers Ass'n. was held Saturday, January 31, 1959 in the auditorium of the Wood County Courthouse, Wisconsin Rapids.

The meeting was called to order at 1:15 P. M. by Pres. Marvin Hewitt. He welcomed seventy growers and guests and expressed appreciation of the turnout in view of the very cold weather. In his remarks to the group he expressed his gratitude for the help he received from the members in running his office and called for the membership to better support their organization and to take more interest in its work. He asked for better response in paying dues and frost warning assessments. Even though he was stepping down he pledged he would continue to actively take part in Association activities.

### Sorensen

Leo Sorensen, secretary read the minutes of the August summer meeting and also gave a financial report of the Association. He briefly outlined the work of the association the past year, reviewed the growing season and gave an outlook for the coming year. He reported that he felt the two major technical advances made in the field last year were the encouraging results and data supplied by the use of the net radiometers and the catching of fruitworm and fireworm millers in the black light traps.

### Wisconsin Film To Paris

The new colored cranberry film on the Wisconsin Cranberry Industry which was made by the Dept. of Agricultural Journalism of the University of Wisconsin was shown by George Klingbeil, Ext. Specialist, Small Fruits, Dept. of Horticulture, University of Wisconsin. The film about fifteen minutes in length was well

(Continued on Page 16)

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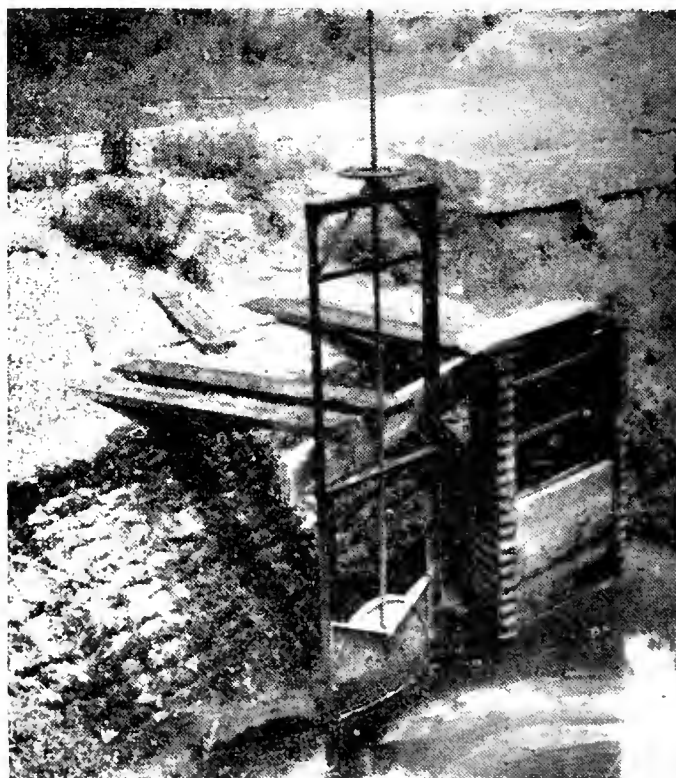
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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



## Some Winterkill

A highly acceptable respite in weather conditions was enjoyed after the first week in January. Temperatures failed to drop below zero, snowfall has been negligible, and while January was a cold month, averaging approximately half a degree per day below normal, it was a far cry from the frigid weather experienced in December. However, the severity of the cold spell encountered January 5-7 will not soon be forgotten when temperatures averaged well below freezing and gale winds lashed the entire area. George Rounseville and "Joe" Kelley have examined a number of bogs exposed to these winter-killing conditions and report that there is some damage as evidenced by an "off-color" appearance of the vines, plus some leaf drop. The extent of the damage will not be known until the vines begin to "green up" this spring. The comment has been made by some experienced growers that if exposed bogs were not damaged during the above period, the use of water during the winter months is highly questionable. Time will tell.

## Oxygen Deficiency

Apparently oxygen deficiency conditions have not become critical on an extensive acreage. We base this point on the numerous tests made by Richard Kiernan of the A. D. Makepeace Company, who has collected considerable information on this subject during the winter months. He has found that the oxygen content on some flooded bogs has dropped to a critical point but the water was immediately removed to correct the problem. The acreage involved has been limited. We ap-

preciate the information received from Mr. Kiernan.

## Vine Pulling

There is another point regarding winter difficulties that cannot be appraised at this time. We are referring to "vine-pulling" damage that occurs when vines are frozen into the ice and the ice shifts its position during periods of thaws and heavy rains. There is some evidence that this type of damage has occurred in January and early February, but again we will have to wait until spring to determine the extent of such injury.

## Charts in March

The cranberry insect, disease and weed control charts have been revised and are now being printed. The county agents will mail the new charts to growers in March, accompanied by a circular letter outlining the major revisions and items for study. The experience and observations of growers who assisted with this work was a tremendous help as usual. We will discuss the major revisions in these charts in the March issue of Cranberries. Growers are reminded that plans did not call for a revision of the fertilizer chart, so their 1958 copy should be retained. There is a limited number of fertilizer charts available at the county agents' offices or at the Cranberry Experiment Station for those who have misplaced their copy.

## Amino — No Change

No approval has been received for the use of Amino Triazole during the pre-bloom period, which of course is a disappointment. Should approval be granted, growers can be assured that they will be immediately notified.

## Important

A pesticide and fertilizer questionnaire has been prepared by the writer with the full cooperation of the station's staff and has been mailed to growers through the county agents' offices. We would like to have growers evaluate their reactions to present recommendations and learn, for example, what insects and weeds gave growers particular trouble in 1958. It will require only a very few minute's time to fill out the questionnaire and return it in the addressed envelope provided for this purpose. No postage is required. The information collected will be extremely useful to the station's staff, the county agents, and ultimately to growers. We hope to have a summary of the results of this survey for the March cranberry club meetings.

## Conservation

Growers are reminded of the assistance they may receive under the 1959 Agricultural Conservation Program. Financial and technical assistance is available for the construction of ditches, dikes, drainage systems, and certain forestry practices. The Soil Conservation technicians, Agricultural Conservation Program field men, Forestry Service personnel, Farm Credit representatives, and county agricultural agents are working as a team to help growers in these cost sharing programs. The deadline for enrolling is March 1st.

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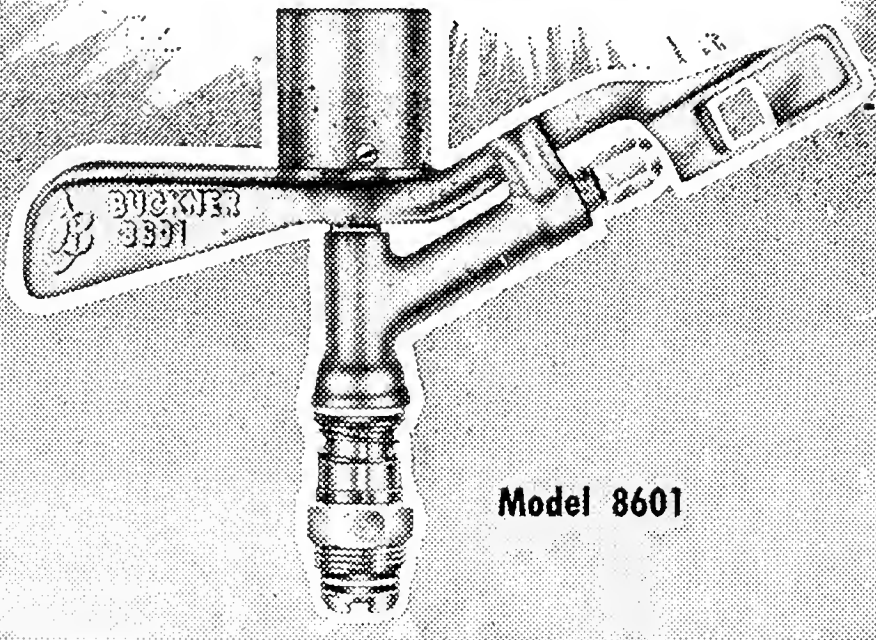
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We suggest that those interested consult their local county conservation committee or their county agricultural agent for further details.

### Long Range Planning

A new approach in program planning occurred at the State Bog on February 5th when a group of growers, marketing representatives, county agents, and extension specialists met with the station staff to discuss long-range planning. This was a follow-up of the State Cranberry Advisory Committee meeting held in early December. The discussion focussed on these major points; namely, what our state's average production might be in five years, acreage trends, mechanization required to achieve this production, major changes in bog management that should be considered, and even returns that growers might expect for their efforts. The discussion was most stimulating, many viewpoints were expressed, and a healthy exchange of ideas was manifest. This was only a beginning but a step in the right direction if our industry is to make the necessary adjustments and continue to prosper in the years ahead.

### LATE MASSACHUSETTS

February started out very cold Groundhog Day, February 2, brought an even zero at State Bog in the shelter. Other home thermometers ranged from zero to five below. It was called by many, with its piercing winds the coldest day of the winter. Certainly the hog saw his shadow cast by the sun in a cloudless sky and returned to his hole for four more weeks.

With the exception of two or three warm days temperatures continued low, minus 25 degrees to the 12th with a reading of 4 above on that day. Departure for the year was minus 42. Normal precipitation for February is 3.67, while records at State Bog showed total precipitation of 2.66 of which 3.50 was snow.

• READ CRANBERRIES •

# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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## FRESH FROM THE FIELDS

Compiled by C. J. H.

### MASSACHUSETTS

#### First of January Bitter

Following the bitter cold of the first week or so of January, after a December which has been aptly described as "murderous", temperatures continued on the very cold side until about the 19th. Minus degrees had averaged about two a day to that point. There had been bitter winds at many times.

#### "January Thaw"

Then began what in the old days would be called "January thaw". There was practically no snow to thaw, but plenty of both salt and fresh water ice. A mixed storm of rain and snow, but mostly rain from the 20th up to the 22nd, brought .47th inch but there were days of heavy fog, and this with "tropical" air brought a high of 48 degrees on the 21st and 51 on the 22nd as recorded at State Bog. Frost was coming out of the ground and conditions became extremely muddy. By the 22nd temperature departure was minus 22 or one a day for month to date.

#### Vine Condition

There was probably no really important winter-kill during the month, but there was some. How much, will be determined when the water is off and vines begin to green. There has been considerable vine damage through the pulling and haulings of ice and water.

A great deal of sanding has been accomplished by growers this winter, a fair portion on ice. Sanding has been more extensive than in several years, due probably to a revival of interest with the better financial condition of the grower, and prospects for the near future.

#### Bog Buggies

Probably for the same reason there is a flurry of activity of growers working on home-made bog buggies. These are of various types and for a variety of bog uses.

#### Water Supplies

There has not been much precipitation in the past 3 months and this is beginning to cause a little fore-looking worry. This is, "will there be adequate water supplies for the spring frost season?"

#### January Not Too Tough

Actually January when it ran out was not a cold month as a whole, but nearly normal—17 degrees or less than one degree a day colder for the 31 days. Precipitation was only 2.13" of which three inches was snow. Greater part of the month saw no snow

cover. Normal precipitation is 2.95.

### NEW JERSEY

New Jersey cranberry bogs are being subjected to a very frigid winter. Luckily, the severity, which produced near critical conditions with ice as thick as seven inches, has been tempered by occasional mild periods during which a large portion of most bogs have opened up. There has been open water for three short periods. The largest snowfall, 3.5 inches on January 26 and 27, fell on bogs which were almost completely open. Thus no dangerous snow-ice conditions have prevailed so far this season.

#### Jan. Not Cold As Dec.

January was not as abnormally cold as December, but the aver-

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age temperature of 31.6°F. was still 2.3 degrees colder than the norm. An unusual warm spell on January 21 and 22, when the thermometer soared to 63 and 58 degrees, did much to alleviate conditions.

#### Dry Winter

It has been quite a dry winter with both December and January being considerably on the short side. January's precipitation totaled only 2.16 inches (only 4 inches of snow). This added to December's deficit gives a shortage of almost 3 inches.

#### Indication

An indication of what might have been had it not been for the lucky ice break-ups is shown in oxygen data taken from two sheltered coves. In these two small "freak" areas, where the ice did not break up, oxygen content was 0.96 and 2.40 c.c. per liter on January 28

## WISCONSIN

#### Real Winter

The big news in Wisconsin continues to be about the real old-fashioned winter we are experiencing. During January eighteen below zero marks were recorded in Wisconsin Rapids, which makes a total of 35 below zero marks this winter. These marks are about twenty five percent above the normal count. For the past five years the average of below zero days in February has been ten so with an extended forecast for below normal in temperature and precipitation for February, a continued cold winter can be expected.

January averaged nine degrees below normal of 15.1 and only .55 inches of precipitation of a normal 1.05 inches. The ground water table remains 1.80 feet below normal. February averages are 17.1 degrees temperature and 1.07 inches of precipitation.

#### Snow Deep

Snow has been on the ground in the cranberry areas of the state since the last week in November. At the end of January the entire state was snow covered with the southeastern part of the state having the most. It

that area snow measured from 12-16 inches, in the far north 12 inches and in the central and west central from three to five inches. Little snow melted during the month due to the frigid temperatures. The mercury climbed to just above freezing for very short times on Jan. 12, 13 and 14th. The coldest temperatures were recorded the night of Jan. 31 when the mercury dipped to minus thirty

six degrees in the north and minus 31 at Wisconsin Rapids. Total minus degree days approximated three hundred in the cranberry areas.

#### Deep Frost Hampers Sanding

Cold weather and deep frost in the pits continued to hamper sanding operations. Over two feet of frost was reported in the pits and the depth of ice in the reser-

(Continued on Page 20)

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# **Teamwork Enables Ruth and "Gibby" Beaton to Greatly Aid Mass. Industry**

**Wareham Couple, are Treasurer and Secretary of Cape Cod Cranberry Growers' Association, Respectively and also Carry On Many Other Duties; Are Amazingly Active In Civic and Varied Groups.**

by

Clarence J. Hall

Originally this article was to be a feature about Mrs. Ruth Beaton, Treasurer of the Cape Cod Cranberry Growers' Association since August 1951. Then it turned out to be impossible to leave out her husband, Gilbert T. Beaton, Secretary of the Association since 1947. "Gibby" is known for his various cranberry activities and as a good grower throughout Massachusetts and beyond his native State.

The wonder is how this pair manage the time to do so much work in cranberries and to take part in so many civic, church and other activities. Gibby says, "We work together as a team and we play as a team."

As a team they are doing a fine job for the Growers' Association, and in other cranberry affairs. A glance at past history shows that in most state cranberry associations, and in many other organizations as well, it is the secretary and treasurer who keep organizations together. The persons occupying these positions usually serve a number of years, while presidents, vice-presidents and directors change frequently.

## **Ruth**

Let's consider attractive, dark-haired Ruth first. Born in Middleboro (an important cranberry producing town), within sight of a large cranberry bog, she screened berries when in her teens. Following her graduation from Memorial High School in Middleboro, she was graduated from the Executive Secretarial curriculum of Burdett College in Boston, which has served her in good stead in her later cranberry and other work.

She was employed by the Frederick S. Weston Insurance office, Middleboro, as secretary for several years prior to and following her marriage in 1935. Previous to her college studies she had worked summers while in high school in the office of the Middleboro Gazette, the town weekly.

She is an active member of the Wareham Monday Club serving as the present second vice-president and program chairman of this major social group. She is a former Brownie leader, former member of the Wareham Girl Scout com-

mittee and its chairman for four years. She is also a member of the Tobey Hospital Guild and its present Civil Defense Chairman.

## **Also Housewife**

In addition to all the foregoing activities Mrs. Beaton is a housewife with all that entails. Ruth has a valued collection of demitasse cups, many of them antiques,

which is her hobby. In their home on Marion Road, Ruth and Gibby have brought up two daughters: Marilyn, who is now attending Lassell Junior College in Auburndale, Massachusetts; and Donna, a Freshman on the honor roll at Wareham High School.

"Gibby" is Secretary of the Cape Cod Cranberry Growers' Association and Ruth, its Treasurer, but often their work intertwines, and it is no secret that Ruth accomplishes much of the "paper work" for both. She succeeded the former Miss Thelma Laukka, secretary at the Cranberry Experiment Station. Naturally, as treasurer she keeps the financial records. An important item of her duties is sending out association meeting notices, and more time consuming, is the secretarial work for the association's frost warning service, of which "Dick" Beattie is chairman. She does the billings and collection of fees for frost subscribers, keeps the records, and sends information and data to the seven distributors throughout



Mrs. Beaton is shown at a task in which she spends many hours, typing out cranberry notes. (Young Photo)

southeastern Massachusetts who "warn" growers. This is no simple task and she has frequently been given thanks for her efficient work by Beattie and the growers.

The couple are members of West Wareham Grange, the First Congregational Church in Wareham, belonging also to the Mr. and Mrs. Club, and the Kittausett Club of Marion, recognized as one of the finest golf courses in the country and at which The Walker Cup Matches were played in 1953.

Although they pride themselves on their "team" work there is competition in golfing—but neither would admit who was the most consistent low scorer.

#### Gibby

Now, as to "Gibby". He was born to cranberries and cranberries have been his occupation all his life.

"Gibby", one of five children, was born actually in Rochester township, but in a section most commonly known as West Wareham, a region of many bogs. He is the son of Peter G. Beaton, and the late Clara Gault Beaton, the former a grower for about 58 years.

Peter was born in Prince Edward Island and left there as a young lad and lived in West Wareham. He graduated from Tabor Academy in Marion where he met Clara Gault, whom he later married. Mr. Beaton worked for several years at the Tremont Iron Works, during which time he was building his own bogs, and when his holdings reached approximately 45 acres, he devoted his full time to them.

#### Sound Early Training

"Gibby" was president of his senior class at Wareham High and during three summers he worked at the Massachusetts Experiment Station under the supervision of the late Dr. Henry J. Franklin. There could scarcely be better basic training than that. While attending high school, he wrote a thesis on cranberry bog insects and specimens were preserved in formaldehyde and others were mounted; these are still on display at the Wareham High School chemistry lab. After graduating from high school he attended the University of Massachusetts where he was a member of the Student Council.

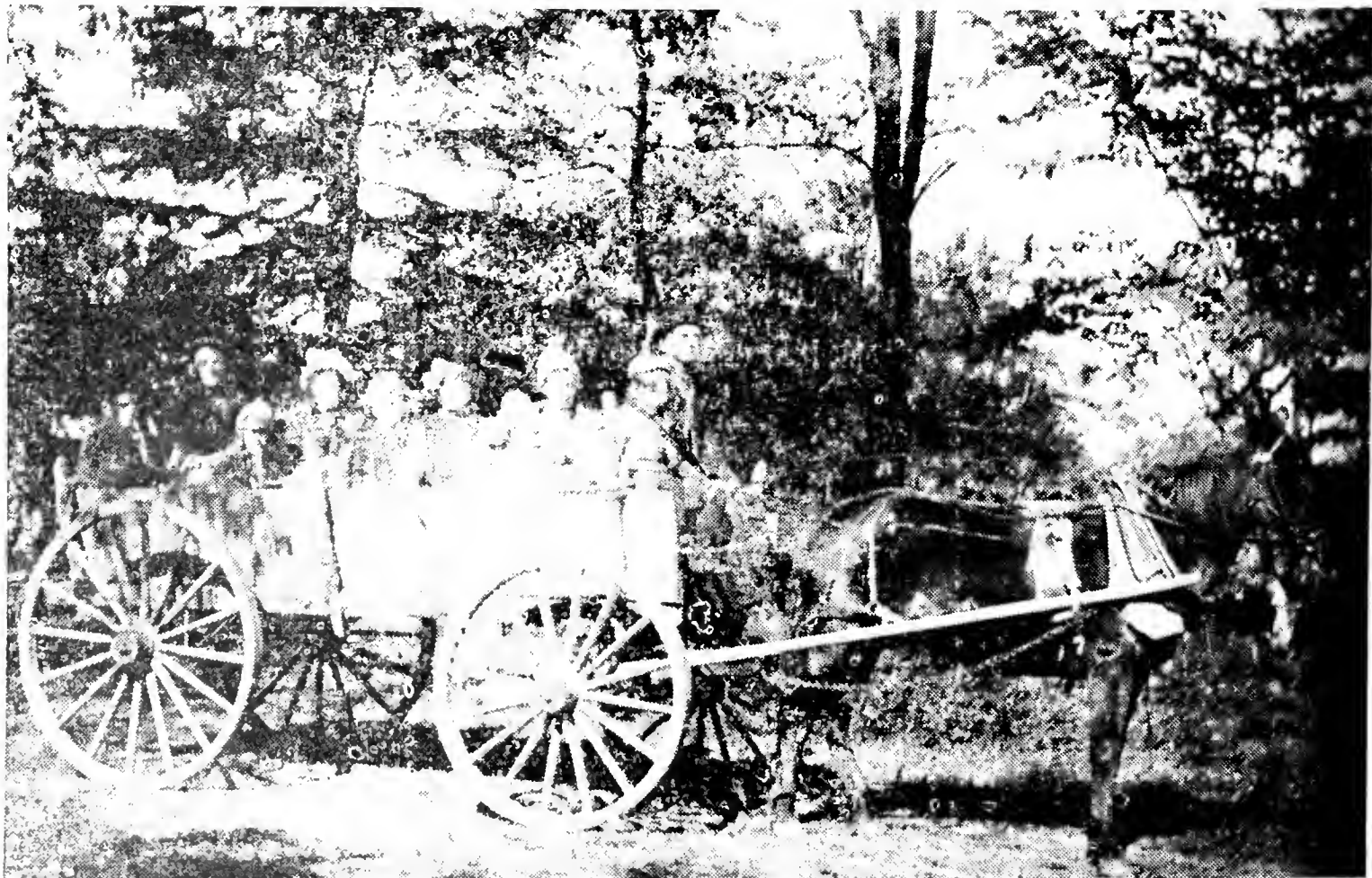
His activities outside the world

of cranberries include currently serving as the vice-chairman of the Wareham School Committee of which he has been a member for the past eight years; and a former member and chairman of the Finance Committee, both civic matters of importance in town affairs. Gibby was the instigator in the formation of the Wareham Little League, being elected as its first president and serving in that capacity for three years. He is a member of Social Harmony Lodge, A.F. & A.M., Wareham, and has attained the 32 degree. He is also active in the Community Associates, a local organization for civic betterment. He has held the office of president of the Southeastern Massachusetts Blueberry Growers' Association, a group of some 40 or 50 members.

Mr. Beaton's interest extends beyond cranberries for he has served as a member of the Board of Trustees Plymouth County Aid to Agriculture, and presently is a director of the Plymouth County Farm Bureau.

#### Cranberry Positions

To get to his official cranberry positions—as well as being secre-



Photo, taken about 1911 shows Thomas Gault starting for the bog for a day's picking. Mr. Gault is driving, beside him the small boy is Elliott and the infant is "Gibby."

tary of the Cape Association, he is secretary and treasurer of the Southeastern Massachusetts Cranberry Club, which meets at Rochester and is the largest of the four state groups.

The Marketing Committee, of which Gibby is also secretary, has been active in working to obtain a Marketing Order. Several trips have been made to Washington, where he testified before Congressional committees in behalf of those in the industry who desired such an order. Mr. Beaton feels very confident that with good sound marketing the cranberry industry will once again be a profitable enterprise to be engaged in.

Numerous cranberry-grower discussion panels have been held locally where Mr. Beaton has spoken on many subjects pertaining to cranberries. His views are always listened to with respect. Gibby is a man who has the knowledge of the cultural side of cranberry growing as well as the marketing end, which enables him to present a rounded picture of the cranberry industry.

Gilbert has now been with National Cranberry Association for the past three years, working at the Hanson office, currently his title being assistant sales manager fresh fruit. Lester F. Haines is Chicago sales manager. For one year he was employed as Eastern manager for Eatmor Cranberries with an office in Plymouth. Previously he had been with Beaton's Distributing Agency serving as its vice-president and the J. J. Beaton Company in Wareham for twenty-five years as Superintendent of bog management and the packing plant at South Wareham. He is a nephew of the late John J. Beaton, recognized as one of the most powerful and largest growers in Massachusetts. Visits have been made to every cranberry-growing area, including Nova Scotia, with the exception of the West Coast. He attended his first fruit growers' convention in 1933.

#### Grower

Gibby is a cranberry grower in his own right. With his practical background in the business he knows cranberry cultivation from peat in the bog bottom to the vines

on the top and down to the bottom of the ditches, cranberry weather, frost and its control, irrigation, and the value of many of the varieties. His personal interest in bog property are first, the Piney Wood bog at the Carver-Plymouth boundary, which is owned jointly with his brother, Elliott, who is the proprietor of a grocery business, and his brother, Kenneth, who manages a cranberry growers' service business. This growers' service company, which, incidently, is a partnership between Kenny and Gibby, takes charge of several other growers property by sweeping, dusting and spraying for insects as well as harvesting. The acreage being serviced is approximately 1000 acres.

Piney Wood property has an excellent water supply with a series of three reservoirs connected by canals with a pump driven by a 50 horsepower electric motor enabling them to take all of the water that is used on the property and pump it back into the reservoirs.

#### Blueberries

Second is the K-G (Kenneth and Gilbert as might be surmised) located on Route 28, Wareham, originally built by the late Norman Hudson. Here again, Ruth keeps the accounts for the two men. Adjoining this bog is a cultivated blueberry patch with the three

main varieties being grown—Rubels, Pioneer and Jerseys. Gibby started raising blueberry plants from cuttings in 1933 and feels very confident that blueberries in suitable land adjoining cranberry property in Massachusetts would be a source of additional revenue to the cranberry grower.

The third property is the "Three B" owned by "Kenny", "Gibby" and their father, Peter. This ownership is situated in both Wareham and Falmouth. The Wareham property was formerly owned and built before 1900 by their grandfather, the late Thomas Gault. The varieties grown here are Early Blacks and Howes.

Besides putting in many licks at golf whenever leisure warrants, Gibby likes to hunt and fish. He is the secretary and treasurer of the Red Cedar Fox Club (which probably involves more bookkeeping for Ruth).

It is amazing how "Gibby" and Ruth find the time to engage in so many activities of such varied nature.

We've all heard of the saying, "Busy as a Cranberry Merchant," and that is true of Gibby and Ruth. This efficient "team" seems also to prove the old adage that goes more or less, "that to keep youthful and happy is to keep busy."

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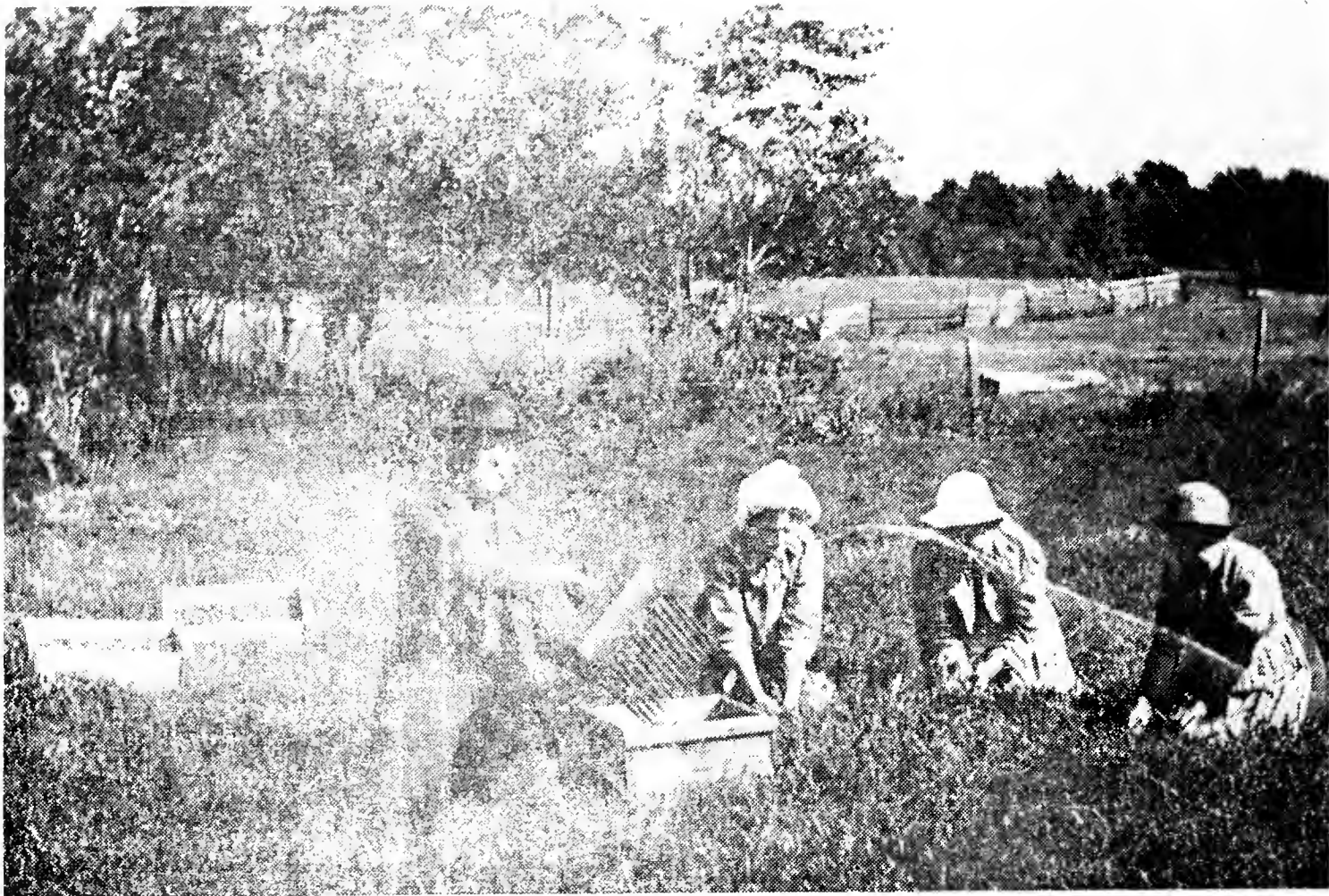
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At hand picking on the bog: Thomas Gault, Gibby's grandfather, Alice Crane, Gibby's mother, Clara (Gault) Beaton and his grandmother Mrs. Thomas Gault.

## Mass. Clubs Get Views Of Last Year And Of '59

### Both Culture and Marketing Angles Are Discussed

Looking back over 1958 and to 1959 and the future could properly be termed the agenda of January Massachusetts club meetings (13th, Upper Cape; 14th, Lower Cape; 20th, Southeastern and South Shore.) That these were largely attended may attest to a revival of industry, hope for much improved financial returns in the near future, and more than a measure of satisfaction in returns that the past year brought.

Principal speakers were Ambrose E. Stevens, general manager of NCA and its director of advertising and promotion, H. Drew Flegal and Dr. C. E. Cross, director of Massachusetts Cranberry Experiment Station.

Dr. Cross' statement, that Massachusetts crop prospects for 1959 seemed at the moment reason-

ably good, and might be expected to be about the Massachusetts' 10-year average of 530,000 barrels, that he did not believe the early January winter-kill conditions may have been too serious and he hoped the remainder of the winter might be more moderate were reassuring. (The text of his address appears elsewhere in this issue.)

Mr. Stevens in a factual talk, after saying he now felt more familiar with cranberry growers and the cranberry industry, made some statements which were reassuring; others perhaps less so. One of the latter was that the 1958 pool could probably not be closed until about December 1, of this year, when the last berry was gone and the total amount per barrel to growers could be determined. This return, it was reasonable to expect would be comparable to the 1957 pool figure, he said.

NCA, he said, from a financial angle, is stronger than in a number of years.

NCA management under the

board of directors is now working on a 5-year plan for the utmost possible efficiency all along the line.

Improvements, especially in the handling of empty boxes should be made at both the Hanson and Onset plants. A new press is needed and needed badly. Additional freezing space is also called for, also additional warehouse space. NCA, it must be noted, is handling a currently increasing proportion of the crop. Those and other improvements could obviously not all be done at once, he said, but it was hoped to make Ocean Spray processing operations second to no plant doing the would decrease costs.

He said the accounting system was now going like "clock-work", the machines were being fed additional "copy" and a saving in time, therefore money, was being achieved.

"In the head of our research, "Bill" Hampton, we have a real pro. He could be working on 30 or more projects, but he is being



limited to two or three to which he can give undivided attention. We want to improve our whole sauce. We now have a business approach to our research."

Mr. Stevens said NCA as a farmers' cooperative, could raise money for increased capacity in only one way, that being through the retain of its members. The fairest proportion seems to be 50 cents per barrel. He complimented growers in general in consistently producing more berries from less acreage. He said he was convinced there was a much better feeling in the trade and referred to a card sent out Friday of each week of the fresh fruit season to Ocean Spray brokers, and trade, and also to competitive cranberry distributors. This listed prices, varieties available and gave a 10-day guarantee on the F. O. B. price of NCA fruit.

#### Flegal

Mr. Flegal, making his first appearance before Massachusetts clubs clearly explained the NCA advertising plans and what research has revealed about various phases of marketing. He told how the slogan that cranberries are the "natural mate for every meat", should be the best advertising idea to sell more cranberries.

He pointed out that meat is eaten almost every day in the year by most people and if they are given the idea that cranberries add to any meat dish, any day of the year, more cranberries will be sold. He said this might be called an extension of the idea cranberries "go" with turkeys and chicken. Yet, he said, turkey and chicken are not bought every day in the year as is meat, so that the idea of cranberries and meat, not just poultry, should be put over.

This thought is being put out by seasonal magazine advertising, newspapers, radio, television and through sales promotions in markets. January and February are months when the consumption of meat falls off due to after-Christmas, year end bills and other

factors. A new booklet is now available to purchasers of Ocean Spray which explains how savings may be made in buying certain grades of meat, by slicing at the table, or other ideas which may help increase meat sales and that cranberry sauce should go with the meats bought.

Ocean Spray sauce is now available in 94 percent of all groceries in the country and 99 percent of all chains.

He said that to make the cranberry business a better one is to induce more people to eat more cranberries throughout the year. The idea is simple and "old" but difficult to put into effect, and that NCA was doing its best through professional promotional tactics, he added.

Growers, he said, must not expect to have fewer cranberries to market each year, but more, as cranberries, like practically every other agricultural product, are on the increase. He said he expected to see a national yield of a million and a half barrels or even more.

Mr. Flegal's talk was accompanied by slides, graphs, advertising in color reproduction and movies. There followed the new

excellent color movie of the industry in Wisconsin.

## Institute Elects 1959 Officers

The Cranberry Institute met at Hanson, Massachusetts January 13 and 14th, holding annual election of officers. Those named were Orrin G. Colley, Duxbury, Cape Cod Cranberry Cooperative, Inc., president; Vernon Goldsworthy, Cranberry Products Incorporated, Eagle River, Wisconsin; Marcus M. Urann, Hanson, vice presidents, and Gilbert T. Beaton, Wareham, Mass., of NCA, secretary-treasurer.

Future plans were discussed. Officers are also directors.

#### EDAVILLE THEFT

Two men have admitted to stealing a safe at cranberry-famed Edaville at South Carver. Safe reportedly contained \$12,000, and the break occurred after the Christmas holiday. The men were given 3-5 year sentences, and the safe has been recovered but not the money, which included checks.

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# Survey and Outlook for Mass. Growers

by  
**Dr. Chester E. Cross**  
**Head Massachusetts Cranberry Station**

In 1957, Massachusetts cranberry growers raised a larger than average crop of 563,000 barrels. This was the more remarkable because it was raised during a season of exceptional drought, and the crop was further seriously curtailed by frost (chiefly on May 17, 1957) with the heaviest losses occurring in Barnstable County. The chief factor in the weather promoting a good crop in 1957 was the sunshine of 1956 which measured 248 hours above normal at Boston.

## Sunshine Build-up

The 1958 crop in Massachusetts, according to the latest U.S.D.A. estimates, stands at 610,000 barrels. This is the second largest crop in the history of the state and is especially noteworthy because it was raised on only an estimated 12,900 acres. This acreage represents the smallest area in cultivation since 1905 and is 2100 acres less than was commercially operated 10 years ago. The almost constant sunshine of the drought months of 1957 provides the key to the heavy crop. For the first time in history over 3000 hours of sunshine was recorded in one year at Boston, the actual figures showing 3912 hours for 1957 or 456 hours above the 50-year average. As Dr. Franklin showed long ago, the sunshine of the previous year is the chief weather control of the cranberry crop in Massachusetts. The long drought of 1957, which hurt that year's crop by about 40,000 barrels and which dried and burned some cranberry vines so severely that growers despaired for the next crop as well, actually built up the reserves for the second largest crop in our history.

What of the keeping quality of these two interesting crops? On June 1, 1957, the Cranberry Station issued a keeping quality forecast for generally poor fruit. Only 4 points of a possible 16

stood in favor of good keeping, and the following month of June was 4° F. warmer than normal—a factor which lost another 2 points. About 700 acres of bog were treated with fungicides in 1957—too small an area to have any significant effect on the Massachusetts crop as a whole. One further element contributed to the picture. Since Dr. Zuckerman joined the staff of the Cranberry Station about three years ago, he has made a serious effort to determine the relative keeping quality of "early-water" and "late-water" cranberries. It appears from his studies that "late-water" fruit is not always superior to "early-water", and further, that in 1957 there was very little real difference in the keeping quality of "early-water" and "late-water" berries. To summarize: the keeping quality of the Massachusetts crop in 1957 was poor, and shrinkage in storage was heavy, because weather factors were against it, little fungicide spraying was done, and the "late-water" fruit failed to stand up to expectations.

## Fungicides

On June 1, 1958, the Cranberry Station felt compelled to issue the same forecast of poor keeping quality as had been issued the year before. Again there were only 4 points of a possible 16 favoring good quality. Growers and shippers alike now know that the great crop of 1958 was actually fair to good in keeping quality and that shrinkage losses were far below those of 1957. Why? To begin with, the month of June, 1958, was over 3° F. below normal, making the score 6 points out of 18 in favor of good keeping fruit. In the second place, about 3000 acres of Massachusetts bogs were sprayed with fungicides in 1958. Since growers who were accepting the additional cost of this practice wanted a maximum return for the investment, it is only reason-

able to suppose that treatments were made on the most productive bogs. So, although only one-fourth of the acreage was treated with fungicides, probably one-third or more of the crop was so treated. Finally, 1958 seems to be one of those years when "late-water" had a distinct keeping quality advantage over the "early-water" berries. It is generally known that ripening was slow for the 1958 crop, and "late-water" fruit regularly colors more uniformly than "early-water". Herein we may have some suggestion of the reason for "late-water" doing better in 1958.

## Congratulations Due Growers

In general, then, growers are to be congratulated for raising two large crops in years of almost opposite weather characteristics; and the improvement in quality of the '58 crop over that of the year before is in part at least a tribute to their own efforts.

For the present situation—we are having a winter of greater severity than we have seen for a long time, and much more severe than we had anticipated. It represents the first time we have noticed a severe winter following a warm April and a warm November. December was very cold, but what snow fell gave us longer protection from winter killing than usual. Sub-zero temperatures were recorded several times in December, but winds did not blow consistently and we do not think any winter-killing occurred then.

January is another matter. As of the present time, (late in January) the only dangerous period seems to have been January 5, 6, and 7, when the wind howled day and night and the temperature remained in the teens during the day and the single numbers at night. These were surely winter-killing conditions. But we usually figure that our vines can stand 48 to 72 hours of such weather. At present, and knowing that large areas were exposed to these conditions, we are inclined to think that some vines are winter-killed, that our crop potential for 1959

has been cut by at most 10 percent. But it is difficult to appraise the amount of damage—we will know much more at “greening-up” time next April. But winter-killing occurs slowly over a period of days and hours. While frost holds the roots in check, preventing the replacement of water lost from the leaves and stems, the danger continues. So, if growers can continue from time to time to pump some water onto their bogs (providing, of course, that freezing conditions persist), they will be helping their vines to survival even if it remains impossible to get them fully under water or ice.

### 1958, Wet, But Not Dark

Most of us will think back to 1958 as a wet and dark growing season. It was, of course, fully as wet as 1957 was dry, but it was not a dark year. Actually, Boston measured 79 hours of sunshine above average, to give a push, albeit a small one in comparison to the last two, to the 1959 cranberry crop. Further, in those months when the sunshine counts most toward our crop, May, August, September and November of 1958, the records show 82 hours in excess of normal. While such a tally is small when compared to the build-up prior to the '57 and '58 crops, it surely indicates a prospect for 1959 that is at least average. If this is so, and if winter-killing has not damaged the prospect seriously, then 550,000 barrels is not an unreasonable figure for the coming crop.

### Sprinkler Control

There are, barring further cold weather problems, just two major hurdles between Massachusetts growers and their 1959 crop—frost and insects. Such a statement should be regarded with special attention as coming from a weed man. But if we are not mistaken, there is more cranberry money jingling in growers' pockets now than for several years, and it would seem most appropriate that some of this new money should go toward solving these two major problems. During the last several years, pumps and their

engines have not received more than the repairs absolutely necessary to keep them operative.

Flumes have been patched on a temporary basis, but many are so weak that a full head of water might wash them out. Perhaps you have often dreamed of a sprinkler system for some piece of bog that has too small a water supply for rapid frost protection. The time seems at hand to convert such dreams into firm plans, and as funds are available, purchase portions of the desired system. It has fairly well been proved that 50 gallons per minute per acre is sufficient to give frost protection. We are in process of demonstrating that the low-gallonage sprinkler can do excellent work in controlling insects, give needed irrigation in summer, and possibly be used to spread fungicides. Some of your cranberry money should be spent on your water-handling facilities. The 1956 survey showed that only two-thirds of the Massachusetts cranberry acreage has full frost protection. Something should be done about it, and now is the time.

Professor Tomlinson was asked last week if in five years it would be possible to recommend a low-gallonage, concentrate insecticide or a pelletized insecticide for all the cranberry insects. He said, “yes”. This would indicate the desirability of the grower owning some equipment for low-gallonage applications. All must have had the experience of finding insects on the bog and encountering weather conditions which kept the aircraft grounded. It would be very helpful to be able to treat “hot spots” of black-headed fireworms with grower-owned equipment—almost regardless of weather conditions. Some of the new cranberry money should be spent in such a direction.

### Harvesting Hurdle

Now to conclude. If we survive the hurdles of frost and insects and raise a crop of 550,000 barrels or better, let us approach the harvest carefully, like good businessmen. The frantic efforts of former times to obtain scoopers, to keep unnecessary personnel on

the payroll all summer to have them available as scoopers in the fall is a thing of the past. Machines pick faster than scoops and are far less temperamental! But machines are no better than their operators, and there is no longer any excuse for careless machine operation. Considering that for twelve long months growers have fought weeds, weather, insects and all other hazards to the crop, it is often an appalling sight to see picking machines at work on the bogs before the fruit is ripe for harvest, before the dew is off the vines in the morning and hours after scoopers would have abandoned the sticky job in the afternoon. The result is badly bruised cranberries, often placed with damp green weeds into picking boxes for storage, and a hasty delivery to the shipping agent.

Growers pick their crop in 6 weeks, but it takes about 18 weeks to screen and prepare the crop for market. Thousands of barrels must be stored for months and to avoid serious shrinkage must be in good condition for this storage. Racing the machines not only batters and bruises the berries but causes substantial losses right on the bog. Furthermore, a speeding machine cannot be guided on the straight and narrow path, lens-shaped areas of unharvested vines are left. The carelessness of our harvesting operation is completely out of character with our Yankee tradition and throws away the exhausting efforts and expense of the rest of the year in wanton waste. The margin of profit in recent years has been narrow, a careful harvest could often change the color of the ink.

### MASS. CRANBERRY AREA GOT MOST 1958 RAIN

Southeastern Mass., where, of course, the bulk of the Massachusetts crop is grown had at least 8 inches more of rainfall in 1958 than the rest of the state. This has been released by the Mass. Water Resources Commission the region as a whole was deluged with 56.25 inches, 11.33 above normal.

# MASSACHUSETTS IS BIRTHPLACE OF CRANBERRY INDUSTRY



Concluding a series of articles sponsored by the Cranberry Institute, presenting statistical data about each of the major cranberry-producing areas. The fifth is Massachusetts, with comments by Orrin G. Colley, President of the Cranberry Institute.

Massachusetts cranberries were enjoying a lucrative market even before 1816 when Henry Hall experimented with cultivation and touched off a Cranberry Rush to Cape Cod.

So much has been guessed and assumed about the early uses of cranberries in Massachusetts that it is not always easy to separate the facts from the fables, and so we turn to "The Cranberry And Its Culture" by B. Eastwood in 1856 for our claims. He wrote, "Long years ago (the cranberry) was used by the Indians, who in their way were extensively acquainted with the products of the soil; they gathered and roasted the unripe berries and used them as poultices, believing that when applied to the wounds made by poisoned arrows, they had the power of drawing the venom forth. Many a squaw of the Pequods on Cape Cod . . . made a mess of cranberries to give relish to the venison they killed and cooked."

Mr. Eastwood also supplies us with some interesting observations of cranberry marketing in the 1850's. In packing cranberries "it is usual to spread them out so that all the dew or moisture may evaporate. Then they are winnowed or picked over. They are packed dry in barrels and thus sent off. But in sending them to Europe or California, it is deemed best to pack them in water.

"The American cranberry is coming into notice in Europe, but most especially in England. It is sold there in small bottles . . . We have seen 'Cape Cod Bell Cranberry' sold at four shillings sterling in the Strand, London.

"Boston is the great market for cranberries. Of such profit is

the cranberry that growers have been visited by city dealers a month or six weeks before the berry had been ready to pick. Even the last season, growers received \$10.00 to \$15.00 per barrel."

With such high prices and trading potential, it was not long before Cape Cod's wastelands were turned into "singular-looking specimens of farming" and the Cranberry Rush was on.

Lands considered worthless and not worth taxing were suddenly bring in \$50 to \$100 an acre.

"Wild catters" who did not give proper care to the planting and cultivation soon went out of business, but many more diligent speculators continued with success and gave Massachusetts a head start in cranberry acreage.

By 1900, 11,300 acres were planted to cranberry vines and cultivated bog land continued to increase until 1950 when it reached a high of 14,800 acres. Since that time, because of economic conditions, smaller bogs were let go and in 1957 harvested acreage was down to 13,000.

Massachusetts cranberry crops followed much the same pattern, building up from 200,000 barrels in 1900 to 610,000 barrels in 1950. However, production since 1950 did not decline with the acreage. The state had its largest crop of 690,000 barrels in 1953, and the 1958 crop was equal to the 1950 crop of 610,000 barrels.

Increased yield per acre offset the loss in acreage, and progress

can be traced on the accompanying chart showing acreage harvested and yield per acre from 1930 to 1957. The figures show that 1953, the year of the record crop, was also the year of highest yield with an average of 49.6 barrels per acre.

As in past articles, 1939 is used as the 100% reference point for purposes of comparison. In 1957, Massachusetts acreage was 6% lower than 1939 while yield per acre was 28% higher.

About  $\frac{3}{4}$  of Massachusetts cranberry acreage is in Plymouth County with Barnstable County second, and the two counties are often referred to as the Cape Cod area. Bristol, Nantucket and Middlesex are next in that order with a few scattered acres in Norfolk and Dukes.

Cultivated cranberry bogs range in size from  $\frac{1}{2}$  acre to 200 acres or more and the average size holding, according to a survey made in 1956, was 13.7 acres.

Massachusetts cranberry country is fortunate in its water supply and Plymouth County has 356 ponds or lakes within its boundaries. Cranberry bogs, therefore, have ample water supplies, and 62% have full flowage protection. They can be flowed when necessary—fall, winter, spring or summer.

Irrigation is accomplished by filling ditches or flash flooding, but sprinkler systems are coming into use and protect about 1% of Massachusetts acreage.

Massachusetts growers harvest dry and, although the hand scoops are still used to some extent, about 75% of the recent crop was machine picked.

Early Blacks and Howes are the main varieties raised along with a few McFarlins and other varieties. The Cranberry Experiment Station in Wareham is developing new varieties to produce better yield and quality.

Because Massachusetts is the leading cranberry-producing area, it headquarters the industry's largest cooperative, National Cranberry Association, and is the home of several fresh cranberry ship-

(Continued on Page 16) ADV.

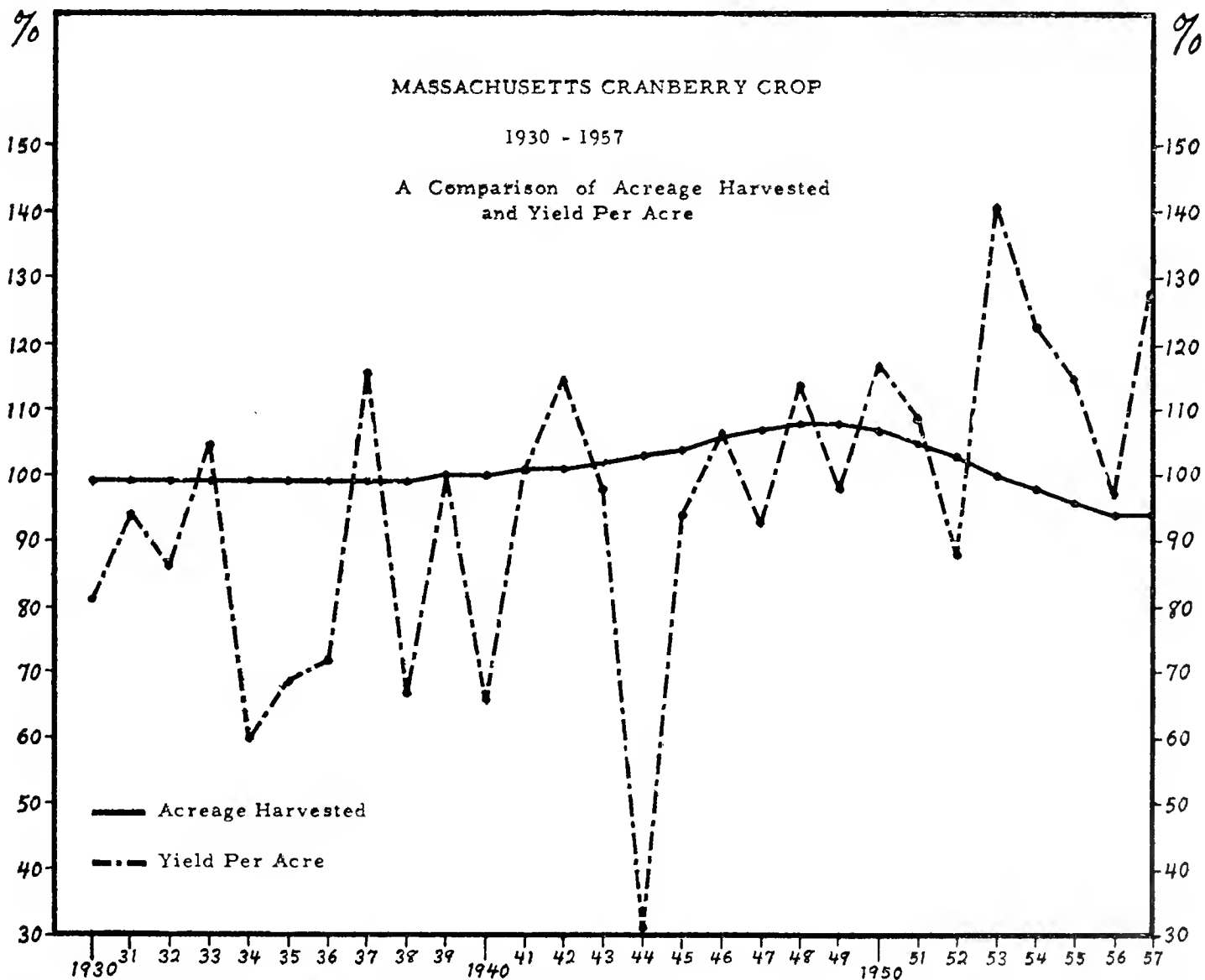


# MASSACHUSETTS CRANBERRY CROP

1939 = 100%

Year	Actual Acreage Harvested	% Acreage Harvested	Actual Yield Per Acre	% Yield Per Acre
1930	13,800	99	28.6	81
1931	13,800	99	33.3	94
1932	13,700	99	30.3	86
1933	13,700	99	36.9	105
1934	13,700	99	21.2	60
1935	13,700	99	24.2	69
1936	13,700	99	25.3	72
1937	13,800	99	40.9	116
1938	13,800	99	23.6	67
1939	13,800	100	35.3	100
1940	13,900	100	23.2	66
1941	14,000	101	35.7	101
1942	14,100	101	40.6	115
1943	14,200	102	34.6	98
1944	14,300	103	11.1	31
1945	14,500	104	33.0	94
1946	14,700	106	37.6	107
1947	14,800	107	32.9	93
1948	15,000	108	40.3	114
1949	15,000	108	34.7	98
1950	14,800	107	41.2	117
1951	14,600	105	38.4	109
1952	14,300	103	31.1	88
1953	18,900	137	49.6	141
1954	18,600	135	43.4	123
1955	13,400	97	40.7	115
1956	13,200	95	34.2	97
1957	13,000	94	45.0	128

Figures from the United States Department of Agriculture



Figures from the United States Department of Agriculture

ADV.

ping agencies and the Cranberry Institute. The Institute's membership is open to all shippers of fresh cranberries. Organized to strengthen the fresh cranberry market, it has also strengthened cooperation among fresh fruit shippers to the benefit of the entire industry.

Orrin G. Colley was elected President of the Institute for a second term recently, and he states that the 1958 fresh fruit market was more orderly and stable this season than it has been for a number of years. "Although the volume of fresh cranberry sales was about the same as last year," he says, "the demand stayed brisk at improved prices. The quality of the fruit was good and comments from wholesalers have been exceptionally favorable."

Mr. Colley grew up in the cranberry business and fresh cranberry marketing is second nature. The family bogs are in Pembroke, Massachusetts, and he takes an active interest in their production. His experience in fresh fruit marketing has been with Colley Cranberry Company in Plymouth, Hills Brothers in New York and Eatmor. He has been President of the Cape Cod Cranberry Cooperative in Wareham since 1950.

He feels that the future of fresh cranberries depends, in a large part, upon the cooperation of all shippers in the business. "We all have common goals," he says, "and we can obtain them together by constantly improving the quality of our fruit and marketing conditions."

## WISCONSIN MEET

(Continued from Page 2)

received. Klinbeil reported that there were ten copies of the film made, with a total of seven purchased by the Association and local shipping agencies. He mentioned the film had shown in a number of meetings to date and was well received. He mentioned that one of the copies was sent to Paris to be shown at meeting there.

### Herbicides

Dr. M. N. Dana of the Dept. of Hort., University of Wisconsin,

gave a brief report on his experimental work using selective herbicides. He stated they were still working on getting clearance on the pre-harvest use of amino triazole, but it looked as if it would be delayed another year. He showed slides on data obtained in using simizan on annual weeds, showing that 2 pounds per acre of the granular type gave good control on some annual weeds. He cautioned growers to expect damage if they used heavier amounts. He also showed slides on wide-leaf grass control using dalapon in the fall. He urged growers to try some early weed control work on young, non cropping beds and to also evaluate the fall work they did with amino triazole and report any interesting results.

### Fertilizers

Dr. A. R. Albert, Dept. of Soils, University of Wisconsin, who retired last year reviewed the work that had been done in Wisconsin on experimental fertilizer plots. He stated that Malty did work in the early nineteen hundreds and Mussbach did work in the thirties. There was no work done in the forties, but in the early 50's he started work. He outlined the various problems involved in cranberry soil fertilization pointing out the big differences in marshes, in individual marshes themselves and even differences in individual beds. He suggested growers make soil tests of their sections and apply fertilizer on that basis. He felt there was a definite need for fertilizer on most marshes and urged each grower to determine the best for his own marsh. He pointed out that Wisconsin uses the most fertilizer per grower and mentioned that all areas now use fertilizer, although each area uses different analyses. He said that although he was retired he still would be interested in cranberries and would probably stop around on a few of the marshes in the coming growing season. President Hewitt wished Dr. Albert a happy retirement and invited back to the meetings and thanked him for appearing on the program and

for the fine talk he gave.

### New Insecticide Law

Hubert Holliday, Ass't. State Entomologist, spoke to the group about the provisions in the new pesticide law governing use of chemical insecticides on forest and non crop lands. He stated that if the grower only treated his crop lands he was within the law as to securing permits. If he was going to use poison outside his croplands in amounts to exceed 1 lb. technical per acre he should apply for a permit.

### Fungicides

Earl Wade, Ext. Specialist, Plant Pathology Dept., of the University of Wisconsin, outlined the preliminary work Dr. D. M. Boone had done this summer with fungicides on two cranberry test areas. He stated that results were preliminary and that there would be no recommendations for the present. The test plots were located at the Biron Marsh and The DuBay Marsh. He felt that by the summer meeting, Dr. Boone could possibly evaluate his work a little better. He thanked the group for consideration shown the personnel and asked for continued support in the project. He showed slides which listed preliminary results and he further discussed the various problems they encountered in the setting up of the plots and trouble with frost and hail on the samples.

### "Old Fashioned" Sauce

Dr. K. E. Weckel of the Food and Dairy Dept. of the University of Wisconsin was the principal speaker. Dr. Weckel has been experimenting with many forms of cranberry processed products for the past several years. He said there was much room for continued experimental work with processed forms, as basically we are still making cranberry sauce by an old fashioned recipe. He felt that there should be a great deal of work done with consumer preference work with cranberries. He also felt that there was plenty of opportunity to develop some new products such as powdered formulations. He stressed quality of

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# Cranberries In North America

By F. B. Chandler

Research Professor, Cranberry Station  
East Wareham, Mass.

The last issue of *Cranberries* reported the results of the surveys on various water subjects. This month will include the different insect, disease, and weed control practices in all cranberry areas of the country.

## A 1926 Talk

As a background, the following is quoted from a talk given in Wisconsin by Bain about the conditions on the West Coast prior to 1926:

"The big problem out West after the industry was started was insect control. In Wisconsin and practically all other cranberry sections, most of the bad insects are controlled by water. They have no water there to control insects with. After they had been growing cranberries for a few years, in time for the black head fire worm to get a good start, it broke out throughout all their sections and practically wiped out the cranberry crops for three or four years. They are only now recovering from that trouble. They had to develop methods of control and it took them four or five years to get the method developed well enough to handle

efficiently, so for that period of time they had practically no berries, and some marshes actually failed. At present they spray for the worm with very great success. It is hardly necessary to explain this method, because so far I haven't found a marsh in Wisconsin supplied with spraying facilities, or one that needed them. Every marsh of any size on the Pacific Coast has equipment for spraying. That is an investment they must make. Some bogs are piped, with a central mixing and pumping station. Others use wagon sprayers driven on roads. All use gasoline outfits of some type for pressure spraying. Spraying is not as easily done as flooding for control of insects. In the first place, where you can put on one or two worm floods and clean out an infestation for one year, they must spray four or five times to do the same thing on an equal infestation of worms. That necessitates their going over the marsh every time they spray, dragging rubber hoses two or three hundred feet long over the vines several times during the growing season. I don't

think the average Wisconsin cranberry grower would like to get on his bog that much, but out there it is part of the day's work. In the second place, spraying has to be done very carefully. The times that they spray are first when the vines start growth, again when the buds are in the hook stage, and once or twice after bloom."

This describes the beginning of the use of insecticides for the control of all bog insects on the West Coast, and indicates how important water was in all other sections.

## Recent Surveys

The recent surveys indicate that fireworm is the insect causing trouble in all sections. In Massachusetts, Oregon and Washington, it is most important, and in Wisconsin second to fruitworm. The next four most troublesome insects in Massachusetts are weevil, leafhopper (blunt-nosed), spanworm, and cutworms. In Oregon, the next most important ones, in order, are weevil, fruitworm, scale and cutworms.

## Insecticides

The kinds of insecticides used in 1955 in Oregon were DDT and Parathion. The Massachusetts survey gave a longer list of insecticides used than other states, and compared this list with those reported used in 1946. In 1946, the most used insecticide was Pryethrum and it was 12th in 1955. In 1946, DDT was second and cryolite was third, with Lead Arsenate fourth. In 1955, the order was Malathion, DDT, Rotenone, Dieldrin, and Parathion. Also in Massachusetts, twice as many acres were reported sprayed in 1955 as in 1946.

## Fungicides

The fungicide situation is somewhat similar. Bain reported that Bordeaux was generally used for fruit rots on the West Coast prior to 1926. However in recent years the fungus problems have changed. Oregon reports its most troublesome disease as twig blight, and next as fruit rot. In Washington, in order they are, red leaf spot, rose bloom, cotton ball, and twig blight. From the surveys it

Cranberry Bog Weeds Listed by Sections  
(Most serious listed first)

Massachusetts	Oregon	Washington
rushes	dandelion (fall)	horsetail
ferns	running tussock*	sedges
asters	yellow weed*	fall aster
poison ivy	horsetail	rushes
loosestrife*	grasses	yellow weed*
cutgrass	asters	dogwood*
wild bean	moss	false Solomon's Seal
green scum	sedges	grasses
nut grass	sorrel	clover
brambles	lousegrass*	buckbrush*
	golden rod	alder
	alder	willow
	ricegrass	wild parsnip
	break fern	dandelion
	nutgrass	golden rod

\* Running tussock is a rush, yellow weed and loosestrife are the same, dogwood is the same as the bunch berry found in Northern New England, buckbrush is spirea, therefore similar to hardhack, lousegrass is a mud rush.

appears that Massachusetts sprayed for disease in 1955 about 11 times as many acres as in 1946. However, in 1955 Massachusetts treated on a percentage basis less acreage than the other states reporting. Massachusetts treated 8.8 percent, Oregon 18.5 percent, and Washington 75.5 percent. The fungicide used was only reported in two surveys — Massachusetts, 95 percent ferbam and 5 percent Bordeaux; and Washington, 74 percent Bordeaux and 26 percent other material.

### Weeds

Weeds are important in all sections but those causing the most trouble vary from section to section. See list of weeds by sections. The West Coast has three weeds not reported in the east, dandelion, dogwood and false Solomon's Seal, and many, if not all, of their weeds seem to be more difficult to control. The two weeds quite common in Massachusetts which are not found on the West Coast are poison ivy and wild bean. The surveys showed a petroleum product most commonly used as a herbicide; on the West Coast it was thinner, and in Massachusetts kerosene. The next most used herbicide in Massachusetts was iron sulfate, in Oregon and Washington it was 2,4-D. The third most used herbicide in Massachusetts and Oregon was copper sulfate, and in Washington it was iron sulfate.

### Equipment

The equipment used to apply pesticides varies with the section and may be associated with the nearness of one bog to another. In Wisconsin, the marshes in Wood County are concentrated and there was greater use of air equipment than in other parts of Wisconsin. In Massachusetts, about 60 percent of the air work was done with airplane and 40 percent with helicopter.

Literature used in addition to that already cited, Wisconsin State Cranberry Growers' Association, Fortieth Annual Meeting December 1926

### Percentage of Acreage Treated from the Air and from the Ground by Sections\*

Section	Air	Ground
Massachusetts	56	44
Wisconsin**	70	20
West Coast	small or none	large

\* The percentages may be related to the concentration and size of bogs.

\*\* Reported in the last survey, but data is for 1952. The percentages do not total 100.

### WISCONSIN MEET

(Continued from Page 16)

the finished product and urged growers to take the best of care in handling the raw product, as that had a lot to do with the quality of the finished product.

#### Meetings

The group went on record to sponsor another booth this year at the Wisconsin State Fair. It also voted to seek extension of the frost warning service from May 1 to Oct. 15, instead of the Oct. 1 deadline and voted to participate in the frost warning service for 1959. In an effort to set definite dates for the two meetings a year, the members voted to hold the summer meeting the second Saturday in August and the winter or annual meeting the second Saturday in June. Committees were appointed to watch for any legislation that might be detrimental to the growers, to try and secure a full time meteorologist office to handle agricultural forecasting in the state including cranberries and a committee to draw up some plans for some type of recognition to H. F. Bain who retired Jan. 1, 1959.

The group also voted to unananimously oppose a bill authored by State Senator W. W. Clark which would require all packaged cranberries in the state to show Wisconsin Grown on the packages and on the containers in letters not less than three inches high.

#### Officers Elected

Officers elected to serve in 1959 were Albert Amundson, president, John Potter, vice president and George Klingbeil, secretary-treasurer.

### MASS. FEB. MEETINGS

February meetings of Massachusetts cranberry clubs were built around the theme of quality control. There were panel discussions led by Plymouth and Barnstable county agents, Don Marino and Ostor Johnson, respectively.

Dr. Bert Zuckerman gave a paper on fungicide treatments, effects on the crop of last year and gave recommendations for 1959. Dr. F. D. Chandler discussed the effect of fertilizers and drainage on fruit quality. J. Richard Beattie and Irving Demoranville gave reports on the 1958 quality program and Mr. Beattie also told of the status of the fresh fruit market as he had found it in market visits.

Archie McLellan, Hanson, was a panel speaker on Harvesting at proper stage of maturity, correct handling and orderly delivery to the warehouse, at the Plymouth County sessions and Arnold Lane at the Cape. Other speakers included Louis Sherman on machine operation, and on the Cape Victor Adams, and "Link" Thatcher. (A more full report will appear in the next issue.)

### "CRANBERRY HIGHWAY"

Activities continue in Massachusetts to have two main state roads in the Southeastern cranberry area bear the names of "Cranberry Highway." These roads are routes 28 and 6A running from Middleboro, where the bog region starts and is a junction point for west and south traffic.

Route 6A would be renamed as far as Orleans not far from the tip of Cape Cod. To make these changes would require state legislation. Reason for the change is the thought that the name "cranberry" might attract tourists, and of course, would do the cranberry industry no harm either.

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## JUMBLE OF THOUGHTS

THIS IS a hodge podge editorial. In jumbling together the freak weather of 1958 and looking to the prospects of 1959 some degree of a picture begins to emerge. In spite of the crazy weather of last year, the second largest crop on record was produced and the second largest for Massachusetts, which will remain the major cranberry area for a few years more, at least.

There are indications from several directions that the final historical figure for this crop may be even higher than the present 1,127,000 barrels. The estimate of Dr. C. E. Cross is that Massachusetts may have no more than the last ten-year average, 550,000, rather than the 610,000 of '58. Wisconsin doesn't seem at present to be "talking big" either. But, NCA now has a big and worrisome surplus.

Then there is the excellent suggestion of Cross that with the "riches" now jingling in the pockets of the growers as much as possible should be ploughed back into the bogs. That this should largely concern water facilities (with more thought to sprinkler irrigation) was his opinion. He also said growers at harvest-time should not be stampeded into picking berries too light, which would aid in the quality program. Growers are becoming better growers: Prof. "Bill" Tomlinson, Massachusetts, has not directly conceded the insect problem has been "licked," but growers are gaining mastery. Dr. Bert M. Zuckerman seems to be proving growers can improve quality through proper use of fungicides.

H. Drew Flegal, advertising director for NCA, which handles such a huge proportion of the industry crop is sound in saying more people must be induced to eat more cranberries more often, and NCA program of "cranberries are the mate for every meat," could be a very logical approach to increasing consumption. He is also right in saying we may expect crops of a million and a half and more.

National's Ambrose E. Stevens is right in saying Wisconsin is not the competitor of Massachusetts or any other state against any other state. Our real competitors are the producers of other fruits which compete in the market with cranberry sales.

CLARENCE J. HALL

Editor and Publisher

EDITH S. HALL—Associate Editor

Wareham, Massachusetts

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THE RESIGNATION from active duty of Henry F. Bain, now living in Wisconsin as announced last month removed from active participation in cranberry research one more scientist who had the justified respect of the industry everywhere. He has been one of those workers with a practical as well as a scientific approach to cranberry cultivation. He has the satisfaction of having contributed much of lasting benefit to the industry as in other fields of research. After so many years of service his retirement is, merited, but we doubt if his alert mind forgets cranberry growing entirely, and we hope he may make further contributions.

## Fresh From The Fields

(Continued from Page 6)

voirs was reported in excess of thirty inches.

### Craig Scott

Craig Scott, 48, died suddenly January 23 at his home near Warrens. He owned and operated the Scott marsh between Mather and Warrens. He served on the board of The American Cranberry Exchange and also held a directorship in the former Wisconsin Cranberry Sales Company. Sympathy is extended to his surviving wife and four children.

## WASHINGTON

'58 Precipitation 82.56

The 1958 weather picture was one of mostly warm days during the early part of the year and during the summer into harvest. A maximum temperature of 95° (June 27) and a minimum of 18° February 27 and 28th were the extremes for the year. May 12th, 25° and the 13th, 29° freezing temperatures were recorded in the area which undoubtedly hurt the 1958 crop. Humidities ran from a maximum of 96% to a minimum of 33%. January and February were both mild months as was the first half of March. The last half of March and April were wet. November and December were also rather wet months. The latter part of December saw a downward swing in temperatures with a low of 36°. Precipi-

tation for 1958 totaled 82.56 inches.

### Jan. '59 Tough

The year of 1959 started off like a lion in this area. A minimum of 10° was recorded on the 2nd of January with a high for the first four days of 45°. During this time the minimum humidity was 48% on January 3rd and the maximum was 86% on January first. January turned out to be a wet month with 15.21 inches of precipitation recorded.

### Some New Planting

Some new planting is being planned this year. Cranguyma farms plans to plant a new section this spring. The Cranberry-Blueberry Experiment Station is planning to plant an additional acre of bog this spring.

## OREGON

Southwestern Oregon cranberry growers report a rather unusual winter so far. Only one light frost, which had negligible effect, and a season of very warm rains add up to the mildest winter for sometime.

At this time, (Feb. 5) because of this the buds are farther ahead this year than can be recalled for several years previous. Vine growth also is green and full. Some of the growers have this question in their minds, "Are the

early enlarged buds presenting an invitation to unusual frost damage?" There are different theories advanced on this and the answer for Oregon growers will, no doubt, be given this year if we have severe early frosts.

At a meeting of the Southwestern Oregon Cranberry Growers Club, February 4, the following officers were elected: president, Don Hultin; vice president, Clarence Zumwalt; secretary-treasurer, Carol Hull.



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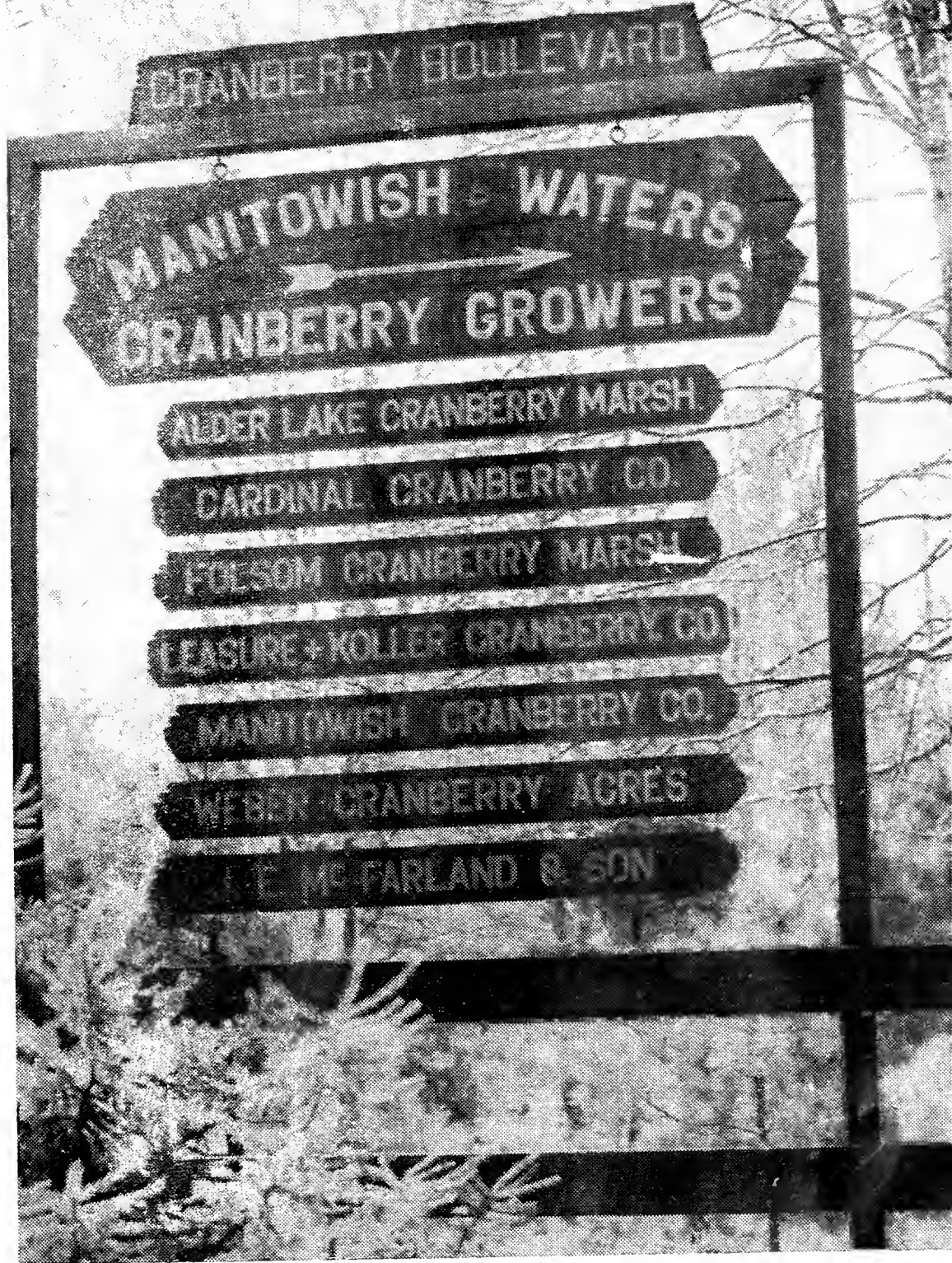
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(CRANBERRIES Photo)

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## Jersey Growers Annual Meeting

Albert T. Andrews, Jr., convened the annual meeting of the American Cranberry Growers' Association in Pemberton on February 5th.

Philip E. Murucci of the Experiment Station spoke particularly about Sparganthis fruitworm. This worm continues to be one of the serious cranberry

pests and is usually controlled with Parathion and DDT. In preparation for changing conditions, Marucci has evidence that Diazinon and Endrin are also very good control materials. The new bacterial spray was tried and found to be about 40 percent effective. This may well be promising for some future development.

Eugene H. Varney and Lawrence C. Ranieri of the Department of Plant Pathology reviewed rot control for 1957 and 1958 and

showed that Maneb and Zineb are sufficiently superior to Ferbam to justify their additional cost.

Donald A. Schallock of the Department of Weed Control recommended that for the control of grass and weeds in canals and ditches the choice of two materials is available, namely, sodium arsenite and Dalapon. Sodium arsenite is cheaper than Dalapon and will burn off broadleaf weeds as well as grass. It has the disadvantage of being very poisonous and the carry-over effect in the next year will be less than for Dalapon. Dalapon will kill only grasses. Both materials can be effectively rinsed out of the sprayer with water.

Some recent magazine publicity has featured a mower adapted for cutting weeds under water with another device for raking under water so that the gathered weeds can then be forked out by hand. In discussing this equipment Thomas B. Darlington felt that he would rather drain the bogs, mow in the ordinary manner, remove the weeds, then flood again.

Experience may be a great teacher, but even it fails to teach some people.

### MARCH 1959

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### How to Conserve Quality and Quality at This Point Stressed at Massachusetts Club Meetings

Quality conservation was the theme of February meetings of Massachusetts clubs with good attendance at all four meetings. Producing good quality fruit was only half the story, it was explained, and that conserving quality all through harvesting and distribution process is equally important, and that careless opera-

tions at these points simply will nullify effort and expense of growing up to that point.

In harvesting, it was suggested that a bog be pruned before picking by machine for the first time and that the bog floor be made as even as possible; that small holes be filled in and even large ones covering vines completely if necessary, and that sloping corners be levelled up. A "picking pattern" should be planned before harvest starts.

Louis Sherman, Plymouth, speaking at Plymouth County clubs declared in operating he had an individual "machine picking school," before he allowed any operators on the bog. He said a day before picking was devoted to this instruction and then the first day of harvest was devoted to a picker, "getting the feel of the machine." He said the first 6-8 hours of actual picking is the most important day and that by training and careful harvesting he gets 99 percent of the berries on his 50 acres.

Operating a machine at top speed is one of the greatest faults in harvesting as it causes bruising of berries. Heavy vine growth and deep, heavy crop and rough ground all call for slow speed operation.

Archie McLellan, plant superintendent of NCA, Hanson, said that one of the main troubles at the plant was the quantity of bruised berries. This, he agreed with Sherman, was that too many berries came in not thoroughly dry, and this affected the keeping quality. Growers, he said could take more care in handling picking bags. He said poor operators of machines were offenders, and these hurt not only berries, but vines.

He spoke about picking too early, especially Early Blacks. He urged growers not to start too early in the day and not to work too late at night when vines and berries became sticky. He also agreed with slower operation of machines and he noted an improvement in quality after a bog has been machine picked over scooping.

Dr. C. E. Cross, Mass. Cranberry Station said it had been the observance over many years that Early Blacks could be picked when beyond the green stage, even though not fully colored. But he urged the early picking of Late Howes.

Dr. F. B. Chandler asserted cranberry growing is now definitely in the age of the machine. He

(CONTINUED ON PAGE 15)



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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



The weather in February could be classified as cold and wet. No records were broken but it definitely was a rather gloomy month. Temperatures averaged a little better than 2° per day below normal, and rainfall as recorded at our station was 4.16 inches or about one-half inch above normal. Total snow accumulation was 4.75 inches, which is below normal for February.

The effect these conditions may have had on our potential crop is not known at this time. We do know that considerable "snow ice" accumulated on flooded bogs, cloudy conditions prevailed, and unless the water was withdrawn it was possible that oxygen deficiency conditions existed on some properties. We base this observation on the many tests made by Richard Kiernan of the A. D. Makepeace Company. He has found that the oxygen content on some flooded bogs was considerably reduced in February, but apparently the acreage involved has been limited. Again, we appreciate the information received from Mr. Kiernan.

There is evidence that some winter-killing damage occurred this winter, but the extent of damage will not be known until the vines begin to "green up" this spring. A number of growers have reported an "off color" appearance of the vines, particularly where they were "roughed up" by the picking, sanding, and pruning operations. We will have more information on this subject, plus ice pulling damage, in the next issue of CRANBERRIES.

It hardly seems possible that the spring frost season is only a few short weeks away. Plans are being made to continue the tele-

phone frost warning service that is sponsored by the Cape Cod Cranberry Growers Association. Frost applications have been mailed to growers who have used this service during the last several years. If there are other growers who would like to subscribe please contact Mrs. Ruth Beaton, Wareham, Mass., or the writer. In addition to the frost applications, growers have also received a questionnaire designed to furnish our frost committee with some very useful information. A frank appraisal of the present system is requested. It will only require a few minutes to fill out this questionnaire along with the frost application and mail to Mrs. Beaton. We would greatly appreciate having these two forms returned by April 1. Many details are involved in arranging the frost warning service and the growers' coop-

eration is necessary.

The 1959 Cranberry Insect, Disease and Weed Control charts have been printed and mailed to growers through the county agents' offices. Extra copies are available at the county extension offices or at the Cranberry Experiment Station. The major revisions and items for study in the new insect and disease control chart are as follows: Growers are urged to review the notes found at the top of the chart. This important section contains a summary of **flooding practices**, suggestions on **concentrates**, the use of the **insect net** and a **new grub control table**.

The first major change in the body of the chart came under the section on **New Growth**. New treatments were added and included low gallonage ground sprays, aircraft applications of parathion aircraft applications of **parathion (4 flowable)**, and a ground and aircraft application of **10% DDT plus 2% malathion dust**. The **tipworm** was omitted from the list of insects controlled at this stage because of unsatisfactory results.

In the **Rough Neck to Hook Stage**, the **Blunt-nosed leafhopper** and the **Sparganothis fruitworm** were omitted from the list of pests controlled at this stage be-

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cause timing was not suitable for best results. A treatment was added for the control of girdler millers which suggests a 10% DDT plus 2% malathion dust at the rate of 60 pounds per acre. It is necessary to repeat the treatment for this particular pest.

Under the 5% Bloom Stage, the Blunt-nosed leafhopper was added to the list of pests controlled at this stage.

Growers are urged to read and observe the Warning outlined in red ink at the bottom of the chart.

The 1959 Weed Chart received considerable attention. Shortening and simplifying the old chart was definitely desirable and this was accomplished by grouping the weeds under a suitable timing schedule. It is suggested that the Notes found at the top of the chart be reviewed. The success of the recommendations depend on a thorough understanding of these important notes. Directly under the notes are three important Cautions which should be carefully observed.

Under the April to mid-May Stage, a small error should be noted under control for haircap moss. 20 pounds of iron sulfate per sq. rod is the equivalent of one and one-quarter ounces per square foot rather than the 3 ounce rate

indicated on the chart. The 3 ounce rate per square foot applies to the next line dealing with sphagnum moss where iron sulfate is used at the rate of 50 pounds per square rod. The No. 2 fuel oil and water white kerosene mixture as outlined in the chart is recommended for summer grass, poverty grass and bayberry, applied as a spot treatment. This mixture is also effective on other grassy weeds growing at this time.

The section on Mid-May and June includes control measures or ditch weeds which have been divided into two groups... and grassy... Combination of Amino-triazole and dalapon is recommended for general ditch weeds. No. 2 fuel oil is still excellent for grassy weeds.

The After Harvest period includes a recommendation for the control of wild rose using Stoddard Solvent. Hardhack, cutgrass and nutgrass were added to the list of weeds controlled with Amino-triazole... Growers are reminded again that no approval has been received for the use of Amino-triazole except after harvest and as outlined in the chart.

Plans did not call for a revision or reprinting of a new fertilizer chart. Growers will recall that they were reminded of this

fact and urged to retain their 1958 copies. However, there is a limited number available at the county agents' offices and at the Cranberry Experiment Station for those who have misplaced their copies.

The response to our pesticides and fertilizer questionnaire mailed out in February has been reasonably good. We greatly appreciate the cooperation received but sincerely hope that many more growers who have not filled out this questionnaire will do so immediately and return it to their county agents in the self-addressed, postpaid envelope provided for this purpose. The results of a survey of this type, which is designed to check the effectiveness of the station's pesticide and fertilizer programs, will be most helpful to the county agents, the men at the station, and ultimately to growers themselves.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of March 1959 - Vol. 23 No. 11

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FRESH FROM THE FIELDS

Compiled by C. J. H.

## NEW JERSEY

Flood water on cranberry bogs in New Jersey remained open for most of the month of February. This condition pertained despite the fact that the average temperature was 0.8°F. colder than normal, which is 34.7°. This low average was achieved because of several extremely cold nights; there were twelve in which the temperatures went below 20°F. and five when it dipped to below 10°. However these cold spells were never of long duration, as evidenced by the fact that only two days in the month had freezing temperatures all day long. The maximum temperature was above 50°F. on eight days and above 40°F. on 21 days.

Despite that there were serious floods in the mid-west and in nearby Pennsylvania, the cranberry belt of New Jersey has been quite dry this winter. February marked the fourth consecutive month of below normal precipitation. Only 1.62 inch of rain occurred during this month, which is 1.15 inch below the norm. From November 1 through February 28 the total precipitation has been 7.71 inches, which is a deficiency of almost five inches over the four-month period.

In contrast to last year, snow has not been troublesome this winter. A total of only 4.90 inches has fallen since November. The average snowfall here is about 16 inches per year.

## WISCONSIN

February was the third consecutive month with below normal

temperatures and precipitation. Temperatures averaged five to seven degrees below the normal of 17.1 degrees. So far this winter southern Wisconsin has had 30 below zero readings, central Wisconsin 46 below zero readings and northern Wisconsin 54 of the same. Coldest reading of the month was on the second when temperatures dropped to minus thirty below in most of the cranberry areas of the state. Warmest was on the 22nd when temperatures rose to 34 in southern Wisconsin. As of the end of February there has been a -.80 inches of precipitation and the ground water level remains at minus 1.75 feet below normal. The entire state remains snow covered at the end of the month.

Central Wisconsin received an additional ten inches of snow on

the 8th to give this area a foot and a half for the most in the state. The northern marshes were still running below normal in snowfall for the winter. Frost continued to go down to record depths in the north and west where snow cover was light or below normal. Total number of minus degree days since January 1 now exceed four hundred in the cranberry areas. The extended forecast for March is for normal to below normal for both temperature and precipitation throughout the cranberry growing area.

Snow and cold weather continues to hamper sanding operations in the southern areas. Sanding progressed favorably in the north as snow cover was below normal. Growers were still planning on continuing sanding operations in

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the south until breakup.

It now appears that Wisconsin has experienced one of the coldest and longest winters in the past 30 years or more. What makes the winter seem so long and severe has been the continued snow cover over the entire state and consecutive below normal temperatures for the past one hundred days. Many old time growers remark that this winter was the most severe and prolonged in their memories. Some growers are reporting frost depths of over five feet deep, which is the deepest they can ever recall.

## **WASHINGTON**

The month of February has again been very wet. We have had sunshine about 10 days of the month so far. It has been rather difficult for some of the growers to finish pruning the bogs because of this. Maximum temperature for the month was 57° with a minimum of 24° on February 10th. Our minimum humidity was 58% on February 21st.

The work progressing at the present time on the cranberry bogs in the Long Beach and Grayland areas has consisted mainly of pruning, weeding bogs and clearing new ground for planting this spring. Judging from the reports which have come in from the two areas a considerable acreage will be planted this year. The largest new planting will be at Cranguyma farms although many of the other growers are also planting additional bog. Here at the Experiment Station we plan to plant one additional acre as soon as the ground is dry enough. Of these plantings all will be of the McFarlin variety.

During the past two years several trial plots of new varieties developed here at this station have been established. Numerous requests have been received from the growers for cuttings of these new varieties, which so far, have not been named, but the demand exceeds the supply. Included for trial have been small plots of the Stevens, Wilcox and Beckwith varieties. We hope to find new

varieties that will permit us to retain the adaptability of the McFarlin to our climatic conditions and at the same time permit much earlier harvesting. We have of the selections, which were made three years ago, one which seems to fill the requirements. We have not been able to obtain sufficient vines to make large scale plantings, however. I hope to do so within the next year.

Our Experiment Station Advisory Board met on the 18th of February to discuss problems which face the cranberry industry in Washington State. Emphasis was placed on a more adequate fungicide program, a more thorough study of frost control with sprinkler systems, herbicide studies and keeping quality forecast. The prospect of the next biennium budget was also discussed. Needless to say the problems and requests brought up exceed our ability to carry them all out during the next year. Our emphasis will be placed mainly on the three or four listed above.

Ralph Tidrick has reported that a number of bogs in the Grayland area have been sold. It seems to be a move on the part of the bet-

ter growers to enlarge their holdings thereby obtaining a more economical unit. It has been rumored that one large bog in Long Beach has been sold too.

## **MASSACHUSETTS**

March to date, (the 23rd) has been fairly favorable to the crop prospects for 1959. There has been a total precipitation of 4.72 inches. Of this there was snow of 7.9 inches. Normal for March is 4.39 inches. This may indicate a good buildup of water supplies for spring frosts if any occur, as they always do.

The February factor for sunshine was up. Indications still point to a Massachusetts crop of approximately 550,000 barrels.

March 21 brought a hard rain with thunder and lightning. Spring weather should be "just around the corner."

## **APOLOGY**

If this issue reaches you late it is because your editor and wife have been on a vacation to Cuba and Haiti. And it was a rather strenuous trip.

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# Manitowish Waters, Wisconsin, Is Wilderness Wonder — Still Growing

**A Handful of Growers Around "Little Trout Lake" in North-Central Part of State Have Developed a Real Cranberry Community—New, Plenty of Water, Good Soil, Enthusiasm.**

by

Clarence J. Hall

Manitowish Waters! The very name is distinctive and this is a cranberry development unique in the cranberry industry. The development is new—the growers are enthusiastic. Production is described as "fabulous" even by growers of other Wisconsin areas. The potential in production is really outstanding.

Manitowish Waters with its seven properties is one of the reasons why Wisconsin is making such gains in cranberry growing as a state.

In community closeness, in the wilderness and newness of Vilas County cranberry growing, this north-central region suggests Grayland in Washington State. But there is this difference. At Grayland most of the growers operate on a huge marsh divided into individual units. At Manitowish each marsh is separate, even though they all ring Little Trout Lake.

## Region Rich Peat Around "Little Trout Lake"

All growers pump on their water supplies, they return it to the lake by gravity. The region is rich, peat soil around this lake. The area was one of the "finds" of Vernon Goldsworthy, who bought up this entire area, which was originally known as Powell's Marsh. Already Manitowish Waters, on about 250 acres has added some 25,000 barrels to the total annual Wisconsin output. Total investment there is unusually heavy—in marsh layouts, equipment, warehouses, handsome, new modern homes. A total figure of something like three-quarters of a million has been mentioned.

These growers look ahead. Although there is no or little worry about water supply, a cranberry water company has been organized and water can be carried back from the Manitowish River to the lake through a canal a mile and a half long. Any surplus goes to the Manitowish River and eventually into the Wisconsin.

## Area Unspoiled Wilderness

Little Trout is in the township of Manitowish Waters. The area is one of the unspoiled sportsmen's paradises of the North Woods. Powell's Marsh was wilderness ten years ago, waste land entirely undeveloped. There were only foot paths leading into the lake. Little Trout is very deep.

The water is acid, 4.5 Ph. and the surrounding peat has been recorded at 3.8 Ph. In building the marshes, top cover, mostly brown brush was scalped, much of this material going into road making. As for insects, perhaps the most troublesome is the black-headed fireworm. There were wild cranberries growing there, and this insect was there. More were probably brought in with imported vines.

Each of the properties has its own new warehouse, all growers own their own equipment. Most of the acreage was planted to Searles Jumbo, a little to McFarlins.

## Endless Cranberry Land

One 12-acre strip at one end of the lake was scalped by Lt. Col. Thurman Doman, who remains in service and has not yet carried his development further. Next to the Doman property there is a little rise. From this slight hill, it is possible to look out over seemingly endless acres of land which is described as all potential cranberry land, suitable in all respects and waiting only for development. This view is one impressive proof that there is plenty of good cranberry land in Wisconsin for future building.

The woods are beautiful, mostly poplar and birch, growing for use as pulp wood. There are a few timber wolves, gray wolves, lots of wild cats; black bear come out

at night and feed at the town dump. This is an attraction for summer visitors, deer are so tame that some vacationists have tied red ribbons around the necks of a few of these particular pets.

Incidentally it was along one of these lonesome trails and in these woods that the late John Dillinger, gangster and his pals hid out while the manhunt was on for them from Chicago.

Entrance to this cranberry wonderland is impressive and is designated by a sign at the entrance "Cranberry Boulevard." The development now is only a short distance in from a main east and west highway.

Let's take up these Manitowish Waters properties and growers one by one. The writer visited all the properties but did not find all the growers on their marshes.

## MacFarland Marsh

A grower who had been with the Little Trout development since its inception is John MacFarland. Mr. MacFarland is a son-in-law of Mrs. Guy Potter, wife of the prominent Wisconsin Rapids cranberry man so he had a cranberry background.

He began working with Goldsworthy when the Manitowish Waters project was in the making. He dug the first big ditch with a power shovel. Starting in February 1947 he dug ditches and scalped 10 acres, the following year doing more. He did some work for nearly all the present growers, including that for Col. Dorman. He rents bees to the growers, having some 13 hives.

For himself he operated 30 acres all of them being in Searles, and plans to put in 5 more. He has produced as high as 3100 barrels but considers his average 2-3,000 barrels. He uses a Case picker.

He was born at Rice Lake, where were located cranberry marshes.

## Howard Folsom

Another marsh at Manitowish is owned and operated by Howard Folsom who, incidentally, was a classmate of Goldsworthy at the University of Wisconsin. He was a letterman in track and cross country as was "Goldy."



**John MacFarland, Pioneer**

Folsom majored in geology and after he was graduated from the University in 1930 took graduate work in that subject at Stanford University. He worked for some time in the geology field on the West Coast.

In 1946, after five years in the Army, he bought his present location in Vilas County and established his marsh. As portions of his geology work had been in personnel activities, and he preferred an out-door life he decided to go into cranberry growing.

He now has 30 acres set to Searls and averages about 150 barrels per acre. This past summer he scalped and put in 10 more acres ready to plant in the spring. He plans to have 50 acres in vines before he considers this marsh complete.

This is one of the earlier marshes around Little Trout and the property includes over a quarter mile of shore line on the lake. His sections average two acres and are laid out in bed approximately 125 feet wide and 1,000 long. Marshes are flooded by water taken from the lake by Lawrence pumps powered by gasoline en-

gines which lift the water 2 feet into the bogs.

Mr. Folsom has a new two-story warehouse 121 x 40 feet wide, which includes a fully-equipped sorting room and shipping room. This has a high, arched roof for ventilation.

Other bog equipment include a dryer, two Getsinger pickers, Bean sprayer, Dana Clipper and hydraulic lifter and two crawler type tractors. Dryer is equipped with two fans powered by electric motors and bottle gas is used for heat.

Adjacent to the marsh and facing the lake is a new ranch-styled residence, there Mr. Folsom lives with his wife and two sons, aged 9 and 13. A second modern house is used for help.

The Leasure & Koller Cranberry Company is one of the top producers at Manitowish and is under competent, progressive management. It is owned by Bert Leasure who is in the real estate business in Chicago and is one of the Wisconsin directors of NCA and Frank R. Koller, his son-in-law. Active marsh management is done by his son-in-law, Koller.

Koller served three years in the U. S. Navy, 17 months of this being overseas, being in the amphibias force making one amphibian landing at Bouganville in the Solomon Islands with the 5th Marines. He also served in the Armed Guard forces aboard merchant ships as radio operator. He is the holder of the Purple Heart and has two battle stars.

Following his service discharge he took three years of cranberry training at Wisconsin Rapids in the "cranberry school," under the GI bill. Also since his return he has taken a turn on a merchant ship for three months during the winter. Although one of the most intent of cranberry growers he still hopes to be able to put in some of his time at sea seeing the world. Due to his naval training he could serve as radio operator or in other capacity. He is an active amateur radio "ham" with the call letters W9PJB. Also has a commercial radio operators license. He is president of the Headquarters Shrine club, masonic organization of the north-central Wisconsin region. He is a member of the Commandery and Consistory of the Masonic Order. An interest of his is hunting.

Leasure-Koller have 50 acres planted and this will be increased to 52 within a few years. Smallest production has been 2100 barrels and the largest to date 5600. The marsh had the highest average in the U. S. in 1954, that being 249 shipped barrels to the acre. The marsh is harvested with 2 Case machines.

#### **Koller's Interest Machinery**

One of Koller's chief interests is machinery. In the basement of a new warehouse is a well-equipped machine shop where he works out many devises and improvements to existing equipment, such as ditch cleaners, lift trucks, marsh maintenance pieces. A warehouse was built in 1954 but is out-grown and the new one is an impressive structure of two stories, 50 x 100 feet. There is a model milling room with 6 Bailey separators, two packaging machines and two heat sealers.

The building is on the shore of Wild Riee Lake, where Mr. Kol-



Howard Folsom

ler is now building a new home for himself, wife and ten-year-old son.

#### Unique Feature

A feature of the Leasure-Koller property, which probably is not duplicated in any cranberry area, is the fact that the present home of Mr. and Mrs. Koller is located at one corner of the marsh and contains pumping equipment for frost and winter flooding in the basement. In this respect it rather suggested the home of a miller of ancient times situated on a stream which turned the wheels for his milling operations.

The main canal from Little Trout Lake, 60 feet wide flows directly beneath the house. In the pump station are one Bailey pump and three Lawrences. These, powered by four diesels, 68.2 horsepower can move about 80,000 gallons of water a minute. Plans are to increase this battery to five pumps and five motors providing

100,000 gpm.

"One thing I like about this arrangement" says Koller, "is that you don't have to worry if the pump is still in operation while you are away. I can sit in my living room and if it misses a beat you know it right away and fix it."

Most growers will agree that is an ideal arrangement for a frost night, almost living room control of the water.

Manitowish Waters was one of the Wisconsin areas hard hit by the unusual hail storms last summer, losing an estimate 5 to 10 percent of the estimated crop. As it was approximately 21,000 barrels were harvested at Manitowish this past fall. Approximately 25 new acres are going in there this year.

Manitowish Waters will apparently thrive and to continue increasing in crop potential at a rate that many another cranberry area may envy.

(To be Continued)

#### THE SHIFT IN FRUIT CONSUMPTION

Data on fruit consumption in the past decade has several stories to tell and they're all different.

Fresh and dried fruit, for example, have experienced a sharp decrease in per capita consumption since 1945. Frozen fruits and juices have skyrocketed. Canned juices show a slight decline, and canned fruits have maintained their level of consumption.

While all this was going on, total per capita consumption went down between 1946 and 1950, then leveled off at about 200 pounds. For the past 8 years, there has been little change in the per capita consumption of fruit. Total consumption, therefore, has increased with the increase in population.

(Agricultural Marketing)

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# Disease Control and Storage Experiments In Massachusetts in 1958

By  
**Dr. Bert M. Zuckerman**  
Cranberry Experiment Station

This article presents aspects of the 1958 research program of fungicide treatments and storage of cranberries. Although 1958 was generally a good keeping quality year, we were fortunate in having experiments on several pieces of bog where the quality was poor. This facilitated evaluation of the various treatments.

## New Chemicals and Combinations

The result of rot control experiments with several new chemicals and chemical combinations are given in Table 1. Phaltan performed extremely well in these tests, reducing decay by 75%. Date of maturity and yield of berries on phaltan-treated plots were comparable to that of untreated berries at harvest. This chemical shows promise and will be tested on a larger scale next year by both the concentrate and standard methods of application.

One application of zineb followed by an application of ferbam reduced rot by 56%, as compared with a 66% reduction of rot by two applications of zineb on nearby plots. These berries colored well in storage. At harvest, the color of the berries was slightly better than that of berries from vines treated twice with zineb or maneb.

Nabam performed better than glyodin, but neither gave good

disease control. Table 1 shows that the glyodin-treated berries rotted more than did the untreated berries. This was probably due to field variation of the plots.

Chemicals were applied twice, the first application at about 5% bloom and the second approximately 14 days later. Rate of application for phaltan, zineb and ferbam was 9 lbs. chemical/300 gallons water/acre/treatment. The rate for other chemicals was 3 qts. nabam and 3 lbs. zinc sulfate/300 gallons water/acre, and 3 qts. glyodin/300 gallons water/acre/treatment.

Throughout these tests, and regardless of fungicide used, storage losses were uniformly reduced by about two-thirds when samples were held in the 40°F storage at Onset as compared with those held in common storage.

## Standard Fungicide Tests

For the third consecutive year, tests were made of high gallonage, fungicide treatments on the permanent plots at the State Bog. It is of interest to compare the three-year results on the Early Black plots (Table 2). Certain trends are indicated in this table as follows:

1. The quality of the berries in these plots was better in 1956 than in the succeeding two years.

2. Maneb has consistently given superior rot control. Ferbam and Bordeaux fell down badly in 1957, and zineb has given slightly poorer control than maneb in each of these years. Maneb has not been recommended to date because of two instances of burning of the flowers when concentrates were applied in 1955. This burning has not been observed in standard gallonage applications, and in no case has it been observed since 1955.

Trends on the Howes plots were much the same over the past three years, but the degree of control was not as good as that obtained on Early Blacks. Whereas maneb gave an overall 75-80% reduction in rot on the Early Black plots, the best control obtained on Howes with this chemical was 50% in 1958. On Howes, zineb gave slightly poorer control of rots, and the performance of Bordeaux and ferbam was erratic. Experiments on other bogs in which Howes were treated often resulted in better control than we have observed on our permanent plots.

## Concentrate Spray

The area in which the concentrate spray tests were conducted in 1958 produced berries of excellent keeping quality. This was most unfortunate from the point of view of our experimental results. In this test two zineb treatments were applied at the rate of 9 lbs. fungicide/25-30 gallons of water/acre with a ground concentrate rig. After field rot counts were made, samples were divided into two lots, one of which was kept in common storage and the other held at approximately 40°F. A summary of the experimental results is presented in Table 3.

## Coloring of Fruit

As reported in 1957, treatment with zineb and maneb may delay the coloring of berries. We delayed harvest of our plots for 7 days beyond the normal harvest time for untreated berries. In some cases treated berries were lighter at harvest than untreated ones. A further comparison of the berries was made by the staff of the Cranberry Station and several

TABLE 1.

Early water, Early Blacks, treated with new fungicides and fungicide combinations, 1958.

Fungicide*	Field rot	Stor. loss (%) - 5½ wks.		Total loss (%)	
	%	Common	Cold°	Common	Cold
Phaltan	3.1	2.8	0.8	5.9	3.9
Zineb and Ferbam	5.9	4.8	1.4	10.7	7.3
Nabam	10.4	6.0	2.8	16.4	13.2
Glyodin	19.5	9.0	3.0	28.5	22.5
Untreated	15.6	8.9	2.8	24.5	18.4

\* Each treatment replicated five times.

° 40°F. cold storage room, NCA Onset plant.



Table 2. Field and storage rot on Early Black plots treated with four fungicides at high gallonage rates, 1956-1958.

Year	Fungicide*														
	Maneb			Zineb			Bordeaux			Ferbam			Untreated		
	F	S	T	F	S	T	F	S	T	F	S	T	F	S	T
1956	2.1	2.5	4.6	2.2	4.5	6.7	1.2	3.1	4.3	2.7	5.2	7.9	5.9	5.4	11.3
1957	3.1	7.5	10.6	4.3	9.8	14.1	11.3	16.4	27.7	9.9	15.3	25.2	20.0	25.9	45.9
1958	3.2	3.9	7.1	6.8	6.0	12.8	5.8	6.1	11.9	7.6	5.5	13.1	24.9	13.3	38.2

F = Field rot (%). S = Storage rot (%). T = Total (%).

\* Each treatment replicated 5 times.

TABLE 3.

Early water, Early Blacks treated with zineb by ground concentrate rig, 1958.

Treatment*	Field rot	Stor. rot (7 wks.)		Total loss	
	%	Common	Cold	Common	Cold
Sprayed	0.7	1.7	1.0	2.4	1.7
Untreated	1.3	2.5	1.0	3.8	2.3

\* Each treatment replicated five times.

growers after the berries had been held in common storage for 6 weeks. They agreed that there was no significant difference in color between treated and untreated berries harvested as above described and stored for 6 weeks. This experiment, carried out in 1957 and repeated in 1958, gave similar results both times.

Retarding of coloration can be a serious objection to the use of zineb and maneb on cranberries if the grower does not take this factor into account in his harvesting procedure. Several courses of action may be followed to minimize difficulties, among them 1) plan to allow for a delayed time of harvest for treated berries, or 2) use a schedule in which one zineb spray is followed by one ferbam spray. These are the procedures which currently seem to be the most helpful. Several growers report, and our experiments confirm, that zineb-treated berries often color as well as untreated ones in the field.

The search continues for chemicals which do not have this ob-

jectionable quality; phaltan showing the greatest promise to date. Slightly reduced dosage of zineb and maneb will probably give comparable rot control, and may not retard berry development as much. Work planned for next year includes a study of reduced dosage rates of zineb and maneb.

#### Common Storage Vs. Cold Storage

A storage in which large quantities of cranberries could be held at controlled temperatures was constructed at the NCA Onset plant in 1958. During this past season, one compartment of this storage was held at approximately 40°F and some of this space was made available for our storage tests.

After taking field rot counts, all berry samples collected during the 1958 test series were divided into two parts, one part of which was held in the common storage at the Experiment Station and the other placed in the 40°F room at the Onset plant. Samples were held for the same lengths of time in each storage, and then compared.

Shortly after samples were removed from the 40°F storage, berries became quite wet due to the rapid change in environmental temperature. The effect of this factor on the subsequent quality of the berries was not evaluated in these tests.

It is apparent from comparison of the common and cold storage losses given in Tables 1 and 3 that berries in cold storage broke down to a lesser extent than those in common storage. An analysis of the figures given in Table 1 shows that the probability is less than 1 in 100 that this reduction in storage losses was due to chance alone. The evidence of this, and other experiments reported in the past, leads to the conclusion that substantial reduction in storage losses can be gained through the use of controlled low-temperature storage.

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# Fresh Fruit Quality Studies 1958

by  
**J. Richard Beattie, Project Leader**  
and  
**Irving E. Demoranville**  
**Cranberry Experiment Station**  
**East Wareham, Massachusetts**

The term quality has many meanings and interpretations as it applies to agricultural products. To many, quality denotes taste or flavor, while to others it has reference to texture, size, color and degree of maturity. Quality, as used in our fresh fruit studies, has even another meaning and refers to the soundness or shelf life of cranberries as measured by their freedom from insect, disease, frost and mechanical damage. With this definition in mind, let us review the reasons for developing the present study.

Interest in extending the shelf life of fresh cranberries and in reducing shrinkage losses so prevalent in 1957 reached tremendous proportions this past year. Conditions were favorable for supporting the Station's recommendations. Shippers and marketing agents were urging their growers to produce sound fruit.

Large annual crops required that as many berries as possible be sold through fresh fruit channels, which still accounts for approximately 45 percent of the United States crop. Massachusetts growers responded by treating approximately 3000 acres of bog, or about one-quarter of the state's acreage, with suitable fungicides compared with only 700 acres treated in 1957. This was a tremendous accomplishment and growers are to be congratulated.

In view of this interest to produce sound fruit, it was logical that some attempt be made to determine the value of fungicides on the keeping quality of the crop. With this objective in mind, a control experiment was developed in 1958 to determine the effect of fungicide (zineb) and refrigeration on the shelf life of fresh cranberries displayed in stores. Previous studies had indicated

the desirability of such a project and one that could be closely supervised. Growers will recall that our quality control investigations began in 1955\*.

## Methods

An "early-water" section of the State Bog was selected for our purpose and included both Early Blacks and Howes. Its past history had indicated that fruit rots were common and, therefore, would lend itself to shelf life investigations. However, for some unexplained reason, the presence of fruit rots at harvest and during storage on the untreated area was considerably less than expected, which should be carefully noted when reviewing the results of this particular study. One-half of the section was treated twice with zineb, using the Station's low-gallonage spray rig. The other half was untreated and served as the check. Both areas were picked by machine in late September and the berries were stored in the screening room at the Station.

Seven test lots, each consisting of the equivalent of six cases of packaged cranberries, were screened at the Station, then transported to the National Cranberry Association plant in Onset where the berries were packaged in cellophane and placed in master cartons. The first lot was screened October 1 and the final lot December 23. Each lot included three cases of treated berries and three of untreated fruit. The splendid cooperation of Robert Pierce and his staff who assisted in the packing operation is gratefully acknowledged. To simulate transportation conditions, the six cases were then driven around the area for a day by members of the staff during the course of their regular bog work. The berries were then delivered to two local stores, and one case each of treated and untreated fruit were placed on display, which included both a refrigerated and a dry rack in each store. We were permitted to service these displays, collect weekly

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Cranberries, Vol. 22, No. 12, pp 7-10,  
April 1958.

samples and secure detailed information on movement. Careful records on movement in the two stores involved showed that the small, family-owned and operated stores in the cranberry area move less than half a case of fresh cranberries per week. The only exception came during the Thanksgiving and Christmas holidays when movement was slightly over one case per week. The cooperation of the local merchants was excellent.

The final two cases were placed on display at the Station on a small refrigerated rack purchased for the study, and on a dry rack build for this purpose. The packages on display at the Station were handled daily to simulate store conditions. Samples were collected and carefully examined from each lot at the time of "shipment" and weekly thereafter from each store and at the Station.

#### Results - 1958

Seven lots of cranberries consisting of 4 Early Blacks and 3 Howes were screened and packaged during the season. From each lot, 4 to 6 one-pound packages of cranberries were analyzed immediately after packing. These constituted the packing house samples. Thirty-six packing house samples were analyzed showing an average of 3.5 percent unusable berries per sample.

A total of 452 retail samples were analyzed during the period from October 10, 1958, to January 29, 1959. Of these, 259 were Early Black and 193 were Howes. The average percent of unusable berries per retail sample was 26.1 percent. This figure includes all samples regardless of length of time stored, whether treated with fungicides or untreated, and displayed with or without refrigeration.

Table I

	No.	% Unusable
(a) Treated	226	23.2
Untreated	226	29.0
(b) Refrig.	227	16.3
Non-refrig.	225	35.9

In Table I, the 452 retail samples are broken down into two groups: (a) berries treated and untreated with fungicide, regardless of the temperature at which they were displayed, and (b) berries displayed on refrigerated and non-refrigerated racks, regardless of whether or not they were treated with fungicide. The figures show that fungicide treatments reduced the average percent of unusable berries per sample about 1/5 or from 29.0 to 23.2 percent. Refrigeration reduced the average percent of unusable berries per sample by 55 percent or from 35.9 to 16.3 percent.

Table II

	No.	% Unusable
(a) Refrig.		
- treated	114	15.8
Refrig.		
- non-treated	113	16.8
(b) Non-refrig.		
- treated	112	30.7
Non-refrig.		
- non-treated	113	41.2

In Table II, the retail samples are taken one step further and divided into two more specific groups: (a) berries treated or untreated with fungicide and displayed under refrigeration, and (b) berries treated or untreated with fungicide and displayed without refrigeration. The figures show that refrigeration reduced the average percent of unusable berries per sample, regardless of whether or not the berries had been treated with fungicide. Fungicide treatments reduced the average percent of unusable berries per sample about 1/4, or from 41.2 to 30.7 percent when the berries were displayed without refrigeration.

Table III\*

	Length of Time Displayed				
	1 wk.	2 wks.	3 wks.	4 wks.	5 wks.
Refrig. - treated	7.0	13.5	18.5	21.6	25.6
Refrig. - non-treated	8.2	14.1	19.3	22.6	27.7
Non-refrig. - treated	14.6	27.9	36.9	40.8	44.9
Non-refrig. - non-treated	16.2	35.8	49.8	58.5	63.5

\* All figures are percent unusable berries per sample.

Table III shows the effect of refrigeration and fungicide treatment on the shelf life of the fruit. If we use an arbitrary figure of 20 percent unusable berries per sample as the point above which a package of cranberries will lose its appeal to the potential purchaser, the following interesting observations can be made. Berries displayed with refrigeration, regardless of whether or not fungicides were used, had a shelf life of slightly more than three weeks, while berries displayed without refrigeration had a shelf life of slightly more than one week. However, we point out again the area of bog used in the test had reasonably sound fruit regardless of treatment.

Additional information found in this year's study included the fact that 89 percent of all unusable berries were due to fruit rots, substantiating previous work. The average weight loss per package of cranberries was about 1/4 ounce per week. This varied slightly, depending on the temperature at which the berries were displayed.

#### Marketing Trips and Observations

In the course of this study, two trips were made to Cincinnati and Detroit to secure additional information on the keeping quality or shelf life of fresh fruit, as well as information on movement, retail prices, and observations of the trade.

The first trip was made in early November to inspect the condition of Early Blacks as they neared the end of their normal season and when movement is customarily slow. Samples were purchased in approximately 10 stores in each city, and were carefully examined as to condi-

tion. Cases of fresh fruit were also examined at the terminal market. These inspections showed a range of unusable fruit from 2 to 22 percent, or an average of about 10 percent, or slightly less than previous years' investigations.

The second trip was made to the same cities in early December to secure information on the market clean-up after the holiday, shell life of Howes, prices and reactions of the trade. Careful examinations conducted in the same manner showed a range of unusable berries from 6 to 31 percent, or an average of about 16 percent. Most of the samples examined on this trip were Howes. Again this figure is less than those of previous seasons. The clean-up was excellent in each city, and retail prices averaged slightly higher in 1958 than in the last several years.

Many trade representatives were interviewed in each city and specific comments and observations pertaining to quality, merchandising, price and movement of fresh cranberries were noted. The most significant point resulting from these interviews was the definite improvement in our

industry's relations with the trade. This was due primarily to stabilized market conditions resulting from a firmer price structure and increased confidence between shipper and buyer.

#### Summary of 1958 Study

1. Complete refrigeration in stores reduced losses by 55 percent, substantiating previous years' observations.

2. Fungicide treatments reduced losses by 20 percent; the reduction being more apparent on berries displayed without refrigeration. The value of fungicides as a means of extending the shelf life of fresh cranberries is based on only one year's work.

3. Berries displayed with refrigeration had a shelf life of about three weeks.

4. Packages of berries lose an average of 1/4 ounce per week, depending on the temperature at which they are displayed.

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## HORTICULTURE MEETINGS

### A "Look" at 1970

The Northeastern Region Section of the American Society for Horticultural Science had its annual meeting at the Biological Laboratories of Harvard University, Cambridge, Massachusetts, January 30 and 31. There were no papers this year on cranberries, but there were a number which reported research in related fields.

However, the highlight of the program was the evening meeting when a panel presented their views of the Northeastern Horticulture in 1970. The moderator set the "stage" by giving some data on population, the migration out of the city, and the loss of agricultural land to highways and house lots. Following this introduction seven people, representing teaching, research and extension, presented some very interesting and surprisingly unanimous views for the future. A brief summary follows:

Machinery will be developed to harvest and grade most or all of the crops now harvested and graded by hand. Equipment will be developed to water and fertilize greenhouse crops automatically in new, large, extensive greenhouses. Breeding will develop new varieties for harvesting machines and for long distant shipments. It was estimated that the teaching methods and curricula would change. Processing will increase--one third of the increase will be canning and two thirds will be freezing.

The greatest changes were forecast for marketing, and quality was mentioned by nearly every speaker. One man believed we will be able to buy tomatoes fit to put on the table. Produce will be sold mostly in super roadside markets. Fruits, vegetables, and flowers will be shipped long distances--at present, some commodities can be raised on the West Coast and shipped to Boston for just a little over half the cost to produce in New England. Packaging will change greatly. Advertising will be more competitive--flowers and fruits

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will compete with a box of candy. More of the markets will be grower owned and controlled, therefore eliminating the middle-man. The consensus of opinion was that the farm of 1970 would be much larger, and the owner would call on companies who had specialists to supervise all operations spraying, fertilizing, etc., --and that there would be a decrease in Experiment Station and Extension work.

F. B. Chandler  
Research Professor  
Cranberry Station  
East Wareham, Mass.

## HARVEST HANDLING

(CONTINUED FROM PAGE 2)

urged pruning to thin out heavy vines, which would let in the sunlight and get the uprights into better picking condition. A well-drained bog made better quality fruit. He mentioned that other fruit growers pruned heavily; in blueberries generally about a third of the bush was cut away. This lets in more sunlight, aids bees in their work and permits better penetration of insecticides. He said that in big crops on properly pruned vines you can almost "see through to the bottom."

Other speakers were J. Richard Beattie and Irving E. Demoranville who will have an article elsewhere in this issue and also Dr. Bert M. Zuckerman on fungicides and on nematodes and their effect on cranberries.

## BERTRAM TOMLINSON RETIRES JULY 31

Bertram Tomlinson, director of the Barnstable County (Mass.) Extension Service retires from duty July 31, after 35 years' of service. Mr. Tomlinson was long interested in the cranberry industry, and gave much valuable help to cranberry growing.

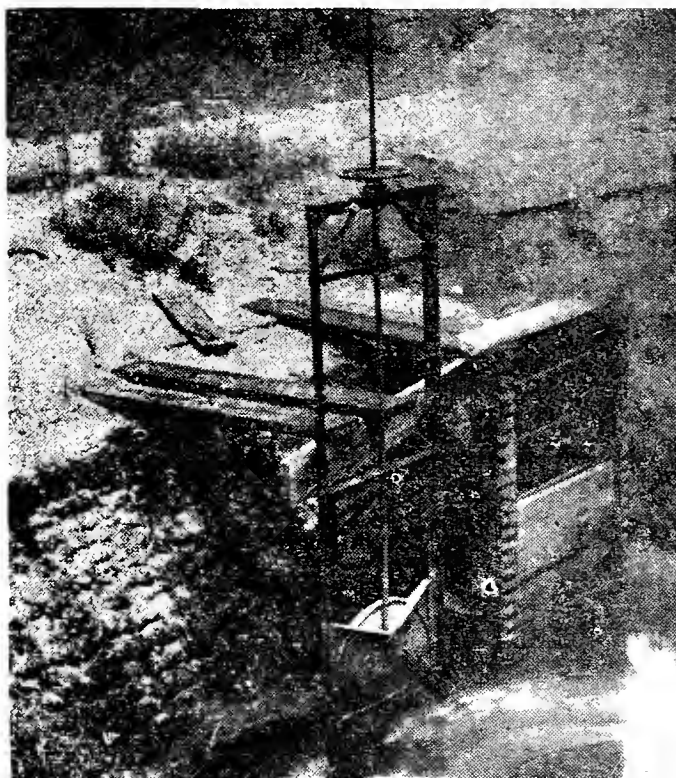
He was a prime mover in organizing cranberry clubs, which got underway in Barnstable County, prior to those in Plymouth, and probably elsewhere in the country.

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# The Cranberry Story

## EARLY HISTORY

### PART ONE



By  
**Gilbert T. Beaton**  
**Secretary-Treasurer**  
**Cranberry Institute**

Beginning a series of 4 articles on the history of the Cranberry industry sponsored by the Cranberry Institute. They will cover: Part I, Early History; Part II, Development; Part III, Fresh Cranberry Marketing; and Part IV, Processed Cranberries.

The first settlers on the North American Continent discovered the benefits of the first American fruit, not only for its excellent flavor and color, but also its healthful qualities. The Pequod Indians of Cape Cod made them into a poultice to treat wounds caused by poison arrows; also using the juice to color rugs and blankets.

The white settlers learned from the Indians how to prepare and cook this delicious berry and some of the first ships returning to England carried cranberries shipped in water casks. The early whaling ships leaving the port of New Bedford and other east coast ports, carried cranberries in water casks in their holds to prevent scurvy, (vitamin "C"), on their two and three year trips in search of whales. In the middle west where scurvy was a problem of the logging camps, cranberries were served regularly.

The first cranberry bog was built by Henry Hall at Dennis, Mass. in 1816. The early shipments of cranberries were from vines growing wild in the low lands, as well as from cultivated bogs. In 1843, Eli Howes developed the Howes variety on several bogs. In 1847, Cyrus Cahoon began the culture of Early Blacks at Pleasant Lake on Cape Cod. It was not until 1875 that Charles Huit McFarlin developed McFarlin berries on a bog, now a part of the Ellis D. Atwood reservoir in South Carver.

As this new continent was developed and the familiar cry was "Westward Ho!" so did the cranberry story move westward. Wild cranberries found in Wisconsin swamps were cultivated by Andrew Searles and the variety is

now known as Searles Jumbo. It is told that Ebenezer Childs, a New Englander, who moved to Green Bay, Wisconsin took eight boat loads of cranberries from Green Bay to Galena, Illinois in 1828. The fruit was exchanged for provisions to supply a camp of Indian shingle makers.

In 1838 William R. Cairns of Boston, who was connected with J. W. Gates & Company, a furniture firm, conceived the idea of introducing fresh cranberries in the southern market. He sent a shipment to New Orleans, Mobile, Savannah and Charleston. This venture was a great success. In 1841 and 1842 cranberries brought \$35.00 per barrel in these markets. Faneuil Hall Market in Boston, still in existence, took the lead in this early marketing picture. Early shippers were J. H. & G. Company, Curtis Company, Sands & Craft, and John Hill. The California trade in cranberries began about 1849 from the East Coast and San Francisco soon became a large market for cranberries, these berries being transported by ship.

In Wisconsin and New Jersey, the wild fruit in early days were protected by laws which provided a penalty for the offense of picking or having in possession unripe cranberries before a certain date

An area north of Berlin, Wisconsin was the first in which cranberries were cultivated in Wisconsin. Edward Sacket, originally of Sacket Harbor, New York, came to Berlin around 1860 to investigate the possibilities of some land he had purchased through agents. He found he had 700 acres of "Shaking Bog" on which, among other plants, grew quantities of cranberry vines. He evidently had some knowledge of cranberry growing in the East. He had dams built and ditches dug so that the cranberries could be kept flooded until most of the danger of early frost was past.

In 1865, 938 barrels of cranberries were produced on the Sacket marsh and were sold in Chicago at \$4.00 to \$16.00 a barrel. In 1869 a \$70,000.00 crop was harvested.

As on the Cape, the early bogs in Wisconsin were wild marshes. The first vines for cultivation were imported from New Jersey in 1871. Wisconsin in turn shipped vines to Massachusetts in 1895 and New Jersey in 1909 which carried the false blossom disease to these areas. Early attempts at frost protection were by fire, as early as 1877. Some growers had placed on their marshes, specially constructed large iron pans in which to burn tar to prevent frost injury. The first cranberry frost warnings were sent by telegraph from the U. S. Army to Berlin in 1885. In Wood county area in 1892, a novel warning system was instituted with the help of the railroads which displayed frost signals from the trains as they passed through the cranberry district.

Back in the east, New Jersey first started planting cranberry bogs some time between 1830 and 1840, but very little was known about the industry until 1850. In the years between 1850 and 1865, the first part of many of the more productive bogs in New Jersey were planted.

Following the Civil War there was an unwarranted expansion of business and many inexperienced people set out bogs. They were unable to continue to maintain

them because of their inexperience, and were finally forced to give up the business of cranberry growing. It was about 1890 before the industry overcame the setback caused by the unwise inflation and began a more normal development.

As one writer so aptly puts it, "Go West, young man, Go West". Let us follow his advice and pick Oregon and Washington. The diaries of some of the explorers of the Lewis and Clark expedition noted that cranberries were often purchased from the Indians after the expedition reached the lower part of the Columbia River. The early settlers on the Clatsop Plains found cranberries growing wild in that locality and picked them for their own use. They also sent them to California in the early days of this land settlement there.

The first attempt at cultivation of berries in Oregon was made by Charles Dexter McFarlin, a Cape Cod cranberry grower who came to Coos County and set out vines which he brought from Massachusetts in 1885. In the neighborhood state of Washington, the first plantings were made on the north side of the Columbia River near its mouth by a French gardener by the name of A. Chebot who planted 35 acres shortly after McFarlin started his plantings in Coos County, Oregon. Chebot brought cuttings from bogs of the eastern part of the United States, but unfortunately brought in some of the worst insect pests and plant diseases at the same time. Development of the cranberry in the Northwest was held in check for a number of years by these insect pests and diseases.

The early pioneers in the cranberry industry were interested not only in the growing phase, but also in marketing, and they were cooperative-minded. One of the first pioneers was A. D. Makepeace, head of a combination whose crop in 1887 was 16,000 barrels. A cranberry growers' meeting was called on Cape Cod on February 15, 1866. This meeting adjourned to March 1st, when the Constitution of the Cape Cod Cranberry

Growers Association was adopted with 67 signers. The New Jersey Cranberry Growers Association was founded in 1869. Through the activities of this body, a study of cranberry rots was undertaken by the U. S. D. A. in 1874 and again in 1901. Cranberry experimental stations were established in Massachusetts in 1906 and in New Jersey in 1913. The Wisconsin State Cranberry Growers Association was organized on January 4th, 1887. Its first annual convention was held August 1887. A cranberry branch station was established near Long Beach, Washington around 1922.

To insure better marketing condition, in 1895 a number of the larger growers of New Jersey and Massachusetts organized the Growers Cranberry Company, a sales organization. In 1906, the Wisconsin Cranberry Sales Co. was formed, A. U. Chaney and Judge Gaynor being largely responsible. In 1907 the New England Cranberry Sales Co. of Massachusetts was formed and in the same year the National Fruit Exchange was organized. These two companies combined with the New Jersey Sales Co. to form the National Fruit Exchange. The National Fruit Exchange was organized for the purpose of uniting the cranberry growers of the country in a single method of disposing of their cranberry products.

During the next few years the National Fruit Exchange was in active competition with the Growers Cranberry Company. The large crop of 1910, 590,000 barrels, together with the losses incident to price cutting between two strong growers organizations in active competition, led to the consolidation in 1911 of the Growers Cranberry Company with the National to form the American Cranberry Exchange. This became the main stay of the cranberry industry for many years.

As production increased from 1906 through 1916, the increase in supply threatened to demoralize selling prices. In 1919 it was estimated that the average cost of producing a barrel of cranberries was somewhat more than the

average selling price for the years 1907 through 1917.

In the face of rising costs in 1916 the growers, through their organization, decided increased consumption was the only way out. A trial advertising campaign was inaugurated in Chicago. \$23,000. was spent that year. It was noted that the Chicago sales for 1916 showed a decided increase over the sales of the previous three years, while other markets with one exception showed a loss. In 1918 the first National advertising assessment was made and \$54,000. was spent. Up to and including the season 1920-1921, a total of \$293,434.00 was spent for advertising purposes.

In the early 1920's acreage in Massachusetts was approximately 14,000 acres, producing approximately 328,000 barrels. In New Jersey acreage was 11,000 acres, producing approximately 183,000 barrels and Wisconsin with 2,000 acres produced approximately 37,000 barrels. The first report on the West Coast in 1924 showed 570 acres producing 14,000 barrels.

(ADVT.)

(To Be Continued )

## MARKETING RESEARCH

Marketing research conducted by USDA's Agricultural Marketing Service is saving the American public—farmers, handlers of farm products, consumers and taxpayers generally—many millions of dollars each year.

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(From Agricultural Marketing)

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## Self Help By Growers Urged In Wisconsin

Retiring Pres. Marvin Hewitt  
Says State Funds for Pro-  
motion, Growers Should  
Also Give More Support  
to Cranberry Association

Self help by growers was urged upon those attending the winter meeting of Wisconsin State Cranberry Growers' Association by retiring president, Marvin Hewitt. Mr. Hewitt declared he had the pleasure of a few trips to the state capitol at Madison and visiting the State Agricultural Department.

"I was surprised at the amount of help there is available to us growers through our state organization," he said in his address, "and, bear in mind that this help is forthcoming only through our state organization and not through any sales agencies.

"In order to get this help, we growers have to give some indication that we want to help ourselves. This can be done by paying our dues on time and paying for the frost warning service." He added that he was embarrassed to find that many growers were not doing these things.

"If we are to have an active organization, we should all make up our minds to do our share such as they had years ago when we were first organized. We cannot expect help from the State or from any other sources if we



ourselves are reluctant to take an active part.

"A defeatist attitude has never made for a successful and vigorous organization. This past season for the first time in 15 years, cranberries were on display at the State Fair. The space was free of charge and all selling agencies were asked to participate. Three companies were represented and a great deal of interest was shown and we did find that in years to come we should have someone at the booth at all times.

### Promotion Funds Available

"Another thing we found out is

that there is money available to the State Cranberry Growers Association for the promotion of cranberries. If we as growers will set aside a small amount per barrel, I am sure that the State would be more than willing to match it and in this way we could start a campaign that would help increase the per capita consumption. Certainly this is most important, since according to the figures that are available the per capita consumption of cranberries

(CONTINUED ON PAGE 20)

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## OVERHEAD IRRIGATION

WATER SUPPLIES, as is being pointed out at cranberry club. association meetings and by those most competent to know, is becoming, and will become more of a problem for the industry. We are not alone in this demand for water.

A couple of statistics. Last year more than 170,000,000 Americans were using 148 gallons per capita per day. In 1900, some 78,000,000 were using 90 gallons a day per capita, doubling the number of people, almost doubling the amount of water each.

American industry at the turn of the century used 10 billion each day and now is using 110 billion gallons, 11 times as much. We needn't worry at present when existing sources are gone or utterly inadequate, that is from rainfall accumulated and made available in rivers, streams, natural lakes, man-made reservoirs and subterranean strata tapped by well.

But, of immediate concern, is the increasing scramble for water by everybody. Answer for the immediate years must lie in sprinkler irrigation—it uses so much less water than flooding.

---

## DON'T LOSE ON HARVEST

QUALITY CONSERVATION of berries grown was the theme of Massachusetts Club meetings, and it made good sense. That is, that getting the fruit ready to pick and then to get it into storage and ready for shipment is just as important as the growing. In fact in a way more so, for much of the money that has been spent getting the crop to the harvest point—frost flooding, insecticide control, other items, represent a cost. Any move from that point on which leaves berries unharvested, badly bruised or of poor keeping quality is so much waste against the amount that represents a barrel sold of fresh or in processed products. A loss which can be avoided!

---

## ELEVEN-YEAR LOOK AHEAD

SOME LOOKS into the future, as far as 1970 are set forth in this issue at a meeting of Northeastern Section of American Society for Horticulture, and reported

CLARENCE J. HALL.

Editor and Publisher

EDITH S. HALL—Associate Editor

Wareham, Massachusetts

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BERTRAM TOMLINSON

Barnstable County Agricultural Agent

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New Jersey Cranberry and Blueberry Station

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by Dr. Chandler. These included that machinery will be developed to harvest and grade, breeding will develop new varieties for harvesting machines and for long distance shipments. It is noteworthy that processing will increase, and two-thirds of this will be in freezing. Packaging will change greatly—advertising will be more competitive and flowers and fruits will compete with candy. We are in a period of an ever faster changing world. Cranberry growers can't lag behind.

## SELF HELP URGED

(CONTINUED FROM PAGE 18)

has decreased rather than increased and it is high time that something should be done about it.

"We want to put Wisconsin cranberries on the map. Many people are not aware that cranberries are grown in our state, and with the right fighting spirit and good old red-blooded fight we can do the job."

He added the association was deeply indebted to many of the Agricultural College of the University of Wisconsin.

In conclusion he said, "As your retiring president I pledge to help

in every way possible to make our state organization a stronger and more aggressive one in order to increase our fields of quality cranberries so that the consuming public will buy more of them at reasonable prices."

Mr. Hewitt got into the cranberry business in 1947 when he and Guy Cole went to the town of Hiles and bought some land, starting a marsh. They planted 12 acres. In May of 1953 he bought his partner out. In 1955 he planted eight more acres of vines. The marsh is located two miles east of City Point.

He was born in Bellwood, Nebraska on August 9, 1902 and lived on a farm in the Platte Valley. He finished high school at Ocravia, Nebraska. When 18 he moved with his parents to Ogema, Wisconsin. He later went to Minneapolis and spent a year in business college. He was employed by the Soo railroad line as a utility clerk and assistant cashier.

After his marriage he went to Flint, Michigan and was employed by the Fisher Body Corporation as inspector of trim material. He worked there for five years and then because of his health he sought a job where he could be more in the open. He opened a

grocery and feed store in Lindsey in the early thirties. In 1940 he disposed of this and built a locker and meat packing plant which his son now manages.

He adds, "I like the outdoor work of a cranberry grower and am very much interested in the growing of cranberries."

People who are ambitious to get in the social swim often find themselves in hot water.



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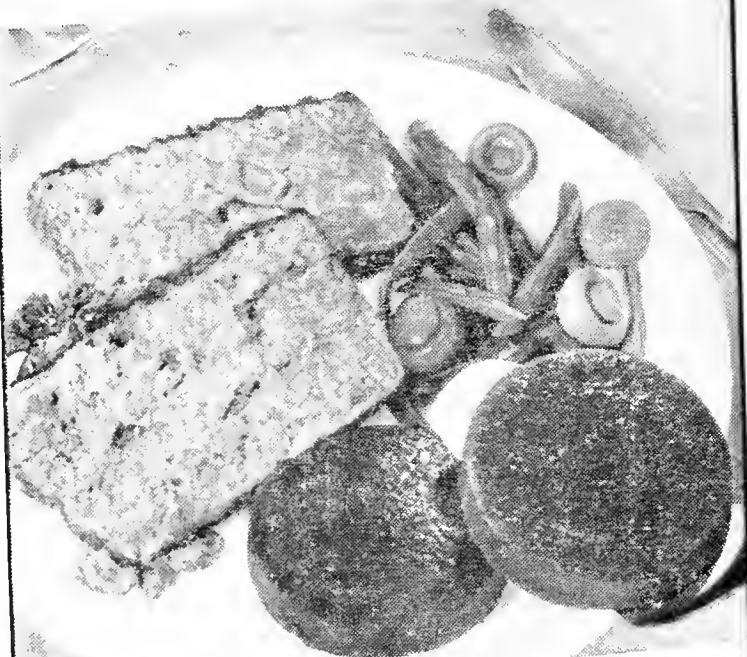
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### PETER G. BEATON

Peter G. Beaton, 77, a Wareham, Massachusetts cranberry grower for many years passed away April 7. Born in Prince Edward Island, Canada, he was the brother of the late John J. Beaton who established the Beaton Distributing Agency and the J. J. Beaton Company with large bog holdings.

Mr. Beaton had lived in Wareham for 65 years and while working at the Tremont Iron Works in West Wareham had built his own bogs. When his holdings reached a considerable size he devoted his whole time to cranberry growing.

He was a charter member of Cape Cod Cranberry Growers' Association, Southeastern Massachusetts Cranberry Club, a member of National Cranberry Association and the first Congregational

Church of Wareham.

Survivors include three sons, Elliott, also interested in cranberries, Gilbert T. Grower and prominent in the industry (CRANBERRIES, Feb. 1959) and Kenneth with cranberry interests too, three sisters, two daughters, 11 grandchildren, five great grandchildren.

### ARTICLES TO COME

The continuation of the article upon Manitowish Waters, Wisconsin, will be omitted this month because of lack of space.

There are also two other Wisconsin articles in type waiting which we believe of much interest, these being one on "Hail in Wisconsin," based on the unusual hail loss of last year but of general interest because of the hail study, by Dr. George L. Peltier. The other is on Amino Triazole by Dr. Malcolm N. Dana,

### PELTIER WISCONSIN CONSULTING SERVICE

Dr. George L. Peltier, Wisconsin Rapids, Wisconsin, as of April first began a consulting service to Wisconsin growers. He has had a career in the field of plant pathology and bacteriology as an instructor at the University of Nebraska. He calls his new venture "his second retirement," by that meaning he retires from one definite work to another.

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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



## Peter G. Beaton

Our cranberry industry lost one of its most respected growers in the sudden passing of Peter G. Beaton of West Wareham in early April. Mr. Beaton's devotion to his family and his loyalty to cranberries were two of his outstanding characteristics. He was a frequent and a most welcome visitor to the Cranberry Experiment Station; in fact, we enjoyed a brief visit with him only a few days before his death. Our staff joins his many friends in extending our deepest sympathy to his family.

## Not An Early Spring

Weather conditions to date (April 15) have not favored an early spring. Temperatures in March averaged .6 degrees per day below normal and the first half of April was about 2 degrees per day above normal. Inland bogs (Easton, Sharon, Foxboro and Carlisle) were beginning to "green up", but bogs near the coast have shown little change in color. However, a few warm days could alter the picture very quickly which brings up the subject of frost.

## Frost System

Arrangements have been completed to send out frost reports over the telephone and radio. The Cape Cod Cranberry Growers Association is again sponsoring the telephone frost warning service which is strongly endorsed by growers according to the returns received from the frost questionnaire. It is apparent that the radio is considered to be a good supplement—not an alternative or replacement for the telephone. Returns have been excellent and a summary of this questionnaire will be prepared at a later date for Cranberries Magazine. The radio

schedule for this spring is as follows, below:

Before leaving the subject of frost warnings, we have a few suggestions. Growers who subscribe to the telephone service are urged to have their frost pads and pencils near the telephone so that no time will be lost in taking down the message. This is a courtesy we owe our telephone distributors as well as the growers who follow us on the frost list.

## Local Balance

Apparently the term local balance, as used in the warning, is still not clearly understood. We have rewritten the explanation which now reads as follows: "If the local balance is against us, the chances are that temperatures will drop to the forecast which would be against the growers interest. On the other hand, if the local balance is in our favor, the odds are good that the temperature will not go to the forecast which would favor the grower." It is an important part of the warning and growers who have "sat in" on the frost sessions at the station for many years know the value that Dr. Franklin placed on whether the local balance was in our favor or against us.

Copies of a circular entitled Cranberry Frost Tips are available at the county agents offices or at the Cranberry Station. These suggestions were taken from Dr. Franklin's weather bulletin and serve as useful guides.

Finally, if growers would like to have their thermometers checked, we would be glad to perform this service for them. It requires only a few minutes and the value is obvious.

## Winter Kill

Winter killing damage is common on many bogs but the acreage involved appears to be limited at this time. This damage is particularly noticeable where bogs were "roughed up" by the picking, sanding and pruning operations. Ice damage has been noticed on a number of properties but in the aggregate appears to be negligible. Check List for April to Mid-May

The following reminders are called to the growers' attention:

1. Now is the time to check motors, pumps, pump wells, dikes, flumes and spillways in preparation for that first frost night.
2. Treat grubs with chemicals as outlined in the new chart.
3. Spot treat summer grass, poverty grass, and grassy weeds growing at this time with No. 2 fuel oil and kerosene as outlined in the new chart. Kerosene and Stoddard Solvent are excellent chemicals for weed control but they are expensive and directions for their use should be carefully followed.
4. Fertilize bogs that need it, using the 1958 fertilizer chart as a guide.
5. Prune those areas that gave the picking machine trouble last fall.
6. Many ditches need cleaning at this time of year.

## Late Massachusetts

April to the 16th had run up a plus temperature (Boston) of 31 degrees, or obviously nearly two degrees a day above normal. Rainfall to the same date (State Bog) was slightly under two inches, or normal. There had been no frost warnings sent out.

Station	Place	Dial		Afternoon	Evening
		A.M.	F.M.		
WEEI	Boston	590 K.	103.3 mg.	2:00	9:00
WBZ	Boston	1030 K.	92.9 mg.	2:30	9:00
WOCB	W. Yarmouth	1240 K.	94.3 mg.	3:00	9:30
WBSM	N. Bedford	1230 K.	97.3 mg.	3:30	9:00

## Ocean Spray Sales Show Lead In First Quarter

Ocean Spray processed sales for the first quarter of 1959 are up 31% over the same period in 1958, "according to an announcement by Ambrose E. Stevens, General Manager of National Cranberry Association. Mr. Stevens reported this increase in cranberry sales at a meeting of Ocean Spray officials and Sales Representatives from U. S. market areas, April 11 at the Statler-Hilton, Boston.

The sales meeting touched off Ocean Spray's spring and summer campaign "mating" cranberry sauce with barbecue meats, scheduled to open in May when national media will be sparked with a consumer premium offer of a special barbecue chef's knife.

Mr. Stevens' report of National cranberry progress was followed by a presentation of the sales campaign by Larry E. Proesh, Director of Marketing; H. Gordon Mann, Sales Manager; H. Drew Flegal, Director of Advertising and Public Relations; William Stilwell, Sales Promotion Administration; John Ballard, Sales Administrative Assistant; Robert Rich, Display Supervisor.

Sales Representatives from area divisions were: Thomas Hodgkins, Northeast; Richard Jones, Assistant, Northeast; M. S. Anderson, Pacific; John Leitch, Southeast; Joseph Conley, North Central; Frank Moreno, Central; Rodney Williams, Jr., Southwest.

### HORSES BEFORE CRANBERRIES?

It was noted in a recent issue of the Western World, Bandon, Oregon that Coos and Curry counties, where cranberries are grown in Southeastern Oregon had horses long before they had pioneers. A former prospector found an interesting specimen of a well-formed tooth. Oregon State College experts declared it was pre-historic, probably six to ten thousand years old.

Tooth measured  $\frac{3}{4}$  inches wide by one inch and one-quarter inch in thickness with length of

two and three-quarter inches. It was found near Myrtle Point in a deposit of blue glacial mud.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of April 1959 - Vol. 23 No. 12

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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

Compiled by C. J. H.

## MASSACHUSETTS

### March Slightly Wetter

Rainfall for the month of March as recorded at Cranberry Experiment Station was 5.87 inches, the normal for the month is 4.39.

### March Temperatures

The March average temperature was 37 degrees (Boston) 0.6 under normal. The December-March period was the longest of consecutive colder-than-normal months in 19 years.

### 30-Hour Blizzard

A 30 hour blizzard starting Good Friday and continuing into Saturday brought some of the most disagreeable weather of the winter to Southeastern Massachusetts. The snow, starting wet and heavy gradually turned lighter in texture. It brought 3.75 inches of snow which melted down into a total precipitation of .54 inch. This was probably Nature's last fling of the '58-'59 winter.

### March Sunshine Up

The sunshine factor for March was up—plus 27 hours. This is a point in favor of good keeping quality.

### April

By April 10 the winter flood was off most bogs, but some still were covered. Late water re-flood was expected to go on generally about the 17th after the "breather." There is a great plenty of water for spring frosts on bogs which have frost flowage.

### Winterkill

Bogs in general were looking well as they came out of winter flood. There are many spots of winterkill on many bogs, the most Dr. C. E. Cross says he has noted in a number of years. However,

he does not believe as a whole winterkill took any considerable toll.

## WISCONSIN

### Temperature Lowest in 39 Years

March was the fourth consecutive month with below normal temperatures and precipitation in most of the cranberry producing areas of the state. The state climatologist, Paul Waite, ranked the 1958-59 winter among the worst of the 20th century. The south and east two-thirds of the state had temperatures that averaged the lowest in 39 years.

In northwest Wis. the readings were as low as the harsh winter of 1925-36. The number of days of zero or below were almost double the normal in south and

central counties.

### Water Level Low

The worst snowstorm in many years struck the south and central counties in March. Heaviest fall was 26 inches in 24 hrs. recorded in northern Juneau County on March 5-6. The majority of the central marshes failed to receive any snow on the third storm on March 20th. Rainfall total deficiencies for the year now total -.65 inches and ground water levels minus 1.85 feet.

Temperatures started moderating the last ten days of the month, to cause the first general thaw of the winter. These warmer temperatures held the average for the month to only minus two to three degrees below the normals of 26 to 29. Lowest was five below on the 17th and warm-

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est was 59 above on the 23rd. The extended forecast for April is for normal to above normal in precipitation and from near normal to below normal in temperature.

#### We Have Had It

Now that winter is officially over for 1958-59 about all we can say is that we have had it and hope it won't be like this again for another 39 years or so.

#### Sanding

The heavy March snows in the south ended the sanding operations as the north had completed sanding work by the end of February. Moderating temperatures would cause road breakups further eliminating road and dyke hauling. The marshes which started work early in the season benefited the most.

#### Vine Heaving Expected

Growers were expressing concern as the heavy snow cover melted in view of possible high water. However the snow was absorbing the early runoff and unless additional rain or snow fell it seemed flood dangers would be very localized. Deep frost presented a definite problem as washouts were being reported and considerable vine heaving was expected. Most growers were planning on doing considerable reflowing if deep frost persisted.

#### Grower Dies In Accident

Vincent Zawistowski who operated a marsh near Hayward was killed in a truck-train crash in Illinois last month. Mr. Zawistowski is survived by his wife and three young children.

## W. F. RUTTER

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## NEW JERSEY

### March

The month of March, as usual, fluctuated frequently between mild and cold periods. The colder spells were a little bit more extensive so the month averaged out at 40.8°F., 1.2° below normal. There were nine days above 60° and four above 70°, making it the highest temperature for this day on record and the warmest March day in ten years. These frequent warm spells kept the flood waters on cranberry bogs almost completely open throughout the month.

After four successive months of below normal rainfall, an excess was recorded in March. A total of 4.77 inches of precipitation occurred on ten rainy days. This is 1.09 inches more than normal. During the past five months the total rainfall was 12.48 inches below normal.

#### Light Winter Snow

In contrast to the record snowfall of the winter of 1957-1958, when 56 inches occurred, the 1958-1959 snow season was one of the lightest on record, with only 5.80 inches recorded.

## OREGON

Many northwestern Oregon cranberry growers are busily en-  
(CONTINUED ON PAGE 20)

## R. F. MORSE & SON



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# DITHANE Z-78



As Miss Betty Buchan, director of publicity for National Cranberry Association holds the seal of the Cranberry Highway Association, President Robert Fugere makes a point during a State House hearing, Boston, concerning the bill to change the names of routes 28, 6 and 6-A to "Cranberry Highway." (RuppertWunschel Photo)

## Massachusetts Cranberry Area May Have — "Cranberry Highway"

Interest is at high peak in the cranberry district of Southeastern Massachusetts concerning the changing of a major highway from Middleboro in Plymouth County to Orleans on the Lower Cape. Proposed name is the "Cranberry Highway." It would extend a distance of 70 miles or more.

Move is sponsored by a recently-formed group known as the Cranberry Highway Association. Purpose of the change in name of routes 28, 6 and 6-A is to attract more tourists from newer super highways now built or building.

Name might do the trick. Most of the group is made up of businessmen of one sort or another along the proposed "Cranberry Highway."

In order to make the change the matter must be acted upon

favorably by the Massachusetts Legislature. A hearing has already been held at the State House, Boston. Several Southeastern Massachusetts Legislators have expressed themselves as in favor of the change.

As this issue goes to press action has not been taken at the State House. But an announcement that the "Cranberry Highway" will become a reality is expected shortly.

### Favorable Report On Cranberry Rd.

The Legislative committee on Public Highways has reported favorably on a bill to rename Route 28 from Middleboro to Buzzards Bay and Route 6A from Sagamore to Orleans. Bill now goes to the

House Ways and Means Committee.

Representatives of Cranberry Highway Associates, seeking the name change, will meet April 22, Wednesday at Tiny Jim's Town Club, Buzzards Bay with representatives of the Bay Shores Association to discuss plans for the highway promotion.

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Research Professor, Cranberry Station  
East Wareham, Mass.

Insecticides, fungicides, herbicides, and the equipment used to apply them, were summarized in the last issue of *Cranberries* under the above title. The frost, harvesting, labor and marketing phases of cranberry production will be presented in this issue.

#### Frost

Frost was mentioned in some of the surveys but not in all of them. The Massachusetts surveys give the minimum temperature and the percentage of damage from the frost. However, when the early reports are studied, it becomes evident that Dr. Franklin studied frost from the first at the State Bog. These reports stated orchard heaters were not satisfactory and were dangerous, the skinner type of irrigation was expensive and the nozzles plugged easily, and tobacco cloth raised the temperature at the vines  $4\frac{1}{2}^{\circ}$  F. at a cost of \$200 per acre. The formulae used to figure the minimum temperature were published in 1920 and the fall of that year the telephone frost warning system was started.

The new Jersey survey did not mention frost, but up until recently they used one of Dr. Franklin's formulas and a telephone system to warn the cranberry growers of the expected minimum temperature.

In Wisconsin, the frost problem is greater than any other problem and is probably greater than that of any other growing section. In Massachusetts and New Jersey, there are a few dry bogs, but it would be impossible to get a crop on a dry bog in Wisconsin. Cox, of the Chicago Weather Bureau, made studies of frost in Wisconsin and found that sanded marshes had higher minimum temperatures than marshes which were not sanded. In forecasting for Wisconsin, some of their formulas were used and some of Dr. Franklin's. The Stevens Point Radio Station WLBL broadcast the warnings as early as 1928, and possibly earlier. In the 40's, the cranberry growers in Wisconsin had a U. S.

Weather Bureau forecaster come to Wisconsin Rapids for the cranberry growing season to forecast particularly for cranberry growers. This forecast has been carried as AP news and broadcast frequently during the day.

British Columbia cranberry growers have had little or no help from the Weather Bureau with frost warnings. Oregon growers check bog temperatures and call one another, and in addition, many growers have electric alarms which ring in the house. Oregon probably has the best possibility of preventing frost as 72.5 percent of the bearing acreage has sprinklers.

In Washington, Crowley made many studies of frost injury and bog temperatures and repeated some studies which had been made in other sections. He reported a

relationship between injury from frost and dense vines. Dense vines prevented the heat of the day from warming the soil, and therefore the temperature dropped lower at night. Also, he reported an obvious setback of the vines without visible injury. Crowley obtained complete protection of blossoms with sprinklers from temperatures as low as  $23^{\circ}$  F., and of berries from temperatures as low as  $20^{\circ}$  F. He recommended starting sprinklers at  $32^{\circ}$  F. and continuing until the frost was over, as he felt growth was retarded if the plant was not injured in the spring and in the fall  $28^{\circ}$  F. would soften berries when nearly mature. It would appear that Washington grown berries might be more tender than those from Massachusetts, as 5 percent of fruit in Washington was injured at  $25^{\circ}$  F., while Massachusetts grown fruit is not injured at  $23^{\circ}$  F.

#### Harvest

Harvesting has changed more than most people realize. Brown, in 1927, reported hand picking in Oregon was very common. Crowley, in 1937, considered only two methods of harvesting—by hand and by scoop. The vacuum picker,

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which was developed after 1940, harvested with very few berries dropped, but as it was slow and damaged many of the berries it has been discarded. In Oregon and Washington, the water reel has recently come into use for water harvesting. However, for fresh fruit harvesting must be done dry, either with the so-called Massachusetts scoop or the Wisconsin rake. Bufton in Wisconsin reports the development of the mechanical harvest in that state. In 1949, 95 percent of the growers representing 96 percent of the acreage employed the flooding and raking method in harvesting the berries. Mechanical pickers at that

time were still in the experimental stage. In the 1952-53 survey, 25 percent of the acreage was mechanically harvested, and in 1956, 66.5 percent of the crop was harvested by machine. Since 1956, even more machines have been used.

another and thereby decrease the necessity of hiring help. In Wisconsin, 60 percent of the growers have 25 acres or less, and most of these growers do much of their own work. In Canada, relatively little labor is hired.

#### Harvest Season\*

Section	Start	Finish
Mass.	Sept. 5	Oct. 20
N. J.	Sept. 1	Oct. 15
Wisc.	Sept. 17	Oct. 13
Oregon	Sept. 10	Nov. 1
Wash.	Oct. 1	Nov. 1
Nova Scotia		
British Columbia		

\* There are usually a few that harvest too early and some that harvest later. On the West Coast, sometimes berries are harvested after Christmas.

#### Labor

Questions about labor were asked in three of the surveys—Massachusetts, Oregon, and Washington—but only Massachusetts was summarized. From one of the tables in the Massachusetts survey, on a per acre basis there are about 6 days of family labor, 6 days of year-round employment, and about 12 days of temporary employment, or less than 24 days per acre to care for an acre of bog, protect and harvest the crop. On the West Coast, there are a number of growers who help one

Marketing  
At the time the surveys were made, berries were marketed through two large cooperatives and a few independent cranberry shippers. Now one cooperative handles over three quarters of the crop and some of the sales organizations have gone out of business.

All cranberries used to be shipped to the fresh market, but in 1919, about 2000 barrels, or a half of one percent of the crop, were processed. The amount processed has increased very rapidly, until now over half of the crop is canned. In some years a decade ago, on a percentage basis, the West Coast has put the largest amount into processing but now they are making an effort to ship fresh fruit from Oregon and Washington. For more than a decade over two-thirds of the New Jersey crop has been processed. The percentage of the crop canned in Massachusetts is about the same as the percentage canned in the United States, or about half. The Wisconsin crop generally is handled mostly as fresh fruit. The Canadian Crop is also sold largely as fresh fruit. With increased production and decreased per

#### Percentage of Acres Harvested by Different Methods

Section	Method			
	Hand Scoop*	Machine**	Water Reel	Vacuum
Mass.	55	45	0	0
N. J. ***	60	40	0	0
Wisc.	34	66	0	0
Ore.	5	29	54	12
Wash.				
Long Beach	0	4	96	0
Grayland	0	34	1	65

\* The scoop in Massachusetts and New Jersey refers to a short-handled scoop used dry. In Wisconsin, it refers to a long-handled scoop used in water. In Oregon, it means either or both used dry.

\*\*In Oregon and Washington, the machine refers to a Western; in Massachusetts and New Jersey, machine refers to a Western or a Darlington; and in Wisconsin, it refers to a Case or a Getsinger used in water.

\*\*\*New Jersey percentages estimated.



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capita consumption, in the future they will probably have greater quantities of cranberries processed than at the present time.

Literature used in addition to that previously cited:

Cranberry Station Reports, 1911 through 1920.

Crowley, D. J. The Cultivated Cranberry in Washington. Wash. Agr. Sta. Bul. 349. 1937.

Crowley, D. J. Cranberry Growing in Washington. Wash. Agr. Expt. Sta. Bul. 554, 1954.

### MISS CHANDLER CHOSEN FOREIGN EXCHANGE STUDENT

Miss Elizabeth Chandler, daughter of Dr. and Mrs. F. B. Chandler of Front street, Marion, Mass., has been named a foreign exchange student by the American Field Service. She was notified recently by the New York office of the AFS. She is a junior at Wareham High school. The group will study in Europe this summer.

Dr. Chandler of the Massachusetts Cranberry Experiment Station is of course, widely known throughout the cranberry "world".

## NCA Directors To New Jersey April 24

When National Cranberry Association's 24-member Board of Directors and cooperative officials meet at Cherry Hill, Haddonfield, April 24, it will be a historic "first" meeting in New Jersey since the incorporation meetings in 1930. At that time, a merger was made of the canning operations of Cranberry Products Company of New Egypt, New Jersey, and two Massachusetts companies, Ocean Spray Preserving Company and A. D. Makepeace, to form a cranberry growers' cooperative under the name of Cranberry Cannery, Inc. Membership of the new cooperative was made up of cranberry growers of New Jersey and Massachusetts. The late Mrs. Elizabeth Lee, owner of the New Jersey company, went down in the annals of cranberry history as the New Jersey founder of the present national cooperative that now handles 74% of the U. S. cranberry crop.

Expansion of membership to include the cranberry-producing areas of Wisconsin, Washington

and Oregon followed the merger and the name Cranberry Cannery, Inc. was appropriately changed to National Cranberry Association in 1946.

The New Jersey cranberry-processing plant is in Bordentown and has been managed by Enoch F. Bills since the 1930 merger. Mr. Bills is a well-known cranberry grower and the nephew of Elizabeth Lee.

Cranberries are native to New Jersey and cultivation for commercial use began here as early as 1835. Mr. Bills' father was one of the early pioneers and built his first bogs in 1890.

Enoch Bills has carried on the family tradition and was recently honored for his contribution to New Jersey agriculture by the Board of Agriculture, Burlington County. Mr. Bills served on the cooperative's Board of Directors from 1942 to 1957 and will be host to the present Board when they visit the Bordentown plant on the 23rd to tour the processing operations and to meet with New Jersey growers.

Accompanying the Board members will be Ambrose E. Stevens, National Cranberry Association's general manager, and President George C. P. Olsson; and staff members, Kenneth G. Garside, director of operations; L. E. Proesch, director of marketing; H. Drew Flegal, director of advertising and public relations; John F. Harriott, assistant treasurer and E. J. Gaughan, controller.

New Jersey Directors are: John E. Cutts, Vincentown; Thomas B. Darlington, New Lisbon; William S. Haines, Chatsworth.

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# Allentown (Pa.) Editor Leads Cranberry Crusade, Larger Servinas

Bulletin — Pennsylvania House of Representatives has under consideration a bill recommending that restaurateurs serve larger portions of cranberries in their restaurants in order to enhance meals and to satisfy the desire of patrons for this desirable delicacy.

The bill has been referred to the Committee on Rules.

Bill further points out that "It is of utmost importance that no item be overlooked which can contribute to the completeness of meals served in home or in restaurants. Cranberries and cranberry sauce, long established foods which have been appreciated during the holiday seasons of Christmas and Thanksgiving can admirably make this contribution throughout the year."

For some years John Y. Kohl has been smoldering about the small servings of cranberry sauce he received in restaurants, and occasionally he would air his feelings in his weekly editorial column called "This and That" in the Sunday Call-Chronicle which he has edited for thirty years.

By December, his remarks had come so saucy that the mayor of the city of Allentown wrote a proclamation of whereases and Be it resolveds making 1958 the year of the Cranberry Crusade, stating "and, FURTHER, I hereby designate citizen John Y. Kohl columnist and gourmet Chairman of Said Crusade, and in evidence thereof I herewith sign my name with a pen of two colors, silver and cranberry red, which pen I herewith entrust to said John Y. Kohl that it might ever remind him of the trust imposed upon him by Americans the country over who are dedicated to the cause of MORE CRANBERRY SAUCE WITH TURKEY."

From that time on the Crusade was off to a big start with Mr. Kohl editorializing week after week and quoting people who were staunchly behind the crusade. A Queen was chosen, Mrs. Ralph C. Swartz, because she made the dandiest cranberry chutney and her picture and recipes covered a

page of the Allentown paper. The campaign was endorsed by chefs, school children, political figures and just plain diner-outers. Allentown restaurants and hotels began bringing on cranberry sauce in soup dishes, especially when campaigner Kohl was dining there.

George M. Leader, then Governor of Pennsylvania, wrote, "It seems tragic that workers who go into cranberry bogs to pick cranberries can have so little to show for their efforts at State functions and public banquets. I am unequivocally in favor of cranberry sauce—in huge quantities—I realize that this broad statement may be political suicide, but on behalf of the cranberry bog workers and Pennsylvania gourmets, I am willing to stake my political future."

To the dismay of his followers, Governor Leader was not re-elected but the Cranberry Crusade went on.

In November, Mr. Kohl wrote a feature article called "Cranberry Sauce 'All-American'" and syn-

and writer F. ... wrote of the crusade ... that appeared in newspapers from coast to coast. (Mr. Othman has since passed away.)

In Hanson, NCA publicist Betty Buchan was keeping the mails Allentown bright with cranberry information, and Ocean Spray sales in the Allentown area showed a decided increase in both fresh fruit and processed products—cranberry sauce of course.

On December 16th she journeyed to Allentown to pay tribute to the crusade and the crusaders at a luncheon for loyal followers. The menu was cranberry punch, ham with cranberry glaze, cranberry jellied salad, vegetables, ice cream with cranberry topping, and the Cranberry Queen brought festive jars of her cranberry chutney as gifts.

On a display table was the Cranberry Crusade Proclamation, the pen that signed it, and other mementos centered around a small paper cup bearing the sign "Hor-



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**FOR BIGGER CRANBERRY SERVINGS—**cranberry crusade chairman John Y. Kohl, editor of the Sunday Call-Chronicle, and Allentown's Mayor Donald V. Hock receive certificates making them Cranberry Merchants from Betty Buchan, publicity manager of NCA at a cranberry crusade luncheon at the Lehigh Valley

Club in Allentown, Pennsylvania. Miss Buchan also presented authentic cranberry scoops full of Ocean Spray to the two dignitaries who have been campaigning all year against the little paper cups of cranberry sauce served at many restaurants and hotels.

rible Example of Microscopic Cranberry Cup" All of which were presented to Miss Buchan to be on display at the cranberry museum at Onset, Mass. this summer. Mayor Hock was the featured speaker.

Newspaper stories, radio interviews and even hotel advertising heralded the climax of the campaign and members of National Cranberry Association will be glad to know that come spring, cranberry vines from New Jersey will be planted in Allentown's park,

and John Kohl, who now owns a share of preferred stock in National Cranberry Association, is still beating the drums for larger cranberry servings.

#### HERBICIDES AND WATER

Overhead irrigation proved more effective than furrow irrigation for weed control in recent USDA-State studies using several pre-emergence herbicides at Weslaco, Tex.

ARS horticulturist R. M. Menges reported that downward

movement of herbicides increased with overhead irrigation. Furrow irrigation tended to leave the chemicals on soil surface away from germinating weed seeds.

Studies using 4 pounds of either CDEC (2-chloroallyl diethyldithiocarbamate) or EPTC (ethyl N,N-di-n-propylthiolcarbamate) to 40 gallons of water, showed 97-percent weed control with overhead irrigation, but 61 percent with furrow irrigation. — Agricultural Research

## **A Concentrate Sprayer For Bog Cranberry Use**

(Editor's Note: The following is a talk given at the March meetings of the Massachusetts Cranberry Clubs).

by

**Prof. William E. Tomlinson  
Mass. Cran. Expt. Station**

We have now had two years experience with the ground concentrate spray rig on cranberry bogs. In general, results have been favorable for the application of both insecticides and fungicides, and it is very probable that certain broadcast weedicide applications can also be made with this rig. We have obtained good commercial control of insects, including cranberry fruitworms, and the common rot inducing fungi.

Why this interest in a spray rig that runs on the bog and in so doing damages the bog and reduces the crop? I feel that the amount of injury has been exaggerated in many growers' minds and what injury may occur is made up for by the improved insect and disease control that is obtained by better timing of applications. It is a rig that the small to medium acreage grower can afford individually or in a group. Weather, short of rain, need not upset timing which

is one of its most important assets. It covers acreage quickly as well as effectively. Relatively small amounts of water needed. No large crew of men necessary and it is adaptable to other equipment used on bogs. Sprays are more effective than dusts and are cheaper than dusts.

The disadvantages are in the tracking up of bogs and consequent loss of crop which, as I said before, I feel is exaggerated. We have been using a rig made on an old cranberry duster at the State Bog for two years and I am sure that you would have difficulty showing any reduction of crops from its use.

### **Other Rigs**

Louis Sherman has developed a rig on the same basic principal but with a different method of transporting and a much longer boom arrangement. J. J. Beaton Company used cub tractors for transporting their rigs with power to pump supplied by power take-off. Carleton Barrows has developed a very light, self-propelled rig for carrying the boom only; the spray being supplied to the boom from a rig on the shore through small diameter, light-weight hose. The spray is pumped through hydraulic atomizing nozzles that deliver from 15 to 20 gallons per hour at about 60 pounds pressure.

Both fan shaped and cone shaped spray pattern nozzles are available, and I can't tell you definitely that one is better than the other. We have worked with the cone pattern because, at least theoretically, it should give better coverage and breakup than the fan pattern. We have worked in the range of 25-30 gallons of spray per acre at 60 P.S.I. in most of our tests, using about a 4X to a 6X concentration with insecticides and 12X with fungicides.

In concentrate spraying, it is generally agreed that the coverage must be such that the distance between drops deposited will not be much more than 1 mm. (1/25 inch). Drops 1 mm. apart readily coalesce when rain or dew occurs. All foliage of course should be hit by the spray. Applying about 30 gallons per acre at 60 P.S.I. provides relatively good break-up of the spray into small droplets, and good deposition on the plant where the nozzles are spaced 20 inches apart on the boom and the boom is about 20-22 inches above the tops of the vines.

### **Pumps Most Important**

The most important part of a low gallonage sprayer is the pump. Piston pumps will handle any material that you can put through the sprayer with less wear and consequent longer trouble-free operation. However, they are heavier and more bulky than we like, and more expensive to purchase.

We have used the nylon roller pump. This pump is light, compact, inexpensive, ideal for liquids, and gives reasonably good service with wettable powders which are somewhat abrasive. Gear pumps should be used with liquid only, while diaphragm pumps will handle both liquids and wettable powders without wearing.

### **Booms**

The boom should be non-corrosive, aluminum or stainless steel pipe or tubing being most satisfactory. Galvanized or black iron may be used but are likely to cause trouble because of rust scale formation, and they are too heavy in long lengths. With proper supports, booms up to 30 feet and

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longer may be used. At a forward speed of 5 mph you can spray an acre in about 5½ minutes, and in just over 4 minutes at 5 mph. Of course, you can't average any speed like that because you have to refill, cross ditches and the like, but with the proper set-up you should be able to do an acre every 10 to 15 minutes.

The longer the boom, the more tendency for the ends to whip, and if the bog is as uneven as the State Bog, the sprayer may roll so that one end of the boom would dig into the vines unless a shoe or slide is provided to prevent this, while the up end would be too high for good penetration and even coverage by the spray.

#### Nozzles

As I mentioned before, there are two basic types of nozzle—the fan and the cone type. There are several makes available and all work satisfactorily. Get a kind that will accommodate different types of tips so that you can vary your spray pattern and discharge rate without having to change the whole nozzle, and use tungsten carbide or hardened stainless steel tips and cores for longest wear. Such tips and cores cost more initially but require less frequent replacement and are actually cheaper in the long run. Each nozzle should discharge at a uniform rate. Any wear to the tip will change the delivery rate. This is particularly likely with suspensions such as zineb.

Nozzle capacities are figured with plain water at about 68° F. Adding emulsifiable concentrates will increase the discharge rate above the nozzle rating, while suspended materials, such as zineb, will decrease the discharge rate some compared to water.

Oil drums make a satisfactory spray tank, but don't plan to use them more than one season or you will be continually plagued with rust scales in the strainers and nozzles.

A pressure regulator is necessary between the pump and the boom to maintain constant pressure delivery to the boom. A pressure gauge should be installed

in the line between the pressure regulator and the boom where it can be easily checked by the operator while the machine is in motion.

A quick acting shut-off valve should be placed in the line between the pressure regulator and the boom. Three-way valves are necessary with sectional booms which enable the operator to use sections independently of the others, or all together, or shut off all quickly.

A suction strainer on the end of the suction hose, a line strainer in the line, and nozzle strainers will reduce trouble from clogged nozzles. With low gallonage concentrates you are working with small openings that clog easily, so strain everything if you would save time that you will otherwise waste unplugging nozzles.

Use synthetic rubber or plastic hoses that are resistant to oils. The suction hose should be reinforced with wire and be at least ¾" inches inside diameter.

Cluster nozzles or boomless sprayers will not provide as uniform coverage as a boom and nozzles. This is particularly true when there is wind. Boomless sprayers are not recommended for cranberry bog spraying.

Nozzle manufacturers have tables of nozzle capacities that will enable you to figure roughly how much spray will be applied per acre at different speeds and pressures. However, the sprayer should be calibrated with the actual spray mixture at a fixed speed as follows:

1. Set 2 stakes a measured distance apart. The greater the distance, the more accurate the results.
2. Fill sprayer with spray mixture and run to see that all nozzles are functioning properly. Close

The rate per acre is calculated as follows:

Gals. used X 43560 ft.

Distance between stakes X width of swath equals gals./acre

For Example:  $\frac{5 \text{ gals.} \times 4356}{300 \times 30}$  equals  $\frac{2178}{90}$  equals 24.2 gals./acre

valve to boom.

3. Refill tank completely.

4. Set sprayer in motion back of stake with throttle in marked position and boom valve closed.

5. Open boom valve as tractor passes first stake.

6. Drive in a steady, straight line without changing throttle setting.

7. Shut off boom as sprayer passes second stake.

8. Carefully measure amount of water needed to refill tank.

(SEE TABLE BELOW)

Thus:

Apply the recommended amount of insecticide in each 24 gallons of water.

Some precautions to observe with the concentrate sprayer are:

1. Don't let spray mixture sit in tank and lines during lunch hour or overnight, but spray out tankful before stopping work.
2. Rinse thoroughly at end of each days operations.
3. Clean strainers daily or more often if you would avoid grief from clogged nozzles.
4. All the usual precautions that must be taken when applying poisonous substances, such as proper clothing and respirators.
5. Don't dump or rinse sprayer near streams or ponds.

---

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# The Cranberry Story

## DEVELOPMENT

### PART TWO

By  
**Gilbert T. Beaton**  
Secretary-Treasurer  
Cranberry Institute



Second of a series of 4 articles on the history of the Cranberry industry sponsored by the Cranberry Institute. They will cover: Part III, Fresh Cranberry Marketing; and Part IV, Processed Cranberries.

The first century in the cranberry industry proved that cranberries were to be accepted and used in all parts of this great country. Changes in agricultural practices were very pronounced following World War One. Crop reporting service bulletin No. 229, states: "It will be noticed that the crop is now grown in four

of Wisconsin's nine crop reporting districts." The early historic marshes in the Berlin area have been abandoned. The Central district which includes Wood County, in 1948 represented about 47% of the total Wisconsin acreage. The West Central district including Jackson and Monroe Counties represented a little less than 33% followed by the North Central district 13% and the Northwestern

district 9%. The present acreage in Wisconsin is somewhat over 4,000 acres, showing a 100% increase since 1925.

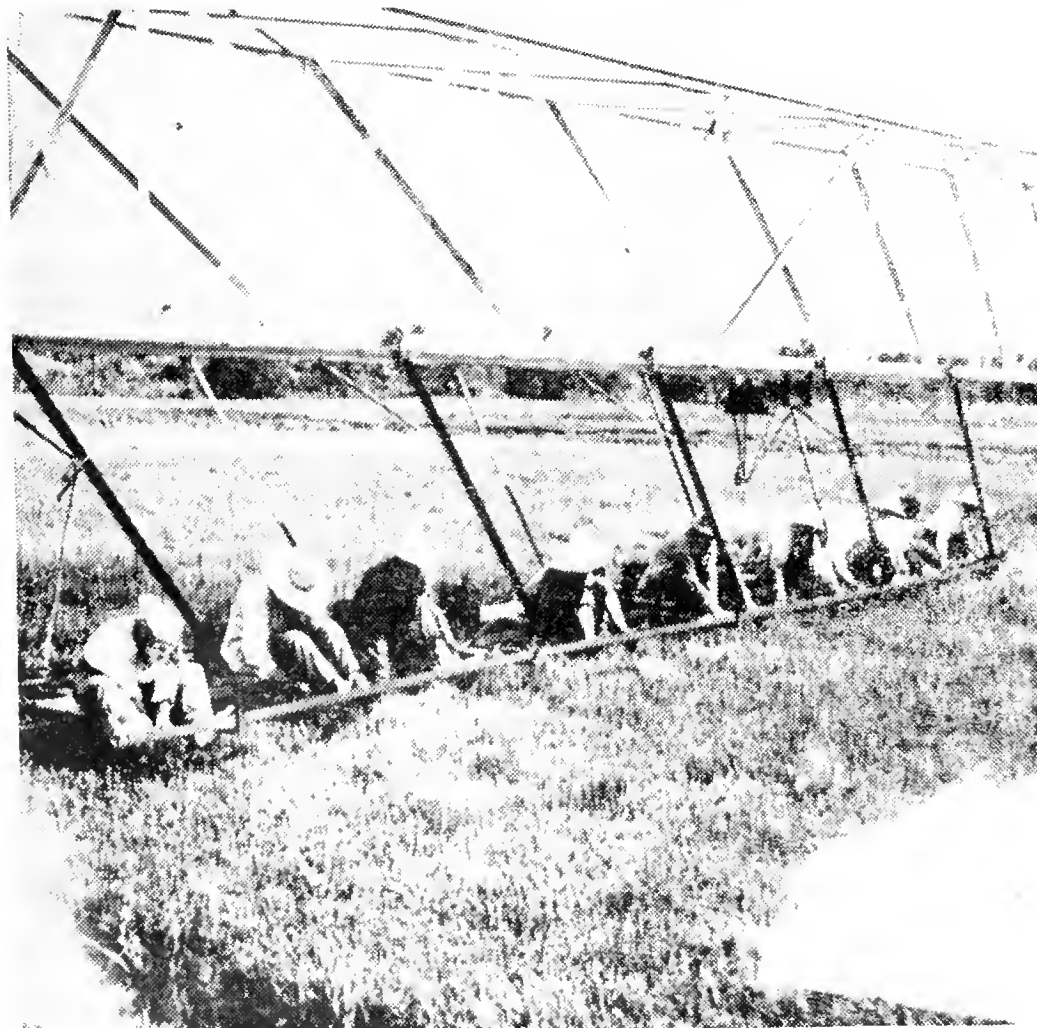
Considerable changes have taken place in the cranberry industry in 25 years. From 1900—1930 the average yield per acre was 19.1 compared to 23.1 barrels per acre in Massachusetts, 13.7 barrels per acre in New Jersey. Washington and Oregon had no official government reporting until the year 1924, so no comparison is made here.

Acreage in Massachusetts increased in 1925 from 13,900 acres to a high of 15,000 in 1949. This acreage has since declined to approximately 13,000 acres, showing an actual decline of 900 acres since 1925. New Jersey has steadily declined from a figure of 10,900 in 1925 to 3,000 acres in 1957. A considerable amount of this acreage was abandoned to be planted with a more profitable crop, cultivated blueberries. Washington and Oregon have increased steadily from 1925, starting out with 570 acres to their present 1,420 acres. The average crop per acre has shown a steady increase, since the early 1930's. The last 10 year average through the year 1957 shows Wisconsin with 69.8 barrels per acre, Washington and Oregon with 64.1 barrels per acre, Massachusetts 39.6 barrels per acre and New Jersey 18.1.

Massachusetts and New Jersey should show the largest increase in barrels per acre for several years due to two main factors. First: mechanical picking has become popular in Massachusetts and New Jersey in the last two or three years. Last year for the first time, approximately 85% of the Massachusetts crop was machined picked and approximately 80% of the New Jersey crop. The second factor has been elimination of marginal bogs, allowing the growers to concentrate on their better producing property.

In 1927, Dr. Henry J. Franklin stated that the false blossom disease in Massachusetts may require the discovery of a new late variety to replace the Howes.

(ADVT.)



In Wisconsin weeds are attacked via the "Brooklyn Bridge" at Cutler Cranberry Company and Du-Bay Cranberry Company.



Airplane dusting was first tried in 1925, and today, dust sprayed from airplanes and helicopters protect cranberry bogs against insects.

This disease, for several years now, in Massachusetts and New Jersey has been fairly well controlled. This was brought about by Dr. Franklin's research, proving the carrier of the false blossom disease was the blunt nose leaf hopper.

In 1931, Dr. E. A. Richmond who was employed by the Crop Protection Institute in cooperation with the East Wareham Experimental Station, conducted tests using a mixture of dust to control insect infestation. Similar dusting experiments were carried on as early as 1921 in Massachusetts with horse-drawn vehicles. However, at that time it did not prove successful. The use of a dust mixture, rather than a spray insecticide control enabled the Massachusetts and New Jersey growers to control the blunt nose leaf hopper carrying the disease, because they were able to dust in full bloom, when all of the leaf hoppers had hatched.

In 1935 airplane dusting was tested extensively with over 100

acres of cranberry bogs being treated. Today during the growing season, helicopters and planes are a familiar sight, dusting, spraying and fertilizing bogs in most areas.

Also in 1931, Dr. William Sawyer was employed, temporarily, on funds provided by the Cape Cod Cranberry Growers Association, to find ways and means of controlling cranberry bog weeds, using chemical weed killers. (Kerosene and distillate were used on Washington bogs as early as 1926.) He carried on this experimental work until 1938 when it was taken over by Dr. Chester E. Cross, now in charge of the East Wareham Experimental Station. With more acreage being planted in Wisconsin and the West Coast, increased production per acre in New Jersey and Massachusetts, it requires no foresight to predict a 1,500,000 barrel crop in the near future.

The changes that the cranberry industry has undergone in recent years are making it no longer feasible to farm much of the

marginal land which in the past, even at its best, was unable to supply the grower with the bare necessities of life.

The cranberry grower and his marketing agent, because of increased competition in all lines of food, should give more thorough consideration to consumer demand, resulting in a more adequate supply of good quality cranberry products.

(ADVT.)

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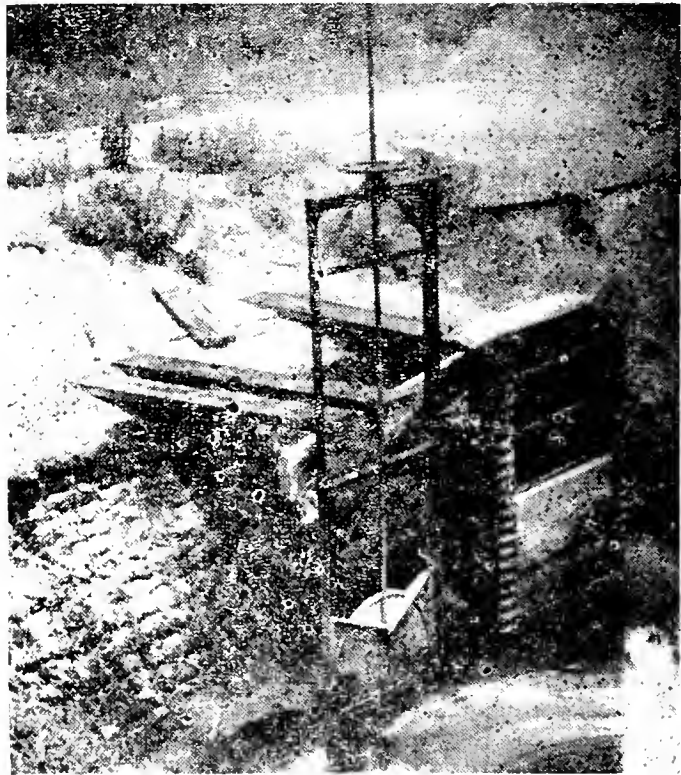
A Cape Cod Harvest Scene of a By-Gone Day, No Mechanization.

## ***Wareham, England Couple To Visit Cranberry Highway***

The Town of Wareham, Massachusetts, and the Cranberry Highway Association intend to roll out a cranberry-red carpet in welcome of a Wareham, England couple in May. The couple is Mr. and Mrs. D. R. Gilmore.

The town clerk of Wareham, England has sent a letter to Wareham, Massachusetts selectmen, saying, "Naturally we shall be very interested to hear from them an account of your town and hope you find it possible to give them an opportunity of seeing Wareham to the best advantage."

The two chambers of commerce in Wareham, Wareham and Onset, a village of Wareham, have been notified and the Cranberry Highway Association as well. Special events are planned in Wareham and Onset in honor of the English couple. They will be shown the highway from Middleboro to Bourne and along the Cape Cod Canal via route 6-A to Orleans. They will be guests of Cranberry Highway motels and restaurants and will be taken on special Highway tours.



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## WINTER LINGERED O'ER LONG

This is April and spring really seems to have arrived. Spring to a native Cape Codder doesn't arrive until the herring (alewives) start running. They are now running up the streams and rivers over the Southeastern Massachusetts area.

We hope you will enjoy this April issue. We think there is considerable of interest. There is the story concerning the Allentown Crusade to get bigger cranberry sauce helpings in restaurants. Dr. F. B. Chandler has another of his interesting articles on "Cranberries in North America."

There is also the latest news on the campaign in Massachusetts to rename a highway from Middleboro, to Orleans on the Cape "The Cranberry Highway." (Miss Cranberry Highway adorns our cover.) This is route 6-A, probably the most quaint and certainly one of the most historic roads on the Cape. Highway passes through Wareham. There is the comparatively new Mid-Cape Highway which has taken much of the traffic from 6-A on the Cape proper.

The Cranberry Highway Association which has been formed to promote tourism along the "Cranberry Highway" believes the very name will attract tourists to this highway. There are stores where cranberry items may be bought, restaurants where cranberries may be had with meals.

All of this cranberry atmosphere can do the cranberry industry considerable good. Maybe some of these tourists have never heard of cranberries before or eaten any. It would seem they would want to buy a can of sauce, or a pound of fresh when in season.

There is even some talk of painting the Cranberry Highway "cranberry red," but we would question this coming to pass.

Finally we would point out there is another of the series of articles prepared for the Cranberry Institute by Gilbert T. Beaton. We are sure you will want to read this. It will remind you that the Institute is by no means defunct, but is ready to be of use to the industry.

CLARENCE J. HALL

Editor and Publisher

EDITH S. HALL—Associate Editor

Wareham, Massachusetts

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P. E. MARUCCI

New Jersey Cranberry and Blueberry Station  
Pemberton, New Jersey

---

We don't know what kind of a marketing year we are going to have, but there is a U. S. population increase of nearly 3,000,000. Some of these may turn out to be "Cranberry Eaters."

---

Of the late Walter Piper, Massachusetts Dept. of Agriculture who contributed much to CRANBERRIES, it was recently written in "Food Marketing in New England," that "Walter Piper always saw the sun regardless of the weather."



**WASHINGTON FROST  
SEASON STARTS**

As of mid-April Ralph E. Tidrick, County Extension Agent of Pacific County Washington, urged growers that the past week of warm weather had started berries out of dormancy. Many buds were on the verge of breaking, he said. New uprights were starting from runners. Frost, he concluded would definitely delay their development.

He recommended growers begin sprinkling.



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**FIRST MASS FROST**

First general cranberry frost warning was sent out evening of May 21 from the Cranberry Experiment Station. Forecast was for 16. Lowest bog recorded was 19, with a number in the low 20's.

It was the opinion at State Bog that little or no damage was done. A slight breeze sprung up toward morning and there was also a little overcast.

A second warning was sent out following night for 17. Lows reported were 16, 17, 18 and 19. It was feared this may have caused some damage to colder bogs which could not be flooded.

**Fresh From The Fields  
OREGON**

(CONTINUED FROM PAGE 6)

gaged in winter work consisting of digging drainage ditches, constructing new irrigation systems and establishing new bogs.

Mild Winter

**READ**

**CRANBERRIES**

This is partially possible due to winter this year. With no frost in March and predictions of none to follow in April, chances for a big crop this year is in evidence perhaps.

**Irrigation**

Under a new Agricultural Conservation Practice some of the growers are reorganizing existing irrigation systems on cranberry bogs to conserve water, by the installation of permanently located mainlines for sprinkler irrigation.

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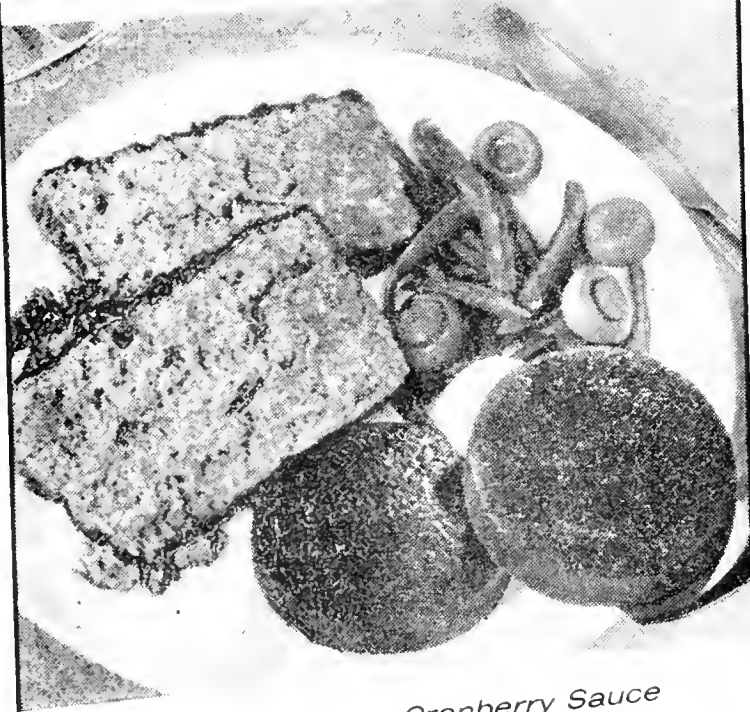
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MAY, and pretty Joyce Westgate, 19, Massachusetts savors a bouquet of Mayflowers. (See page 6) (Cranberries Photo)



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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



Growers who received the questionnaire will recall that they were asked to give a frank appraisal of the present system. We have received an excellent return and the information was most helpful to the frost committee. Results have been tabulated and the following summary prepared:

Many inquiries have come to our attention regarding the winter killing and leaf drop damage oc-

## Fungicides on "Soft" Bogs

Temperatures in April averaged 1.7° per day above normal — the first month since last November when temperatures were above normal. Rainfall was slightly above average with 4.09 inches recorded at our station compared to a mean of 3.85 inches. Incidentally, with temperatures and rainfall above normal, our keeping quality forecast was definitely not strengthened. Weather factors to date (May 7) strongly indicate the need for fungicides on those bogs that usually produce weak fruit if our marketing agencies are to have an adequate supply of sound fruit this fall. The month of May will have to be cool and dry if the Final Keeping Quality Forecast is to show any marked improvement.

## More on Frost Service List

The first general frost warning was released Wednesday, April 22, and was followed by another the next evening. Since that time, no general warnings were issued but we have been in touch with the inland bogs on several nights as these bogs tend to advance faster and drop to lower temperatures in the spring. The lowest temperature reported during this period was 16° and occurred at Green, R.I., on April 22. The frost warning service has functioned smoothly and we are pleased to report that there are 197 subscribers to the telephone relay system, which is a definite increase over last year.

## Frost Questionnaire

Reference has been made in this column to a frost questionnaire that was to be sent to those who have subscribed to the telephone service sponsored by the Cape Cod Cranberry Growers Association.

## SUMMARY OF THE 1959 FROST WARNING QUESTIONNAIRE

Number receiving the Questionnaires	210
Number of growers returning the Questionnaire	143
Percent returned	68%

	Percentage	
	Yes	No
1. Does the frost pad introduced last year for taking down the message serve a useful purpose? .....	92	8
2. Is the term <b>Local Balance</b> as used in the warnings understood? .....	92	8
3. Do you know how your bog temperatures compare with the warnings? .....	96	4
4. Do the conditional warnings, such as "If winds die out" or "If it clears" convey helpful information? .....	99	1
5. Do you make use of the radio warnings which supplement the telephone relay system? .....	71	29
6. Do you think the Cranberry Station is taking too many chances on near or border line frost nights by not releasing a warning? .....	19	81
7. Do you understand that these warnings were developed for the cooler than average bogs—not the coldest bog? .....	96	4
8. Do you check weather conditions and your bog temperature on those nights when no warnings are released? .....	77	23
9. Have you been seriously hurt by frost in the last few seasons on a night when no frost warning was released from the Station? .....	7	93
10. Where are your thermometers located? Number indicating on bog 51, on upland 43, other positions 5		
11. Do you check the accuracy of your thermometers each season? .....	74	26
12. What radio and TV weather programs do you depend on for your information? Number preferring WBZ - 50, Don Kent - 38, WHDH - 23, WEEI - 19, WBSM - 6, WOGB - 5, Miscellaneous 4.		
13. Would daily radio weather forecasts dealing primarily with expected minimum bog temperatures and beamed to cranberry growers during the frost be a suitable alternative to our present telephone relay system? .....	36	64
14. Any suggestions for improving the frost warning service would be greatly appreciated. A total of 22 made observations or suggestions as follows: 12 expressed their general satisfaction with present system. 7 wanted earlier report in afternoon and evening. 1 wanted information on wind velocities. 1 wanted information on warning trends. 1 wanted warnings on borderline frost nights.		



curing on Massachusetts bogs this spring. This type of damage is difficult to appraise but, after numerous bog visits made by various members of our staff, there is general agreement that the crop may have been reduced by as much as 10 percent. Certainly, there is more of this damage, particularly winter killing, than we first expected.

In late April, the writer was asked to arrange and appear on a cranberry TV show on Channel 5, Boston, featuring the production of Massachusetts' number one fruit. A miniature bog built by Bob Rich, of the National Cranberry Association was used on the show to illustrate certain production practices. We discussed the history of our industry, showed kodachrome slides of various bog operations and a display of old scoops used over 50 years ago.

#### Check List for May to Mid-June

The following reminders are called to the growers' attention:

1. Early spring pests will soon be with us. The trusty insect net is still the best method of locating weevils, false armyworms, blossom worms, spanworms, leafhoppers and fire worms. Sparganothis fruit worms, on the other hand, can best be detected by carefully examining the webbed tips of loosestrife. If these pests are controlled in May and June, particularly those that have a new or second brood such as weevils and fireworms, they seldom create a problem later in the season.

2. May is a good month to treat brush, poison ivy and brambles on the uplands, using one of the brush killers. This practice will prevent the above weeds from spreading onto the bog. The low volatile esters of brush killers are erasonably safe for use on shores and uplands of greatly diluted — one part in 250 part of water. Brush killers should not be used with oil on dikes or shores next to the bog at this time of year because of damage to the turf.

3. The combination of fuel oil and kerosene should not be used on "late water" bogs. In fact, this combination should not be used

after mid-May on "early water" bogs because of serious damage to the vine growth.

4. Those using Stoddard Solvent after "late water" should complete such work within 5 days after the flood has been withdrawn and within 8 days after kerosene is to be used.

5. Bogs that suffered winter

killing damage would benefit from a little extra fertilizer at this time of year.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of May 1959 - Vol. 24 No. 1

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FRESH FROM THE FIELDS

Compiled by C. J. H.

## MASSACHUSETTS

### April Wetter, Warmer

April was a slightly wetter and slightly warmer month than normal. In fact, it was the first month since November that was not colder than average.

Precipitation as recorded at State Bog was 4.09 inches, normal 3.85. April mean temperature was 45 degrees, approximately two degrees above normal. Month started dry and colder than normal, then became dry and ended colder and with five final days of rain. Temperatures reached 70 on four days and 75 on the 17th.

### Sunshine Factor Down

The sunshine factor was 59 percent of a normal of about 66. This would not be in favor of the crop but would have little effect, April not being very important in this in Massachusetts.

### Adverse

The more than warmer average temperature and the more than normal precipitation tend not to make the coming crop of better quality. This combination should be added to the lack of sunshine as adverse to prospects.

### More Winterkill,

### More Oxygen Deficiency

More winterkill than anticipated is showing up in larger areas and on more bogs than anticipated earlier, according to Dr. C. E. Cross. There is also more leaf-drop than normal, indicating that bogs which were flowed and escaped winterkill suffered from oxygen deficiency.

### May

There was heavy rain on the first day of May, vines were a bit backward as the month began.

An "inland" frost warning went out on May 4th, but although temperatures were low the following night none was sent out.

## WASHINGTON

### "Mixed Weather"

The months of March and April to the 22nd of the latter were a period of mixed weather, which might be termed about average. Rainfall for March was 8.87 inches with 2.22 of this falling in a 24-hour period ending on the 31st. April to above date was normal, with rainy periods and periods of rather low humidity and dry conditions.

Five April Frost Sprinkler Nights

Low for March was 26 on the first, 27 degrees at Cranberry Experiment Station April 2 and 18. Maximums for March were 65 on the 16th 69 on the 7th, 76 and 78 on April 8 and 9. Minimum relative humidity was 12 percent on the 9th and 22 on the 8th. There were several periods when the day-time temperatures would be relatively high and the nights clear and cold; mixed in between periods of rain. Sprinkler systems were going for frost protection on April 2, 6, 18, 19 and 20.

### Bogs Showing Growth

Bogs in Long Beach and Grayland areas were showing some growth by April 22. One-quarter to one-half inches of runner growth

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were found in some areas. Flower buds were just coming into white stage.

#### Weeds Vigorous

Weeds are growing vigorously and herbicides were being applied.

#### Good Crop Prospects at Long Beach

Bogs of the Long Beach area have a very good set of flower buds. Prospects appear good for a good crop this fall.

#### More Sprinklers, More Acres

A number of growers have been installing sprinkler systems. Planting of new areas is still taking place.

#### Dr. Clarke Again Grower

Dr. J. H. Clarke has purchased the Carl Bernhardt bog and once again becomes an active grower. He now has in addition to cranberries, a nursery of rhododendrons, azaleas, holly and several other miscellaneous plants. He is chairman of the Western Washington Horticultural Board and also chairman of the USDA Small Fruits and Nuts Advisory Committee.

### Our Cover

Miss Westgate is the daughter of Edward Westgate of High Street, Wareham, Massachusetts. Her father is a foreman for the J. J. Beaton Company, Wareham. She is employed at the office of Edwin K. Greer Lumber Company, Wareham.

The mayflower is any of various plants that flower in May or early spring. It is the trailing arbutus in the United States as well as Mayflower. In England it is known as the hawthorne, cowslip and marsh marigold.

It is the official Massachusetts State flower, and of course the name of the ship in which the Pilgrims crossed the Atlantic to land in the New World at Provincetown and Plymouth, Massachusetts.

### NEW JERSEY

#### April Dry, Warm

April was a dry, warm month with a total rainfall of only 2.29 inches, or 1.12 inches below nor-

mal. The average temperature for the month was 53.9° F., or 2° above normal. There were only three days when the maximum temperature was 50° or less and on these days they were 50°, 50° and 48°. There were only three nights when the upland temperature dropped to freezing or below, and these temperatures were 30°, 31° and 32°.

#### Expect Winter Injury

There has been no known serious frost injury to cranberries. The first report on winter injury has come in to the laboratory. There will probably be more of this, since the extremely cold weather in December caught many growers unprepared to flood their bogs promptly.

#### Advanced Season

The mild April weather has ad-  
(Continued on Page 13)

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# Amino Triazole For Cranberry Weed Control In Wisconsin

by

Dr. Malcolm N. Dana  
University of Wisconsin

The control of weeds in cranberry bogs is one of the most serious cultural problems confronting the Wisconsin grower. The weeds not only compete with the cranberry vines for moisture, nutrients and sunlight, but also interfere with proper pollination, impede harvesting operations, and, of course, are unsightly. Organic herbicides have provided research people with new tools to aid in the development of better programs for weed control.

The most promising herbicide for the control of a wide range of weed species common to cranberry bogs is amitrol (3-amino-1,

2, 4-triazole). It is commercially available as a wettable powder containing 50% active ingredient. One company is now producing a liquid formulation for experimental use.

### A Note of Warning

Amitrol has not received label clearance for use on cranberry vines during the growing season. Growers may use the material only for post-harvest applications.

The evaluation of amitrol for use in Wisconsin bogs has been in progress for four years. During this time a considerable amount of information has been accumulated with regard to the use of this

material. Excellent results from the use of this chemical have been reported by Demoranville and Cross (2, 3, 4) in Massachusetts and Aldrich (1) in New Jersey.

Experimental applications were made with a bicycle type plot sprayer calibrated to deliver 40 gallons per acre of spray solution. Fan nozzles were adjusted to provide a uniform distribution of spray at the top of the vines. Nozzle pressure was maintained at approximately 30 pounds per sq. inch. All rates of chemical application were calculated in pounds per acre of actual amitrol. To obtain the amount of 50% material needed per acre one must merely multiply the given rate by two (rate per acre of actual amitrol x 2 equals rate per acre of 50% material).

A list of weed species successfully controlled, together with the rate and date of application, is given in Table I. This list does not necessarily include all weeds that can be controlled with amitrol, but does include those for which successful control has been demonstrated in Wisconsin.

A number of weeds have shown considerable tolerance to amitrol applied at rates up to 6 lb/A. Among these are St. Johnswort, hardhack, feather fern, royal fern, sensitive fern, brown bush, bog bean, anemone, tall wiregrass, creeping sedge, three square grass, rattlesnake grass, big stovepipe, wide leaf grass, loosestrife, and round rush.

Amitrol sprays applied during the season of active cranberry vine growth have caused the development of pink foliage on the new growth of the cranberries. High rates of amitrol have caused the development of intense pink color which has persisted for several weeks while low rates of application were followed by slight color development which persisted for one to two weeks. Applications made on producing vines after mid-July have not resulted in foliage color changes.

An experiment designed to evaluate the effects of amitrol on the growth and fruiting of the cranberry was conducted in 1957.

Table 1  
Rates and dates of amitrol application on which successful control of the listed weed species has been attained.

Weed	Rate (lb/A)	Time of application
Bushy horsetail	1	Mid-June
Star grass	1	Early June
Poison Ivy	2-4	"
Alsike Clover	3-10	Mid-May
Aster (one species)	1	Early June
Goldenrod	1	Early June
Short Wire Grass	3	"
Ragweed	1	Late May
Sticktites	1	"
Lady's Thumb Smartweed	1	"
Arrowhead	1	Late June
Sickle Grass	3	"
Slender stovepipe	1	Mid-June

Table 2

Yield, fruit size, fruit set, upright growth and fruit bud set of cranberry vines treated with 4 lb/A of amitrol at five dates compared with untreated plots.

Time of treatment		Yield		Cup count		Fruit set		Growth		Fruit Buds	
Date	Stage of growth	ck. trt.	bb1/A	ck. trt.	bb1/A	ck. trt.	ck. trt.	mm	mm	%	%
May 6	White bud	99	104	75	73	27	22	73	79	40	48
May 26	Buds out 1/4"	82	75	72	72	21	24	77	71	37	42
June 19	Pink hook	81	67	73	74	26	19	75	78	44	42
July 11	Late bloom	82	77	72	71	25	26	75	70	34	37
Aug. 6	Fruit Buds forming.	84	89	71	71	29	25	78	80	42	47



Applications were made at five stages of growth at rates of 0, 1, 2, and 4 lb/A of actual amitrol. Measurements of yield, cup counts, fruit set percentages, growth, and fruit bud formation were obtained and are presented in Table 2. Because the low rates of application, 1 and 2 lb/A, produced no measurable effect on cranberry growth and development, these data were omitted from Table 2.

The only important difference found for the 4 lb/A rate versus the untreated, resulted when the herbicide was applied at the pink hook stage of growth (June 19). The data showed a reduction in fruit set percentage, 26% vs. 19%, and a corresponding decrease in yield, 81 bbls. vs. 67 bbls. for the 4 lb/A and control plots, respectively. Upright growth, fruit size, and fruit bud set were not affected by amitrol treatments. These data agreed closely with those of Demoranville and Cross (2, 3, 4).

This experiment and other studies made over the past four years showed that rates up to and including 4 lbs/A of amitrol could be applied at any stage of growth with little danger of serious injury to the cranberry vines. However, 4 lb/A was near the maximum amount that may safely be used during the critical period of blossoming and fruit set. Rates of application higher than 4 lb/A have been made in early spring and late summer with no injury to cranberry vines.

In the course of the work with amitrol, a number of limitations on its use have been observed.

a) The application of amitrol, when followed within 24 hours by rainfall, has resulted in the inferior degree of weed control. In general, it may be said that at least 24 hours between application and rainfall is necessary for any practical degree of effect from any given rate of application.

b) Application of any given rate of amitrol to vigorously growing, young vines has resulted in a greater degree of injury than on less vigorous, bearing vines.

e) Amitrol has little herbicidal

effect when sprayed on the soil. The spray must be applied to the foliage of the plant in order to attain maximum effectiveness.

d) In general, actively growing weeds are more sensitive to amitrol than are dormant or mature weeds. Therefore, it may be assumed that for many species higher rates of amitrol would be necessary in the fall than in May or June to obtain the same degree of control.

e) In Wisconsin, early and severe fall frosts and mechanical harvesters reduce the likelihood of effective post-harvest amitrol applications because they destroy much of the weed foliage. It seems logical to assume that pre-bloom treatments offer the most promise for large scale use of this herbicide in Wisconsin cranberry bogs.

The experimental work conducted on the use of amitrol in Wisconsin cranberry bogs has shown that a great potential exists for its use as an herbicide for the control of several species of weeds. Undoubtedly, other weeds will be added to the list as more knowledge concerning its use is gained from continued experimentation. As was previously stated, amitrol is an important addition to the list of herbicides for complete weed control in cranberry bogs.

#### Warning

Growers are warned that the above article contains only research results, which are not to be taken as a recommendation for using amino triazole. Until label clearance from Federal Control Agencies is obtained, this material may not be used on producing vines before harvest.

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# The Cranberry Story

## FRESH CRANBERRY MARKETING

### PART THREE

By  
**Gilbert T. Beaton**  
**Secretary-Treasurer**  
**Cranberry Institute**



Third in a series of 4 articles on the history of the cranberry industry sponsored by the Cranberry Institute. Coming - Part IV, Processed Cranberries

The marketing of fresh cranberries was recorded as early as 1650 with the report from an early ship log, showing twenty-two casks of cranberries being shipped back to England with a load of ship's masts and spars. Upon their arrival in England, these cranberries were repacked in bottles to be sold. From bulletin No. 1109, published by the United States Department of Agriculture, comes this statement: "The noteworthy achievements of the cranberry growers are the outcome of evolutionary practices based upon years of experience in selling through growers' cooperative agencies." The result of organized efforts in this industry are the more remarkable because of the unusual difficulties which must be overcome in the successful marketing of cranberries.

The cranberry growers of the United States are widely separated; the growing areas, Massachusetts, New Jersey, Wisconsin, Washington and Oregon. Cooperative marketing involves the coordination of the growers in these widely separated localities into one central selling location.

Marketing risks have been distributed equally among all members of the Association by means of pooling systems. Pools are, in effect, a form of marketing insurance.

In 1895 a number of the larger growers of New Jersey and Massachusetts organized and incorporated the Growers' Cranberry

Company. This company employed the most expert cranberry salesmen available at that time and opened an office in Philadelphia. The Cape Cod Cranberry Sales Company, composed of Massachusetts growers, was also organized about 1895 along the same general lines as the Growers' Cranberry Company. The Cape Cod growers were not as fortunate in their choice of salesmen as were the Growers' Cranberry Company. As a consequence, their company was less successful. At the time these two companies were operating, the greater portion of the crop was sold by growers to cash buyers who traveled through the cranberry districts, conducting separate negotiations with each grower. In 1902 there were ten important car-lot shippers and the severe competition among them often resulted in cutthroat practices.

It was the disastrous year of 1905 which actually brought about the formation of a central cooperative selling association, the National Fruit Exchange. Alliances among dealers were formed in that year for the purpose of attacking other dealers. Competition of a vicious sort was resorted to, some buyers offering the growers \$5.50 a barrel and quoting the trade \$5.00. On top of the demoralized state of the trade came one of the largest crops that had been produced up to that time. The public was unable to consume such a quantity.

Prices fell as low as 70c per barrel and carloads of berries were never shipped because they would not bring enough to pay freight charges. Notwithstanding these adverse conditions, the cooperation that existed among the members of the Growers' Cranberry Company and the established reputation of their brands enabled them to sell their 1906 crop at fair prices. One member of the company received an average of \$6.51 per barrel net for his entire crop, over 8,000 barrels.

A new epoch in the history of cooperative marketing among cranberry growers began with organization and operation of the Wisconsin Cranberry Sales Company in 1906. Over 90% of the growers in the state of Wisconsin joined the company. This organization proved so successful that the selling agent was asked to come East and explain to the growers of New Jersey and Massachusetts the plan of organization of the Wisconsin company. As a result, the New England Cranberry Sales Company and the New Jersey Cranberry Sales Company were formed in 1907. Approximately 35% of the growers in Massachusetts and 30% of the growers in New Jersey joined the new association.

The three state companies then formed a central selling organization known as the National Fruit Exchange. In 1911, the Growers' Cranberry Company with the National Fruit Exchange formed the American Cranberry Exchange. In the early 1920's, this company controlled about 75% of the total crop in Wisconsin and 65% in both Massachusetts and New Jersey.

The first shipping containers used commercially were the cranberry barrels, starting with the Civil War and staying with us through World War I. The U. S. standard cranberry barrel, containing approximately one hundred pounds net, is the theoretical measure for cranberries and the United States Department of Agriculture still uses the barrel as a measure of production in re-

AVT.

porting annual crop figures. This was followed by the quarter-barrel box introduced in 1926. By 1931 the quarter-barrel box was the standard shipping container and continued through World War II. The dimensions are 9½" x 10½" x 15". Each box holds approximately twenty-five pounds net.

Although cranberries had been retailed in transparent bags and window boxes before World War II, it was not until 1948 that a vigorous demand developed for pre-packaged cranberries. This was brought about by the development of large supermarkets and self-service stores. By 1949 and 1950, approximately 75% of the fresh cranberries were pre-packaged. Today it is approximately 100% in favor of pre-packaging.

The consuming public looked upon the cranberry as a luxury rather than a prime necessity and generally considered it a holiday fruit. Thanksgiving and Christmas bring the turkey with its cranberry sauce to the minds of the American people, but Thanksgiving and Christmas demands alone

were not sufficient to support the industry.

A national advertising fund sufficient to bring fresh cranberries forcefully to the attention of the consuming public has been created by means of an assessment of growers on the number of barrels each produces. By cooperation, the cranberry growers are in a position to employ specialized businessmen capable of advising them regarding supply and demand forces and their probable effect on price and market conditions. Thus growers put themselves in a position to gauge the factors which influence the sale of their product and are better prepared to take advantage of market conditions as they find them. Individually the growers are unable to do this.

Monthly availability expressed as percentages of total annual supply shows that 16% of the crop is marketed in September, 22% in October, 40% in November, 20% in December, an 1% in January, 1% in February, ½ of 1% in March. Marketing of

fresh cranberries is to be extended, as cranberries have come into more common use with all kinds of meats, for desserts and other purposes and not merely associated with turkey or chicken at Thanksgiving and Christmas.

Present day distributors of Fresh Cranberries include the following: Distributors and Brand:

National Cranberry Association, Ocean Spray; Beaton's Distributing Agency, Beaton's; Decas Cranberry Company, Protection; Peter LaSage, Pals; Eric Hukari, Jumbo; Growers' Cranberry Company, Grocran Co.; Indian Trail, Indian Trail; Habelman Bros., Habelman; Eagle River, Eagle River; Davis Cranberry Company, Blue Diamond; Claire Habelman; Hotz; LaRocque; Union Cranberry Company; Weatherby Cranberry Company.

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**CRANBERRIES MAGAZINE**



Cellophane window boxes for fresh cranberries are appealing to look at and convenient to handle. Above is an assortment of packages currently being used.

AVT.



# DITHANE Z-78

(ZINEB)

## PROTECTS CRANBERRIES FROM FRUIT ROT

Normal dosage is three pounds of DITHANE Z-78 per 100 gallons, using about 300 gallons per acre for good coverage. For top-quality fruit, two applications per season are suggested. See your Rohm & Haas fieldman for more information . . . see your dealer for DITHANE Z-78.



*Chemicals for Agriculture*

**ROHM & HAAS  
COMPANY**

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

*DITHANE is a trademark, Reg. U. S. Pat. Off. and in principal foreign countries.*

# DITHANE Z-78

## FRESH FROM FIELDS

(Continued from Page 6)

vanced the season. The heavy bloom and good setting of berries in the first week of May indicates a bumper crop of blueberries. Dry weather practically eliminated gray mold in the clusters of flowers. Fields not sprayed for gray mold will probably produce as well as those sprayed. Mummy berry has hit a few plantations hard. On some it has done a useful amount of thinning of the crop. The use of calcium cyanamid on the ground to kill mummy cups was very successful, when properly timed. Clear, warm weather has been favoring pollination of the blossoms. Some good rains are needed at the present time (May 7) to prevent the development of a drought.

## WISCONSIN

### April Near Normal

April averaged near normal in precipitation and temperature for the state as a whole. Precipitation was deficient in the north and west central areas, however. The snow cover disappeared the first of the month in all areas and the ice melted on the beds the second week of April. Temperatures were unseasonably cool the first half of the month and above normal precipitation and near normal to above normal temperatures for the cranberry areas.

### Winter Heaving

Winter floods were removed the third week of the month or about one week later than the normal date of April 15th and two weeks later than last year. Considerable heaving was noted and deep frost was still reported in some areas at the end of the month. Growers were expected to do considerable re-flowing to level beds and to pull out the deep frost. Most marshes waited until they had eight to ten inches of frost out of the beds before pulling the floods, in order to prevent possible further heaving. The heavy snow cover in the south melted slowly and the ground absorbed most of the runoff, resulting in little flood water. Reservoir supplies were re-

ported in good shape in all areas.

### Vines In Good Condition

Growers were busy the last week of the month fertilizing, pruning and combing. Preliminary inspections showed the vines to have come through the winter in

very good condition.

The 1959 Wis. Cranberry Frost Warning Service begins operations on May 1. James Georg returned to Madison for his sixth consecutive season. At the end of

(Continued on Page 19)

## HORTICULTURAL SALES

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"Bob Mossman" Prop.

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CRANBERRY GROWERS SUPPLIES

WEED AND BRUSH KILLERS

WEEDAZOL (50% AMINO TRIAZOLE)

Insecticides — Fungicides — Herbicides

Aerial Spraying and Dusting

## HELICOPTER PEST CONTROL



**Wiggins Airways**  
NORWOOD, MASS.

DUSTING and SPRAYING

RAY MORSE, Agent

TEL. CYPRESS 5-1553

# Cranberries In North America

By F. B. Chandler

Research Professor, Cranberry Station

East Wareham, Mass.

Production and yield of cranberries may be considered several ways, such as the production for the state or section, average yield per acre, trends per acre over a period of years, maximum yield per acre, or the percentage of the United States crop produced by different sections. Any one of these alone gives only a partial picture.

The five-year average production of cranberries for the United States has risen from 370,600 barrels in 1900-1904 to 1,043,100 for the four years 1955-1958. This is an increase of nearly three times. During the same period, the Massachusetts production has increased from 240,200 barrels to 542,800 barrels, or over twice. The New Jersey production has been quite uniform, showing a slight decline from 100,200 to 82,300 barrels. The Wisconsin production has increased over eleven times, from 28,600 to 319,800 barrels. Data for Washington and Oregon is only available for 35 years (other sections 59 years) and that section has increased the cranberry crop three times, from 23,500 to 78,700 barrels. The production data is illustrated in a graph.

When the average yield per acre is considered, Massachusetts has doubled since the turn of the century, New Jersey has nearly tripled, Wisconsin has more than tripled, and on the West Coast the yield per acre has nearly doubled. These statements do not give a true picture of the yield per acre because sections did not all start at the same yield. New Jersey started with about 11 barrels per acre, Massachusetts 20 barrels per acre, and Wisconsin 22 barrels per acre. However, until after 1934 the Wisconsin yield per acre was below that of Massachusetts. Wisconsin's average yield per acre from 1930 to 1934 was 23.1 barrels, and 25 years later was

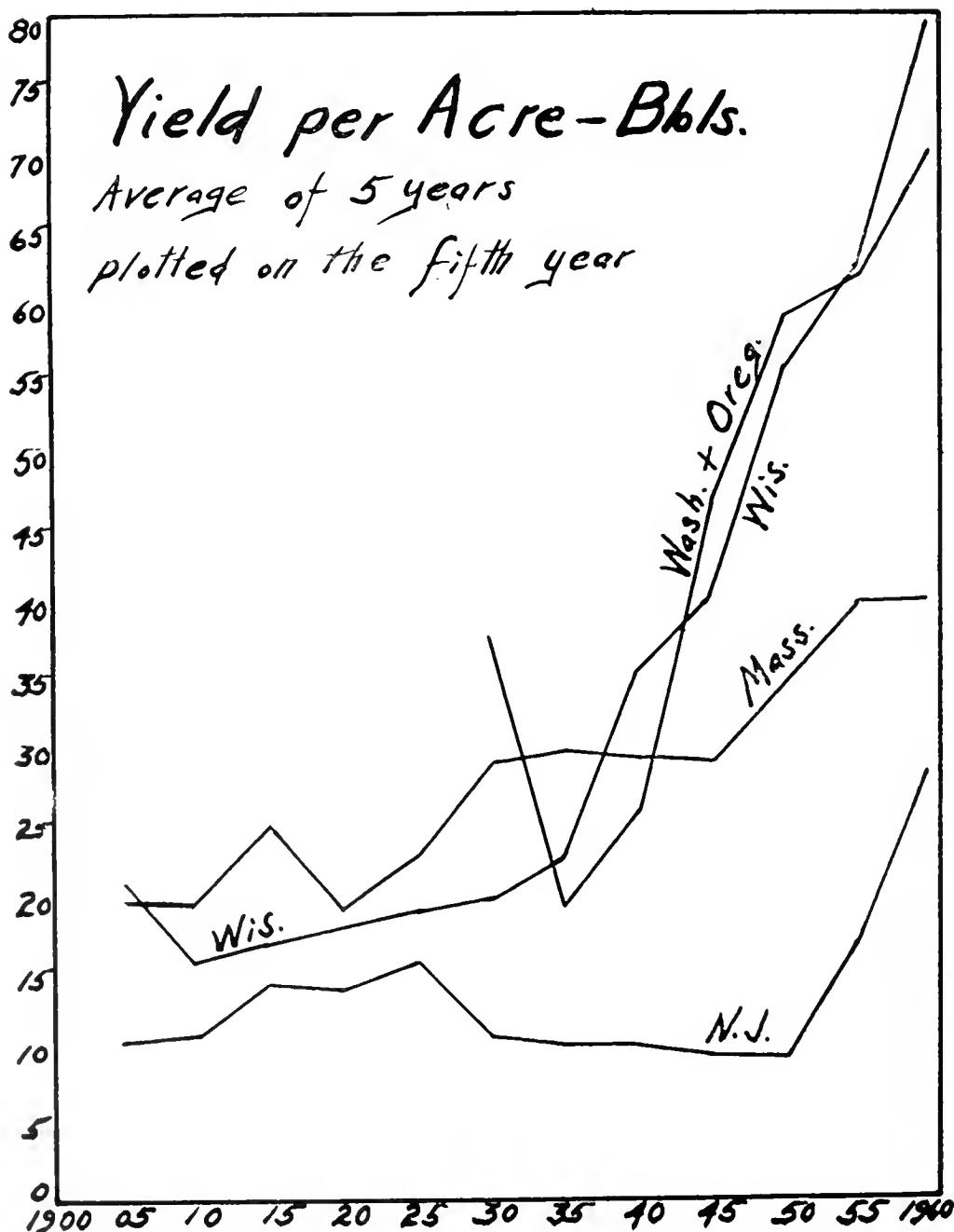
79.4 barrels. During the same time, Massachusetts' yield per acre has gone from 30.1 to 41.4 barrels. The yield per acre started high on the West Coast, dropped below 20, and has since risen to over 70 barrels (see graph).

The maximum yield of cranberries per acre would be another measure of production, but unfortunately little information is valuable. In Oregon, over 300 barrels per acre has been reported by word of mouth and similar reports have come from Wisconsin. However, Anderson published in *Cranberries*, June 1951, a list of 25 bogs of known consistent yield

capacities. This list contained one bog at 300 barrels, one at 275 barrels, four at 200 barrels, two at 180 barrels, one at 175 barrels, and two at 150 barrels (the lowest was 10 barrels.) The high for Massachusetts and New Jersey probably is about 225 barrels.

Another method to study production is to determine the percentage of the United States crop produced by different sections. Massachusetts has been producing 50 to 60 percent most of the time in this century. New Jersey started with about 40 percent and has dropped to about 10 percent. Wisconsin started with a little over 5 percent and is now producing over 30 percent of the United States crop. The West Coast has also shown quite an increase and now produces over 9 percent. (see graph).

The reader who has gone



through the preceding four paragraphs realizes that the different methods of measuring the cranberry crop do not all give the same impression. Production alone shows Massachusetts well above the others, New Jersey low but

quite uniform, and the western section very low but has increased considerably. The production lines on the graph show much more rise than similar curves for acreage (not illustrated). Probably the most misleading is yield

per acre. This might be called the yield the grower is paid for. In the east, many berries are raised but not taken (loss with dry picking). Then, too, Washington had a very damaging frost in 1958 yet they had 63.3 barrels per acre (57,000 barrels on 900 acres) because the cranberry growers who protected their crop from frost had 150 to 190 barrels per acre. The yield per acre for a growing section is not as important as it is to an individual because the individual must divide his fixed per acre cost by the number of barrels to get the per barrel cost. This has a great bearing on the profit. The percentage of United States data shows the trend, and since 1950 or 1955 there has been a definite trend west.

Possibly in the future more valuable data could be obtained by getting yield per acre in the surveys. Such data would give the number of people who harvested 300, 250, 200, 150 or 100 barrels per acre. This information would be much more valuable than such expressions as yield per acre.

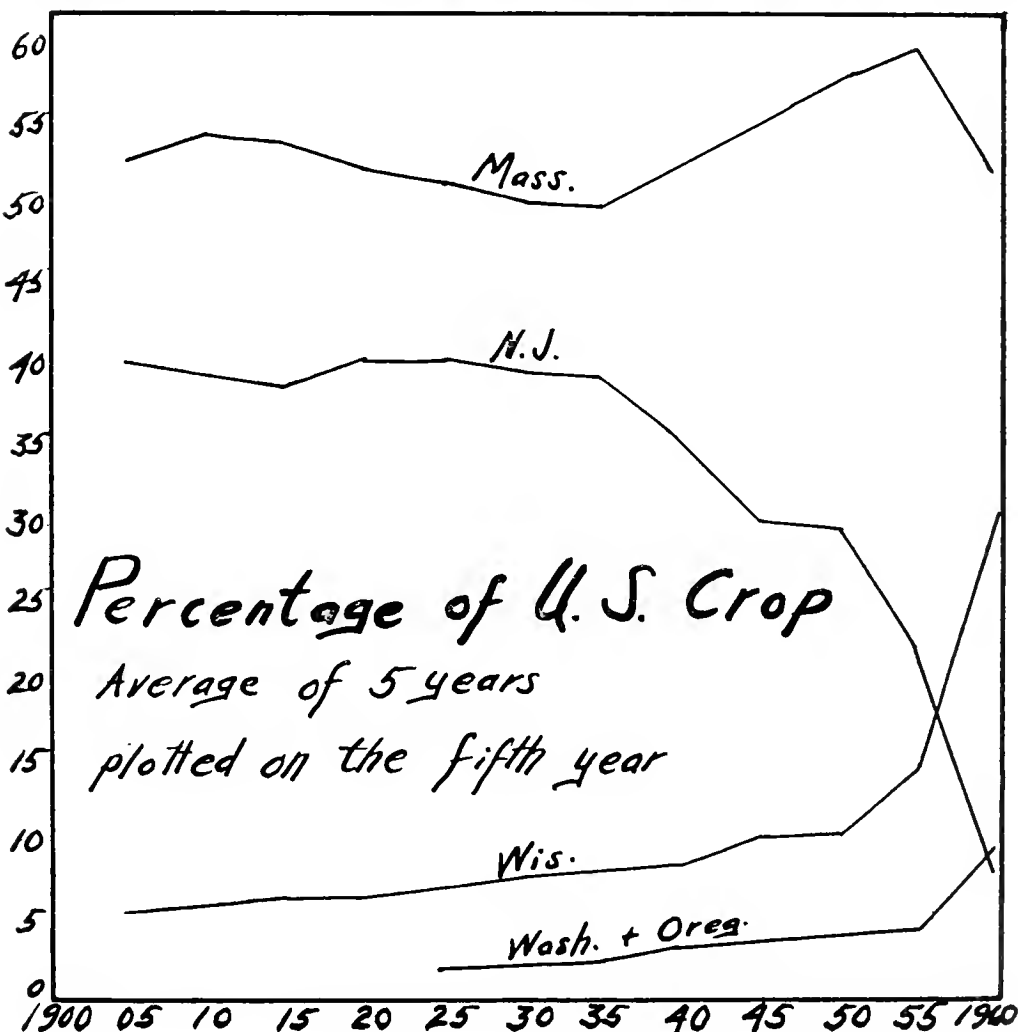
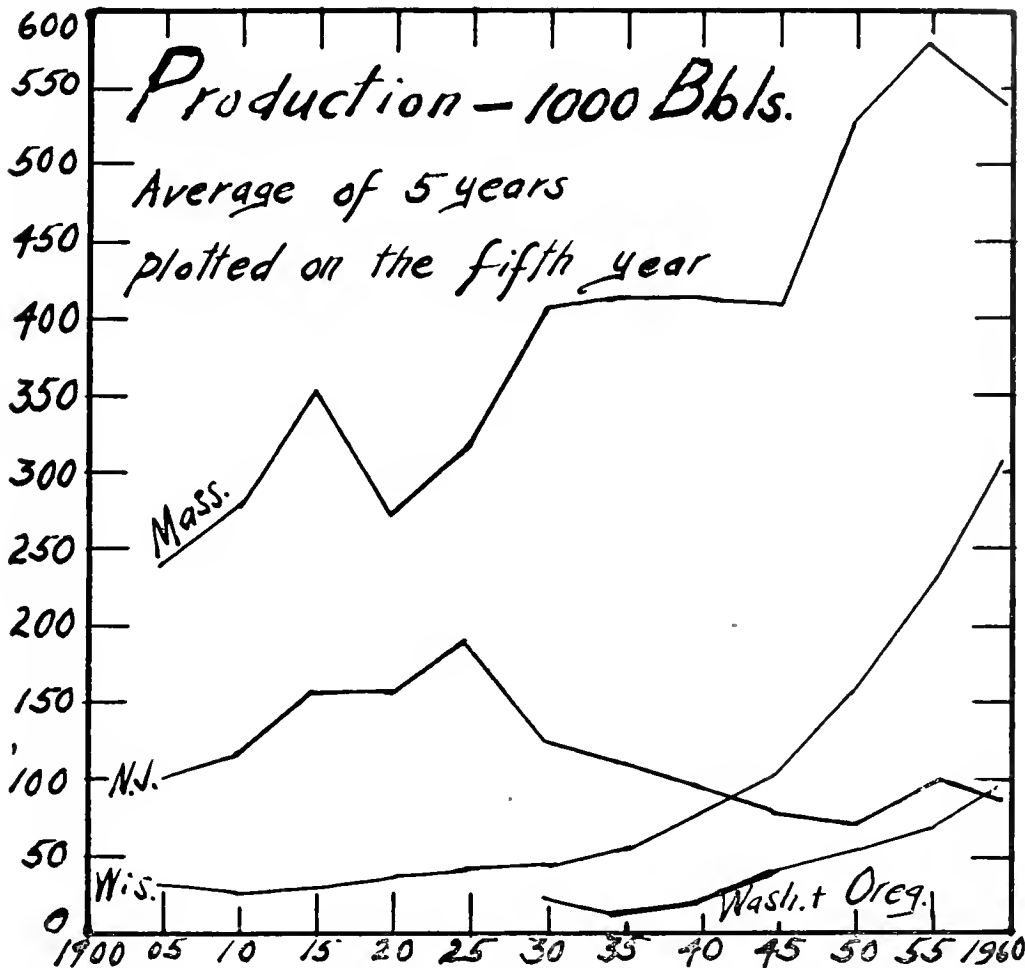
The next chapter of Cranberries in North America will be a summary of the seven chapters which have appeared in Cranberries, starting with the September 1958 issue.

## First Quarter NCA Sales Up

Cranberry Juice is gaining in popularity as a breakfast fruit juice and a refreshing appetizer for dinner and through the day, according to Ocean Spray sales figures. Ambrose C. Stevens, general manager of NCA announced a 66% increase in national sales of cranberry juice in the first quarter of 1959.

Sale of all Ocean Spray processed products was up 31% for the first quarter.

In a Newsletter to National Cranberry's 1200 grower-members, Mr. Stevens said that if Ocean Spray continues to fulfill its sales quota in the current quarter, the next payment to growers of \$1.00 a barrel will be paid in mid-June.





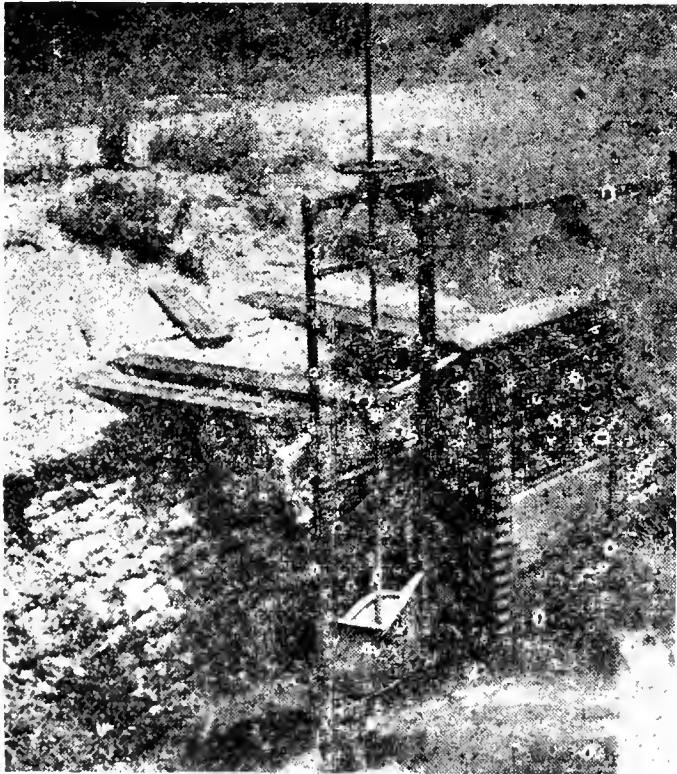
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PREFABRICATED FLUMES

BOG RAILROADS

UNION 6-3696

North Carver, Mass.

## *“Cranberry Crusade Marches On*

It was meet that the National Live Stock and Meat Board's Cooking School in Allentown, Pennsylvania should include demonstration of a cranberry loaf and the the news should reach Cranberry Crusade Chairman John Y. Kohl.

Ever alert to recruiting new Crusaders, Editor Kohl hurried to Lyric Theatre and while Ruth Hogan was stirring up her cranberry bread, Mr. Kohl told her and the 1200 women in attendance about the Cranberry Crusade and how cranberry sauce goes with any meat. (Mr. Kohl happens to have Ocean Spray's new cooking guide, "How To Save Money On Meat", in his own Kitchen.)

Mr. Kohl climaxed his talk by making Miss Hogan an honorary member of the Crusade and read the following citation:

To Whom It May Concern:

This is to certify that in view of her remarkable culinary achievements with cranberries Miss Ruth Hogan, assistant director of the Homemakers Service Dept., National Live Stock and Meat Board, Chicago, Illinois, has been named an Honorary Member of the famous Cranberry Crusade of the Sunday Call-Chronicle, Allentown, Pennsylvania.

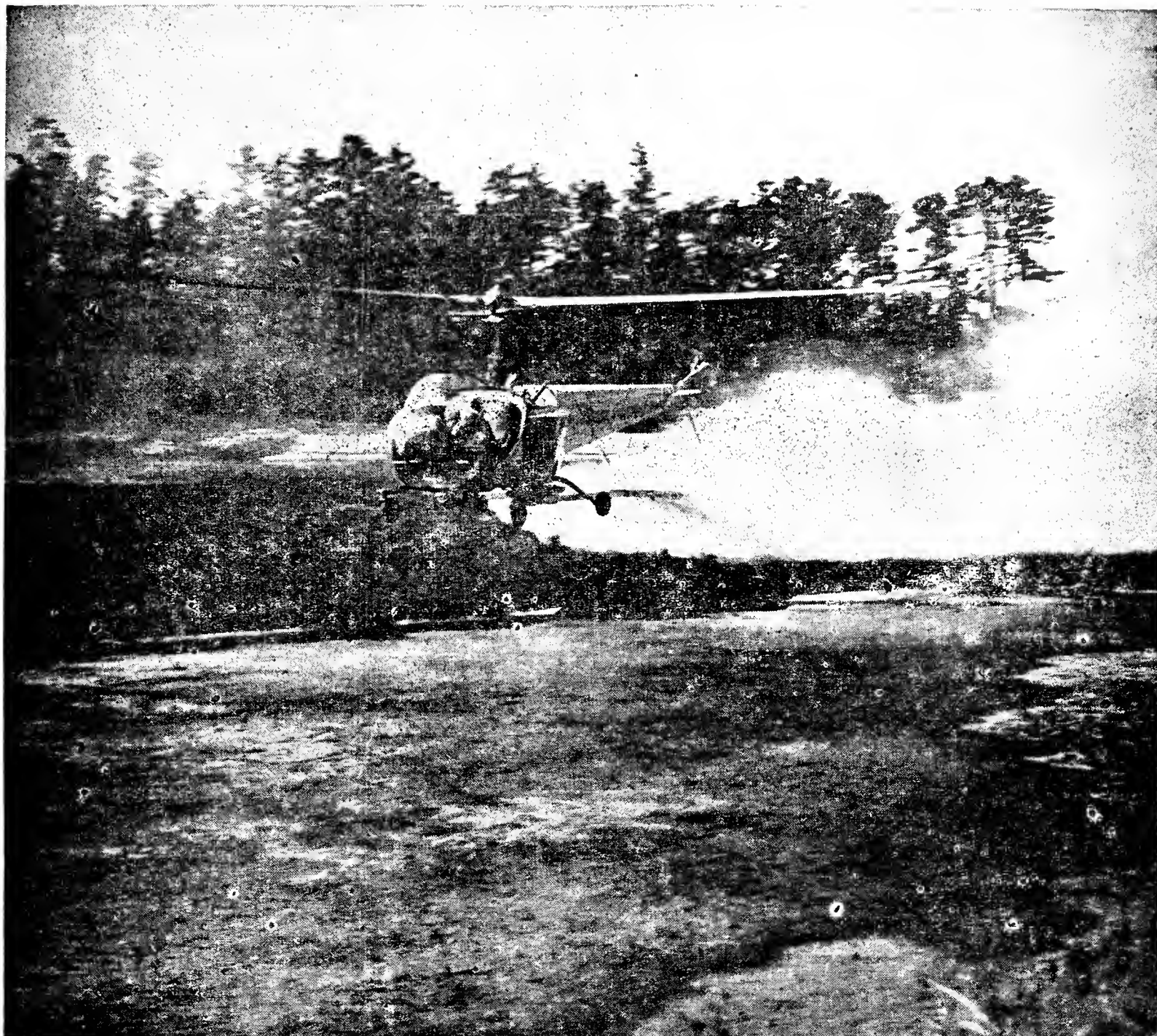
May she ever carry high the banners of the Cranberry Crusade.

The cranberry-meat interview was enthusiastically reported in Mr. Kohl's column, "This And That", in the Sunday Call Chronicle May 3.

(The story of this campaign for larger and more frequent servings in public eating places appeared in the April Issue.)

## **“DICK” BEATTIE ON TV CRANBERRY SHOW**

J. Richard Beattie, Cranberry Specialist at Massachusetts Experiment Station was principal participant on the "Joe Kelley" program televised from Boston WHDH at noon April 24. This was received by many cranberry growers with much interest.



*photo courtesy of the National Cranberry Association*

## ***Kill All Major Cranberry Insects with Malathion***

- **Helps You Avoid Residue Problems**
- **Offers Safety in Use**

Five seasons use has proved malathion's superiority as a cranberry insecticide. Early spraying or dusting with malathion protects the new crop against damage from black and yellow-headed fireworms, false armyworms, blossom worms, tipworms, cutworms and blunt-nosed leafhoppers. Later in the season, malathion controls the highly destructive *fruitworm*.

### **Offers safety in use**

Malathion is a phosphate insecticide with *low toxicity* to man and animals. Its wide safety margin makes it ideal for air application ... especially in and around populated areas.

### **Avoid residue problems**

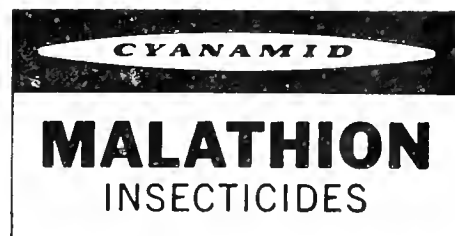
Malathion's fast disappearing residues allow application on cranberries up to 72 hours before harvest.

Residues will be well below the limits established by law.

### **Compatible with other chemicals**

Malathion is compatible with most fungicides and other insecticides... another reason why so many growers are making it the basic insecticide in their spray schedules.

American Cyanamid Company, Agricultural Division, New York 20, New York.



# Helping Cranberries Grow Better

## ORTHO offers a crop protection program tailor - made for your area

Your ORTHO Fieldman knows the particular problems of your area wherever you farm. When you buy the ORTHO program you get the benefit of this technical field service, a half century

of research, and all the scientific experience that makes ORTHO America's number one line of agricultural chemicals.

### There are ORTHO offices to serve you in the Nation's Cranberry growing areas

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#### New Jersey

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Moorestown  
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#### Wisconsin

Janesville  
Sturgeon Bay

#### Washington

Yakima  
Seattle  
Walla Walla  
Wenatchee

#### Oregon

Portland



California Spray - Chemical Corp.

A SUBSIDIARY OF CALIFORNIA CHEMICAL COMPANY  
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## FRESH FROM FIELDS

(Continued from Page 13)

the month vines were still quite dormant and frost protection was not needed unless temperatures dropped drastically.

### Planting Searles — Bain McFarlin

Plans were under way to plant over two hundred new acres in the state, but it was doubtful if some of the new area would be ready to plant. Most of the planting would be Searles followed by Bain McFarlins.

## Cranberries In Russian Market Fifty Years Ago

(This is from the Wareham Courier, Wareham, Massachusetts of fifty years ago:)

O. G. Malde of Wisconsin on his way back from Europe noticed some cranberries in a shop in Liverpool. On making inquiries he found that they were grown in Russia and were about the size of what is known as pie berries in Wisconsin. They were in poor shape being soft and mushy. The dealer informed Mr. Malde that he had handled American berries and there was a good sale for them but that he had not been able to get them of late. The foreign market is being neglected. There is an opportunity to sell American cranberries abroad if anyone would take advantage of it.

### LARGER SAUCE PACK IN '58 THAN '57

The cranberry sauce pack for 1958 exceeded that for 1957, according to statistics of National Canners Association, Washington, D. C.

The United States total for 1957 was 5,752,320 cases, while that for 1958 was 6,114,624. The report is a summary of reports from all canners known to have packed sauce in 1958.

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CRANBERRIES**



**FLOWABLE PARATHION 400** is ideal for use on cranberries. It is a modern formulation of parathion...a water-base emulsion offering all the advantages of parathion with these additional benefits: Less hazardous to handle...and greater safety to plants than emulsifiable concentrates. It contains no solvents or oils, can be used in all types of sprayers, and is compatible with a wide range of insecticides and fungicides.

Flowable Parathion 400 is a Stauffer specialty. It's available at your dealer. See him now.

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## *Leasure-Koller Photos*

In the first installment of the Manitowish Waters story, Manitowish Waters, Wisconsin, was an account of the Leasure-Koller Cranberry Company, largest holding there, partners of which company are Bert Leasure of Chicago and his son-in-law, Frank R. Koller, who does most of the active management.

These photos, omitted previously, due to lack of space, give a graphic account of this progressive cranberry producing unit and show the high degree of practical and modern mechanization which the company utilizes.

In the next issue the story of Manitowish Waters will be continued. There will also be a timely article upon hail, by Dr. George L. Peltier of Wisconsin.

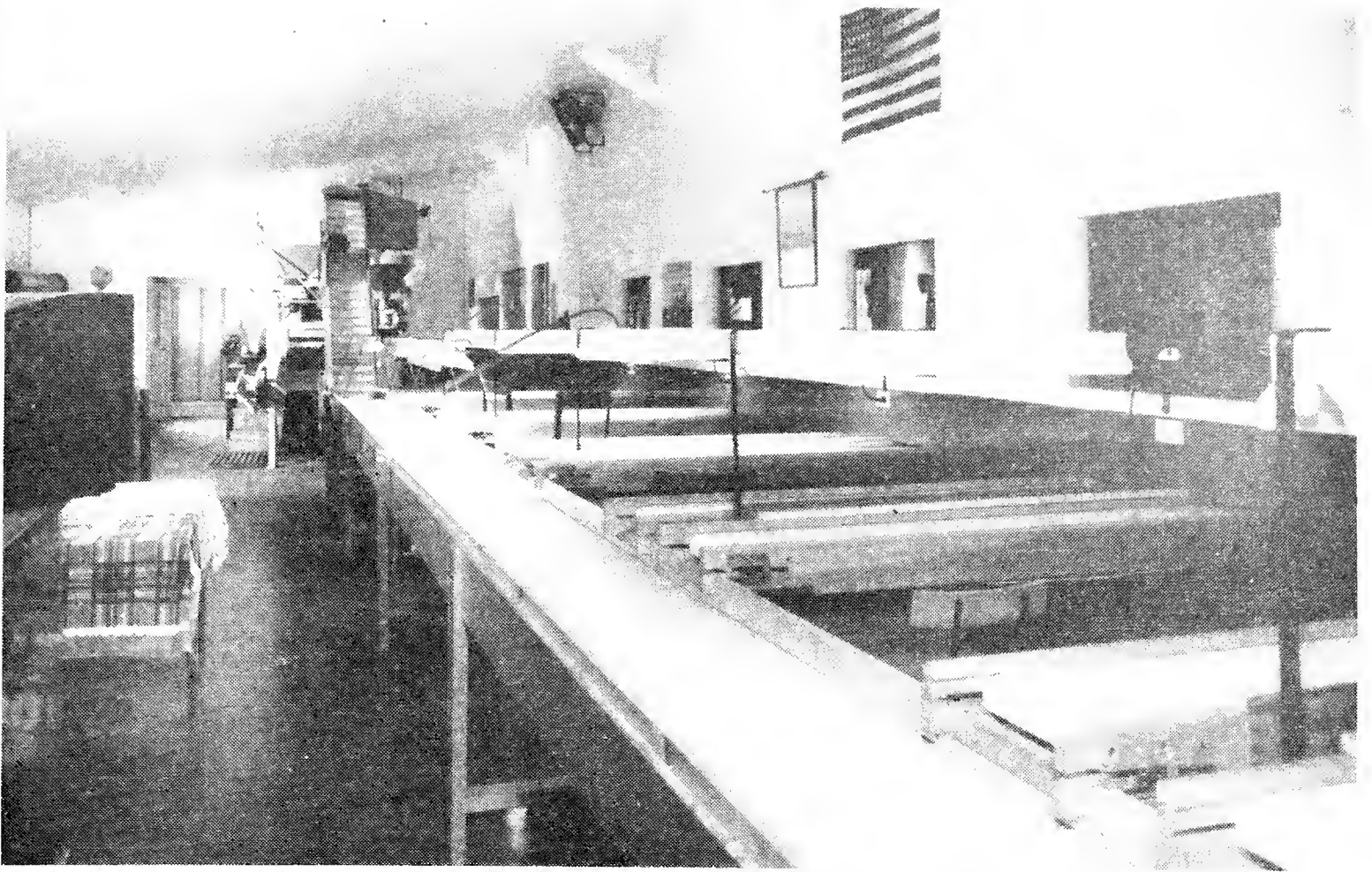


Frank R. Koller

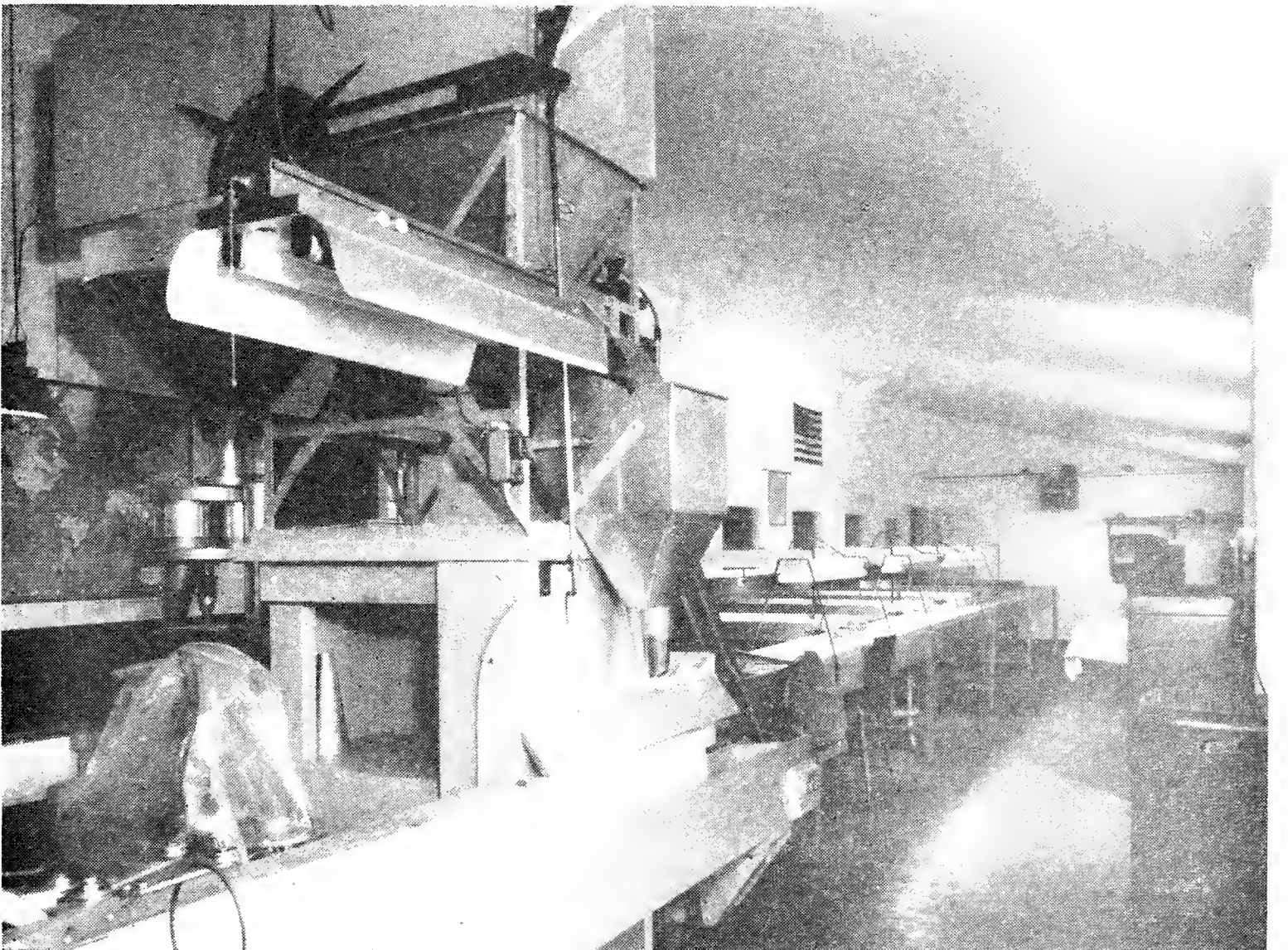
(Cranberries Photo)



Home of Mr. and Mrs. Frank Koller, with canal running beneath it. Pumps on ground floor, living quarters above. Unique arrangement of the Cranberry industry. (Cranberries Photo)



Inside milling room, showing sorting tables and table elevators, etc. Mills are outside in warehouse, packing is done outside also, to keep berries out of warm milling room as much as possible. Leasure-Koller Cranberry Co.



Showing packaging and sealing equipment. Leasure- Koller.



## Late Massachusetts

Vine growth conditions changed rapidly from late April and the first few days of May. Up to the 14th temperatures had averaged about four degrees ahead and this pushed growth along rapidly, whereas before this had been tardy.

With such rapid growth this could pose a frost problem for growers during the rest of May and into early June. There is plenty of water for bogs with frost flow. Frost damage to end of first two weeks of May had been very slight.

For best quality results May should also have been on the cool side, rather than so warm. Sunshine factor was up, a good point in favor of the crop of 1960.

The month was dry except for two rains which brought it up to about normal. The first was on the first day, .64 inch and .84 on the 13th.

As the spring has advanced in additions to winter injury on bogs, it is developing that throughout Massachusetts and most of New England the bitter months of the winter raised much havoc with all sorts of ornamental shrubbery and many trees.

## Massachusetts Now Has Official Cranberry Highway

Governor Fureolo of Massachusetts has issued a proclamation proclaiming the week of May 24 to May 30 as "Cranberry Highway Week".

Governor Fureolo, it has been reported, has signed the bill making official the name Cranberry Highway along Route 28 from the Middleboro traffic circle to Buzzards Bay and along Route 6A from Sagamore to Orleans.

In the proclamation, the Governor urges "The people of Massachusetts to help and join in its observance during that week and thereafter, each in his own way to join in this effort to tell all the Northeast about this magnificent highway to Cape Cod."

The proclamation is to be sent to all State public buildings, all post offices and all public schools.

The official naming of Cranberry Highway culminates some five months of work by the Cranberry

Highway Associates. A huge dedicatory parade is planned to run the entire length of the highway, about 70 miles next month. Tentative date for the parade and ceremonies is June 7.

### INGREDIENTS

Success is largely a matter of ways and means — winning ways and sufficient means.

CRANBERRIES  
PROVIDES A NEEDED  
MEDIUM OF INFORMATION  
FOR  
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**Aerial Spraying and Dusting also Fertilizing**

**We Specialize**

**In Parathion Applications**

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**REX<sup>®</sup> CORN SYRUP  
FOR CRANBERRY PACKING**

*Retains full natural flavor  
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Manufacturers of fine products for the food industry...  
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MAZOLA<sup>®</sup> corn oil • KARO<sup>®</sup> syrups • BOSCO<sup>®</sup> chocolate flavored syrup  
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NUSOFT<sup>®</sup> fabric softener rinse • ARGO<sup>®</sup> corn and gloss starches

## COMMEMORATIVE CRANBERRY STAMP ?

The suggestion of a commemorative stamp showing cranberry harvesting, and in honor of Thanksgiving has been made by Vernon Goldsworthy of Eagle River, Wisconsin. The matter has been taken up with Wisconsin's Senator Alexander Wiley and been forwarded to the United States Post Office Department.

Goldsworthy received a reply in April. This was not too encouraging, that such a stamp might be issued. L. Robe Walter, special assistant to the Postmaster General, replied that many requests for commemorative stamps are received, because of this, selection of subjects is a most difficult task. He continued there are many such stamps the Post Office would like to issue, but that "we cannot honor even a small fraction of the requests that come to us however worthy they may be."

Letter continued, however, that the proposal will be kept on file for consideration with future stamp programs.

The issuance of such a stamp would probably be of no vital importance to the cranberry industry. But we can think of no harm it would do and there could be benefits. Certainly any stamp collectors with interests within the industry would appreciate, such a stamp especially and so would others.

This might be something for state cranberry growers associations, cranberry clubs and/or the Cranberry Institute to become interested in and work for. The Institute as the over-all-industry unit might be the most effective in getting this postal recognition.

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## STARTING OUR 24TH YEAR

With this issue we start our 24th year of publishing CRANBERRIES. As we have said before, on anniversary occasions this has involved a lot of hard work and also a lot of pleasure. We know we are

CLARENCE J. HALL  
Editor and Publisher

EDITH S. HALL—Associate Editor  
Wareham, Massachusetts  
SUBSCRIPTIONS, \$3.50 Per  
Year, FOREIGN, \$4.50

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Director Mass. Cranberry Experiment Station  
East Wareham, Mass.  
BERTRAM TOMLINSON  
Barnstable County Agricultural Agent  
Barnstable, Mass.

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### New Jersey

CHARLES A. DOEHLERT  
P. E. MARUCCI  
New Jersey Cranberry and Blueberry Station  
Pemberton, New Jersey

---

giving a valuable service or you growers would not continue to subscribe year after year, making publication possible. We believe we have served our advertisers well, too.

As we go into our 24th year, it is most gratifying to be able to say, as do many others, that we firmly believe the industry is on its first real upswing in a number of years. There are pessimists, but the optimists outnumber.



# SERVING THE WISCONSIN GROWERS

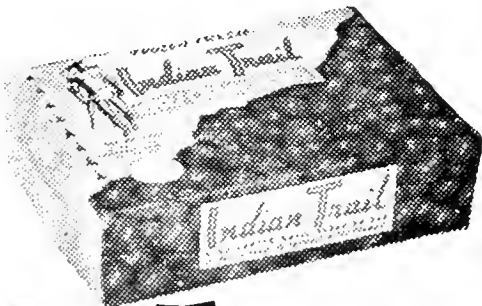
## NCA Expects To Pay Next Advance Of \$1.00 In June

NCA Board of Directors, meeting at Haddonfield, New Jersey April 24th, voted among other matters, that the next advance payment on the 1958 pool be \$1.00



*Indian Trail*

Wisconsin Grown  
MERCHANDISING  
and  
MARKETING,  
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SPECIALTY



*Indian Trail* FROZEN FRESH  
WHOLE  
**CRANBERRIES**

great dish with fish  
*Indian Trail*  
CRANBERRY ORANGE RELISH  
... IN THE FROZEN FOOD CASE

INDIAN TRAIL Inc.  
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Wisconsin Rapids, Wisconsin



per barrel and be made the middle of June. This was if the corporation made it's sales quota. About 150 were on hand to hear talks by President George C. P. Olsson, General Manager Ambrose E. Stevens and Drew Flegan, director of advertising and promotion. Meeting lasted two days with a tour of Jersey bogs and blueberry land under the direction of Edward V. Lipman, who commented from the front seat of a bus. A visit

was made to the Bordentown Plant, where the delegation was hosted by Enoch Bills.

A vote was taken to include the brand name "Ocean Spray" in a change in the corporate name. Selection of a specific recommendation was deferred until the next meeting in Massachusetts June 26. New name, when agreed upon, will be submitted to stockholders for approval at the annual August meeting.

### WISCONSIN HEADQUARTERS FOR INSECTICIDES - FUNGICIDES HERBICIDES

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EAGLE RIVER, WISCONSIN

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## FOR SALE

SEARLES JUMBO  
HOWES, McFARLIN  
Vines

for delivery in 1959

**\$125.00 Ton F.O.B.**

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Deserves A  
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Cranberry growers have enjoyed  
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Insecticides, Fungicides and Herbicides

Better Chemicals For Agriculture

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THE ONLY  
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WISCONSIN  
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# Cranberry

THE NATIONAL CRANBERRY MAGAZINE

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JUN 2 1959



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VISC  
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WASHINGTON  
CANADA

JUNE is the month of blossoms. (See Page 9) (CRANBERRIES PH)



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## Washington Station Report 1959

(Editor's Note: the following is a summary of the work carried on at the Cranberry-Blueberry Experiment Station at Long Beach, and also Grayland area. It is signed by Dr. Charles C. Doughty, station director and Dr. Folke Johnson and Dr. Maksis Eglitis

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weed control  
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RENTAL OF BEES**

**John Van de Poele**

West Abington, Mass.

TRiangle 7-2656-R

of the Western Washington Experiment Station.)

### WEED CONTROL

During the 1957 season the following herbicides were tested for weed control in bearing cranberry vines: Alanap - 3 (20% granular formulation made especially for this trial), Vapam (31% emulsion), neburon (18% WP), and ATZ (amitrol 50% WP). Only amitrol produced sufficient weed

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control to warrant further testing. It was applied at 2, 4, and 8 pounds of 50% WP per acre in 300 gallons of water. Four applications were made at these rates. The first on April 25, when the weeds were 4 to 8 inches high. Other applications were made at 3 to 4 week intervals as needed except during the blossoming period. The last application was August 9, 1957. Amitrol provided good control over Equisetums (horsetails), tideland clover (*Trifolium fimbriatum*), Sedges (such as nutgrass) and *Juncus* species (onion grass). Yellow weed (*Lysimachia terrestris* and sorrel (*Rumex* species) were only partially controlled and were somewhat tolerant to amitrol.

In 1958 Vapam, neburon, amitrol (ATZ), and Alanap-20G were tested again. In addition simazin and a Geigy chemical company herbicide No. 444E were tested. Again amitrol produced good results on the same weeds as in 1957. Two applications (4 and 8 lbs. of 50% WP per acre) were applied May 5 and again July 8. More injury was noted from ATZ last year than 1957. This probably is due to the drier weather and to a lower amount of water per acre. It appears probable that less injury to the vines will appear if ATZ is applied in 300 gallons per acre than in lower amounts.

Herbicide plots in 1958 on young vines where the soil was not completely vined over included these materials: Geigy 444E at 4, 6, 8 and 10 lbs. actual per acre, Simazin 50% WP at 1, 2, 4, and 8 lbs. actual per acre and Alanap-3 at 8, 16, and 24 lbs. actual per acre. Simazin at 8 lbs. actual per acre provided the best control over horsetail, onion grass, louse grass, and some other *Juncus* and Sedges. However, Simazin at 2 and 4 lbs. actual per acre and Alanap-3 at 8 and 16 lbs. actual per acre provided fairly good control; similar to that obtained in 1957. There is one effect from Simazin which has been evaluated yet. Experience with this material on strawberries indicates that it has a tendency to accumulate in the

(Continued on Page 4)

# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



One of the warmest Mays in Weather Bureau history was enjoyed in the cranberry area. Temperatures averaged nearly 5 degrees per day above normal, making the second consecutive month this year when temperatures were on the balmy side. The result is an advanced season—possibly a week or so ahead of last year at this date (June 10). This has been quite a contrast to the cool, wet spring experienced a year ago. There is one similarity, however, and that involves the frequency of frost warnings. Thirteen warnings have been released this spring as of June 10th, compared to 17 during the same period in 1958, 19 in '57, and only 6 in 1956. Just for the record, 41 warnings were issued in the spring of 1949. These include, of course, both the afternoon and evening forecasts. Frost damage at this time appears to be negligible; however, “umbrellas” are common on many bogs which indicates that if temperatures had dropped another degree or two on these bogs, damage could have been rather substantial.

## Keeping Quality

While we have enjoyed this spring, weather factors since April have added only one point to the final keeping quality forecast which was released June 4th and is as follows: **FINAL KEEPING QUALITY FORECAST:** Examination of weather records from April through May gave us only 1 additional point, and when added to the 2 points accumulated prior to April makes a total of only 3 out of a possible 16 which favor good keeping quality fruit next fall. The prospects, therefore, are not favorable for the general keeping quality of the 1959 Mass-

achusetts cranberry crop unless corrective steps are taken. Proper control measures for fruit rot are carefully outlined in the new charts and fungicide treatments will be needed on many “early” and “late water” bogs. **Growers, shippers, the trade, and consumers benefit from “sound fruit”.** It should be clearly understood that these forecasts serve only as guides and to that extent are a useful tool as has been demonstrated in the majority of years that they have been released.

The county agents arranged six field meetings the last of May and early June to acquaint growers with the latest information on the control of insects, diseases, and weeds, plus timely information on water management and the use of fertilizers. These sessions were unusually well attended. Live material was used to help teach the growers the identification of early spring insects and weeds. This technique has proved to be particularly effective.

## Insect Activity

Insect activity as of June 10 has varied considerably this spring. **Blackhead fireworms** and **Spartanthis fruitworms** have been very active, while **weevils** and **green spanworms** have not been too troublesome except on a few properties. Cutworms such as **false armyworms** and **blossom worms** have been about normal. **Blunt-nosed leafhoppers** are just beginning to make their appearance as tiny nymphs and no doubt will require treatment on many bogs. The second brood of fireworms could cause considerable trouble on those bogs that were treated late for the first brood or received no treatment. The millers

are now plentiful on these bogs, indicating the need for careful checking for the second brood of fireworms in late June or early July on “early water” bogs.

We would like to stress again the importance of using the insect net as a method of determining the types of insects present and whether they are numerous enough to warrant treatment. Bogs should be “swept” every 4 or 5 days from mid-May to about mid July. The county agents and the men at the Cranberry Station are always willing to teach or demonstrate the use of the insect net.

## Weeds

Growers attending the May and early June clinics were encouraged to learn about a new method of checking **loosestrife**. The treatment is not on the chart because further research is needed. However, one year's work shows some promise in burning down this weed for at least one season and in giving some degree of control. The treatment involves the “wiping technique” using 2,4-D—2,4,5-Tester brush killer (4 lbs. acid equivalent per gallon or 2 lbs. of 2,4-D plus 2 lbs. 2,4,5-T) in kerosene. The suggested dilution is one part of the above brush killer and 20 parts of kerosene. The top of the loosestrife plant should be carefully wiped with this mixture 2 or 3 times a season, using every precaution not to touch the cranberry vines.

Greater use of weed clippers is suggested where **grasses**, **sedges**, and **rushes** are a problem and chemical weed treatments have had to be postponed. One final weed note to-date, no tolerance has been established for **Amino Triazole**. Only after harvest treatments have been approved and they are outlined on the new weed chart.

Wise use of fertilizers will improve many bogs, including those damaged by winter kill and leaf drop. The 1958 fertilizer chart contains the recommended rates of application. Growers are reminded that **urea** can be combined with insecticides and fungicides and is non-corrosive to equipment.



## REPORT 1958

(Continued from Page 2)

soil and become toxic to the fruit plants where it is applied at more than one or two lbs. actual per acre. Since 1958 was the first year this material was tested, this effect cannot be evaluated until the 1959 season.

In blueberries the combinations of ATZ plus dalapon at 4 and 8 lbs. and 4 and 12 lbs. actual per acre and Karmex plus ATZ at 4 and 4 lbs. actual per acre again provided good control over quack-grass, velvet grass, sorrel, horsetail, and chickweed. Higher rates than these caused some leaf chlorosis but it did not appear to restrict fruit bud formation for 1959 crop. None of these materials have been cleared for use on blueberries. The application of these herbicides was as a ground cover spray around the base of the blueberry bushes. No spray was applied to the foliage of the berries. (To Be Continued)

## Cranberry Clinics Well Attended

First of the Massachusetts cranberry "clinics" took place May 26 with excellent attendances, about 65 at NCA plant, Hanson at 2 p.m. and nearly as many at State Bog at 7 p.m. Dominic A. Marini, County Agent Extension conducted the sessions.

It developed that the usual amount of spring insects are working, span worm was especially heavy and there were infestations of cut-worms, sparganothis and plenty of blackheaded fireworms, against all of which control measures were being used.

Other topics concerned weeds, identification and control, fertilizer recommendations, extent of winter injury and frost damage and other bog management suggestions.

Frost losses, despite a number of frosts, is called practically nil, and Dr. C. E. Cross said the bud looks better than would have been expected in view of the severe winter conditions.

Participating in the discussion were J. Richard Beattie, cranberry specialist, and various members of the Experiment Station staff.

Similar meetings were held May 28 at Makepeace screenhouse, West Barnstable and NCA at North Harwich.

## WISCONSIN HARVEST PLAN

Report from good authority reaches us that a plan for Wisconsin harvest is being advanced which would reduce the cost of harvest, hauling and storage of cranberries. The plan would call for ventilated storage which will keep fruit in much better condi-

tion. All to be accomplished less cost than present methods any cranberry growing area, is said.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of June 1959 — Vol. 24 No. 2

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FRESH FROM THE FIELDS

Compiled by C. J. H.

## MASSACHUSETTS

### Frosty Period

Frost warnings were issued from Cranberry Station through May 15 to 18th inclusive, giving growers a troublesome, sleepless, period. The worst night was that of the 17th when a warning of 2-23 degrees was sent out and temperatures generally averaged about that with one 19. There was probably some slight damage that night and perhaps a little on others, but no general serious hurt. Bogs at that point could withstand 26.

That most flowable bogs were under frost flood continuously into the fifth day would not be conclusive to crop possibilities.

### May Very Hot

By end of first three weeks of May temperatures were approximately 95 degrees above the normal, or more than four a day, while on the 21st there was an all-time record high for the date (Boston) of 93 degrees.

Except for the last two days of May, heat records would have been shattered for the highest May average in one hundred and twenty years. The record (Boston) showed a plus of 149 degrees for the month or nearly five a day above the norm.

Boston is usually a few degrees warmer in summer than the Cape but heat extended down into the Hanson-Carver area in Plymouth County. From Falmouth it was reported about four degrees a day warmer than last year.

May heat was not desired for the coming crop, but dryness was.

### May Drier

Normal May rainfall for the

Experiment Station East Wareham is 3.48 inches. The total recorded for May was 2.47. At Falmouth it was 3.04, so, over the cranberry area in general it was a drier month.

### Bud Surprisingly Good

Bud throughout Massachusetts was described as surprisingly good in view of the severe winter. It was also reported as spotty. At end of May there was beginning blossom on a number of bogs.

### Frost Damage Almost Nil

At the end of May frost injury had been chalked down at the Station as practically nil.

There has also been a very considerable amount of sanding

which would normally reduce prospects. At end of May growers were generally talking the crop down seemingly certainly not as larger than average.

### Sunshine Up

Sunshine for the month was a good 73 percent of possible hours. That is a point in favor of the size of the 1960 yield.

## NEW JERSEY

### May Dry

May was another dry month (even drier than April) with a total rainfall of 1.80 inch, or 1.97 inch below normal. For cranberries this was important chiefly in the way it may affect stream-

## HAIL IS ON THE WAY WATCH OUT, MR. GROWER PROTECT YOUR PRODUCTION COSTS

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flow this summer, since most bogs were held well into the middle of May.

#### No Serious Frost Injury

There were only four really cold mornings, the worst being the 17th. Isaiah Haines reported that several bogs had temperatures as low as 22½° on the 9th., 27½° on the 16th., 24½° on the 17th. and 27° on the 25th. Growers in general tended to hold their water late so that many bogs were still flooded on the 17th and the rest were generally flowed for frost. As of June 1st there seems to be no serious amount of frost injury.

It looks like a season favorable to the blossom worm.

#### May Warm

May was a warm month, averaging 2½° above normal for both days and nights. The general average of all temperatures for the month was 65.2°, or 2.4° above normal.

#### Blueberries

Blueberries were favored more by the weather than they were hindered. The warm, dry weather held botrytis gray mold under natural control. In general there is a full crop of berries set, although some fields have apparently suffered from the few cold nights and show small berries that will not mature. On June 1 rain was urgently needed. There had been no satisfactory rain at New Lisbon since the 1.26 inch on the 13th - 15th. Where weevil and curculio sprays or dusts were applied on time, the green fruit is in good, clean condition. Where calcium cyanamid was used on time in April for the control of mummy berry, it was unusually successful in checking the blight of flowers and foliage which was severe in many untreated fields.

#### WASHINGTON

The month of May was fairly warm with a maximum temperature of 86° on May 12th and a minimum of 29° on May 10th. There were several showers along with one rainy period from May 14 to May 17th. The minimum relative humidity was 27% on

May 12th. This past month has been about normal for this time of year. Sprinkler systems were going for frost protection on six different occasions. The temperatures during those periods of frost were 31° on May 2nd, 31° on May 5th, 32° on the 18th. So far no really severe frosts except

on the one night of May 10th.

#### Good Bud

Most of the bogs have good set of buds this year so there should be a very nice crop.

#### Variety in Growth

The growth on the different

(Continued on Page 16)



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The advertisement features two vertical branches of cranberries on the left and right sides. Each branch has several dark, round fruits and small, pointed leaves. The background is plain white.

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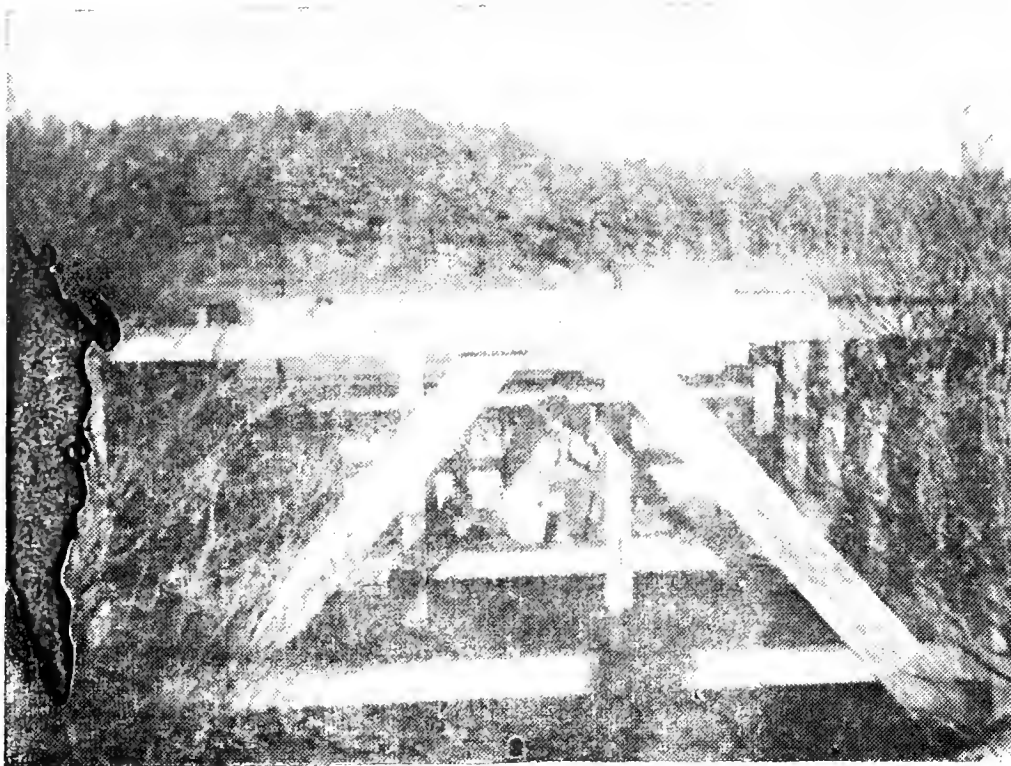
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The Forest Products Laboratory, U. S. Department of Agriculture at Madison, Wisconsin, has available records of the outstanding results of Redwood.

Some of the service records of redwood taken from all over the world, especially in warm humid climates where termite attack and decay are the greatest, are following examples:-

1. Redwood pipe in Laguna Province, Phillipine Islands, was still in service after 20 years, and redwood tanks installed by a mining company in the Philippines were in use after 20 years while other woods had been rapidly attacked.

2. Redwood pipe installed by a

sugar company in Hawaii was in perfect condition after more than 30 years.

3. Tests by the commissioner of the Lands and Forests Department, Freetown, West Africa, showed that redwood tested in termite-infested ground was found "resistant" to all insect attack."

4. Testimony from Mazatlan, Mexico, revealed that redwood

used in reconstruction of a match factory was sound after 55 years, though other softwoods and hardwoods in the area were ravaged.

Research by the Bureau of Entomology, U. S. Department of Agriculture, on Barro Colorado Island, Jamaica, where 45 different kinds of termites exist showed that a redwood building erected in 1927 was free of rot and termite damage after 16 years' service, when the building was destroyed by a falling tree.

Redwood has been used in increasing quantities in the cranberry industry the last thirty years for flume work with very good results. There are many grades of Redwood that may be used for flume work, the most important thing being all heart, free from white sap wood as sap wood does not have the rot or termite resisting qualities.

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## OUR COVER

These June blossoms are shown in front of the Pilgrim fort in the reproduction of the entire Pilgrim village from 1620 to 1627. This is on Route 3-A south of Plymouth Massachusetts and near Chiltonville.

Blossoms are blooming there as everywhere at this season of the year. Already the first half dozen of the 22 structures to be built look "rooted."

Cranberry growers should be especially interested in this gigantic project, which in time will have the Mayflower II permanently anchored adjacent in Eel River. Whether it can be historically proven the Pilgrims ate cranberries or not, they have always been associated in legend.

Heading the enterprise of Plymouth Plantations, Inc., is Harry Hornblower of Boston a cranberry grower and former treasurer of Cape Cod Cranberry Growers Association. Other cranberry growers are important in the project as well.

### ALASKA LINGENBERRIES

(European variety of cranberries)

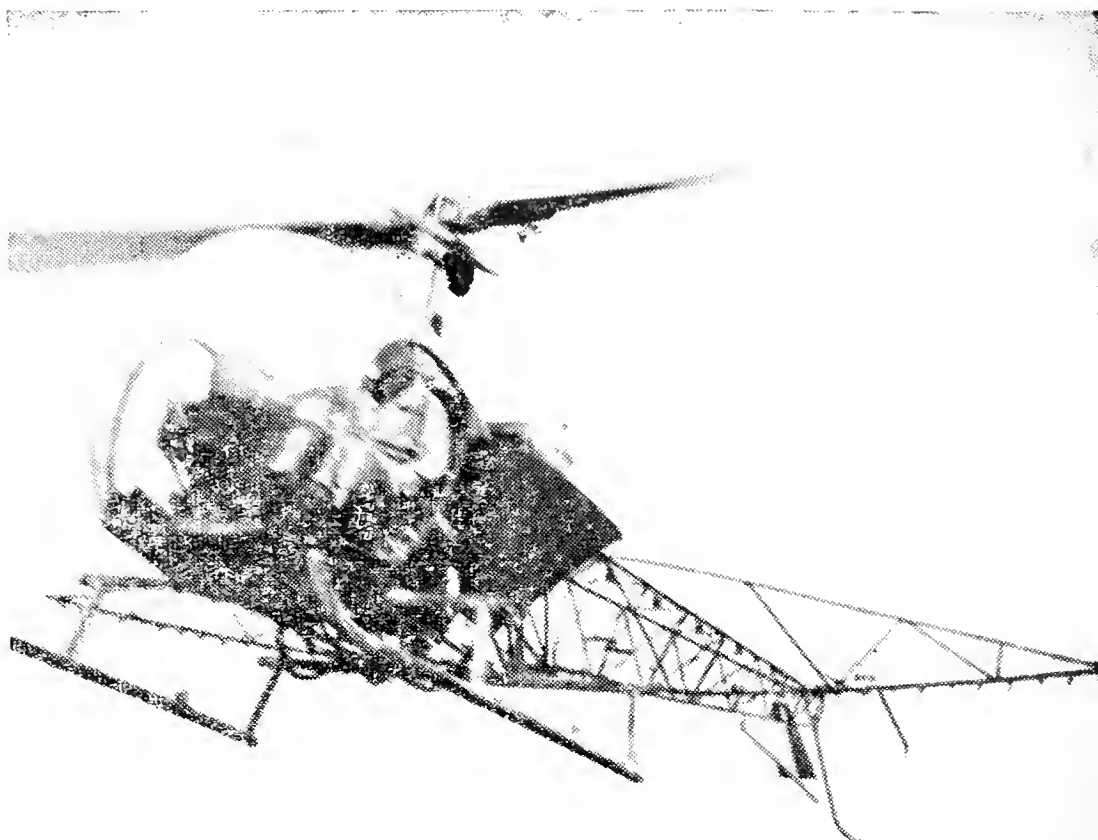
Lingenberries from Alaska are reaching the States today because of a challenge to Mrs. Judy McPherson of Fairbanks.

When Mrs. McPherson, who uses bushels of lingenberries herself wondered about raising them for export her husband encouraged her to carry out her ambition. She is now head of her own company Arctic Alaska Berries. Native women pick the berries which are then packed and shipped to the States.

The lingenberry grows only in the northern lands, such as Alaska and the Scandanavian country where it is also popular. It is similar to the cranberry but has more flavor and color.

Mrs. McPherson sends recipes along with her exported berries. The berries may be used for relishes and sauce or in salads, pies and tarts. (Margilee Watts, in American Fruit Grower.)

(Editors Note — The lingenberry is a variety of cranberries.)



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# WISCONSIN'S UNUSUAL HAIL YEAR OF 1958 — FACTS ABOUT HAIL

By

Dr. George L. Peltier

A hot, muggy, afternoon or evening, with moisture laden southern winds that sap one's energy—shortly dark clouds accumulate and rear their ugly heads in the west—soon a thundercloud is in the making and the surge of the lower stratum of warm, moist air into the vortex of the cold thunderhead congeals the vapor particles—suddenly with a roar the storm descends and one of the greatest hazards to the grower is upon him, i. e. HAIL. Normally, hail is associated with thunderstorms and for the most part are localized within small and definite areas. Usually hail appears as the storm breaks and is then followed by rain. The amount of hail is correlated with the amount of rainfall, which simply means that more vapor particles are available to form hail.

## About Hailstones

The size of hailstones varies from tiny, mushy pellets to the size of marbles and occasionally they are as large as golf balls. Their volume depends on the number of layers of ice that develop on the surface of the stones as they move downward and reascend in the upsurge of the moist air currents, before they are finally released. While hailstones are usually round, they can assume diverse shapes and become irregular, angular and at times even elongated.

## Duration of Storm

The duration of a hailstorm varies from a minute or two upwards to 30 minutes. The average duration is somewhere between 10 and 15 minutes. Hail may fall at any time that conditions are favorable for its formation. Almost  $\frac{3}{4}$  of the storms occur between 2 and 9 P. M., with the greatest number prevailing from 4 to 7 P. M. Less than 4% appear between the hours of 6 A. M. and

noon.

As hail is associated with thunderstorms, they occur most generally from May into September. They are most frequent during July and August with some in May and September, and occasionally in April and October. Thus, the prevailing weather conditions favoring the development of numerous thunderstorms enhances the number of hailstorms. These conditions were available

more frequently in 1958, resulting in the most severe losses from hail in many years.

Some hail fell in all cranberry growing areas during the season. Thus, hail was not only more frequent, but more widespread. Usually in past years not all areas were hit during the season, and in the main, losses have been more localized and less destructive, due in part to the isolated bogs and their location over a wide area in Central and Northern Wisconsin. Severe hail losses were reported from the Northeast in June; from the Northwest in June and July in Wood County in late August and in the Warrens area in September and again in early October.

The writer had an opportunity to study the damage from hail in three cranberry growing areas. The results of these studies are herewith presented as a preliminary report.

## 1. Wisconsin River area (Biron)

August 30. Midnight. The thunderstorm moved from the southwest, with heavy rains and winds of gale proportions. Hail fell for a period of 10-20 minutes. The size of the stones varied from small pellets to large, rough ones capable of cutting the berries in two or inflicting large deep gashes in the fruit. At the time of the storm, depending on the variety and location, some coloring of the top crop was present, but the heavy bottom crop was still green and about  $\frac{2}{3}$  full size.

The results of numerous counts in three bogs is shown in Table 1. The figures were arrived at by using the following formula: Number of berries damaged per sq. ft. x 43,560 sq. ft. (1 Acre.) Number of berries injured divided by the average number of berries per pound, which equals the number of pounds of damaged fruit.

The berries knocked off the vines in an immature state were figured as a total loss. All of the bruised berries had deep wounds that extended into the seed locules and thus were subject to physiological breakdown and to rots. For

Continued on Page 12)

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(Continued from Page 10)  
immature green berries were considered as a total loss.

A large percentage of the berries dented exhibited an unbroken cuticle, which did not otherwise interfere with their subsequent maturity and coloring. Most of these berries were suitable for processing and in a few instances were packed as fresh fruit, with the designation of hail-marked berries.

The center of the storm passed over Bog 3, while the other two bogs several miles away were near the outer reaches of the storm. Thus, a higher total loss was accounted for on Bog 3. Bog 2 was rather grassy and weedy so apparently fewer berries were knocked off than on Bog 1, which was fairly free of weeds and the vines more exposed. The figures presented are simply indicative of the damage that hail can cause and the losses that hail can incur.

### 2. Warrens area.

September 3. 5-7 P. M. Apparently the cloud formation developed over Bear Mound, with indications of two small funnels. Hail fell for approximately 15-20 minutes, followed by a heavy rain (2.85") and accompanied by winds

of gale proportions. Hail stones varied in size, but on the average were quite large. Sand patterns on the dykes showed complete ground coverage with dents about the circumference of marbles. The storm was quite localized in a narrow band and was confined to an area south and east of Bear Mound. The losses from hail by varieties are shown in Table 2. While the writer was able to make field counts of the berries knocked off, only samples from which the counts were made gave the percentage of bruised and dented berries.

From a varietal standpoint it is interesting to note that the Natives showed less total damage than either the Searles or Howes. The higher percentage of injured Howe berries was due to the fact that they were still quite immature. The large share of the berries from this bog were shipped for processing immediately after harvest.

### 3. Warrens area.

October 8. 2-3 A. M. Path of the thunderstorm from West, north of Bear Mound in the northern part of Knapp township and east to the county line in a rather narrow strip. The duration of the

hail was 10-20 minutes and was followed by a heavy rain. As usual, the hailstones varied in size from pellets to a few as large as golf balls. This storm, so far as records are available, is the latest recorded in the cranberry areas in Wisconsin. Fortunately, only a few sections remained to be harvested at this late date. While counts were made of knocked off berries, time did not permit an extensive field count of the damaged berries since the sections were harvested within the next two days. However, enough samples were collected to arrive at a percentage of injured berries. The results of these counts are presented in Table 3. The majority of the damaged berries were shipped for processing so that from 1/2 to 3/4 of the crop was salvaged.

### Hail Insurance

It is hoped that this brief account of three hailstorms in Wisconsin and the losses therefrom may be of sufficient interest to stimulate further progress in a reasonable insurance program among cranberry growers. Unfortunately, only one grower had hail insurance so that the losses incurred were a direct liability to the uninsured.

Hail, when it strikes, is a calamity which is awesome in its suddenness, in that the grower is completely helpless.

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### MAY HAIL

There was severe hail reported in the Black River Falls, Wis. area on night of May 10. Some hailstones measured 1 1/2 inches in diameter with enough falling to blanket the ground.

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### NEW WISCONSIN MARSH

Report from Wisconsin is that a new development of 60 acres will be underway near Fiefield in the Eagle River area. Plantings are planned for 1960.

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### CRANBERRIES MAGAZINE

TABLE 1

Pounds per acre of hail damaged berries.

	Knocked off Lbs.	Bruised Lbs.	Dented Lbs.	Total Lbs.
Bog 1.	1070	802	535	2407
Bog 2.	827	1380	827	3034
Bog 3.	2080	1483	893	4456

TABLE 2

Pounds per acre of berries knocked off and the percentage of bruised and dented berries.

Variety	Knocked off Lbs.	Bruised %	Dented %
Searles	3000	10.2	22.8
Natives	2156	10.8	23.3
Howes	2359	12.0	43.7

TABLE 3

Pounds per acre of berries knocked off and the percentage of bruised and dented berries.

	Knocked off Lbs.	Bruised and dented %
Bog 1.	1381	16.5
Bog 2.	1252	9.0
Bog 3.	708	6.0

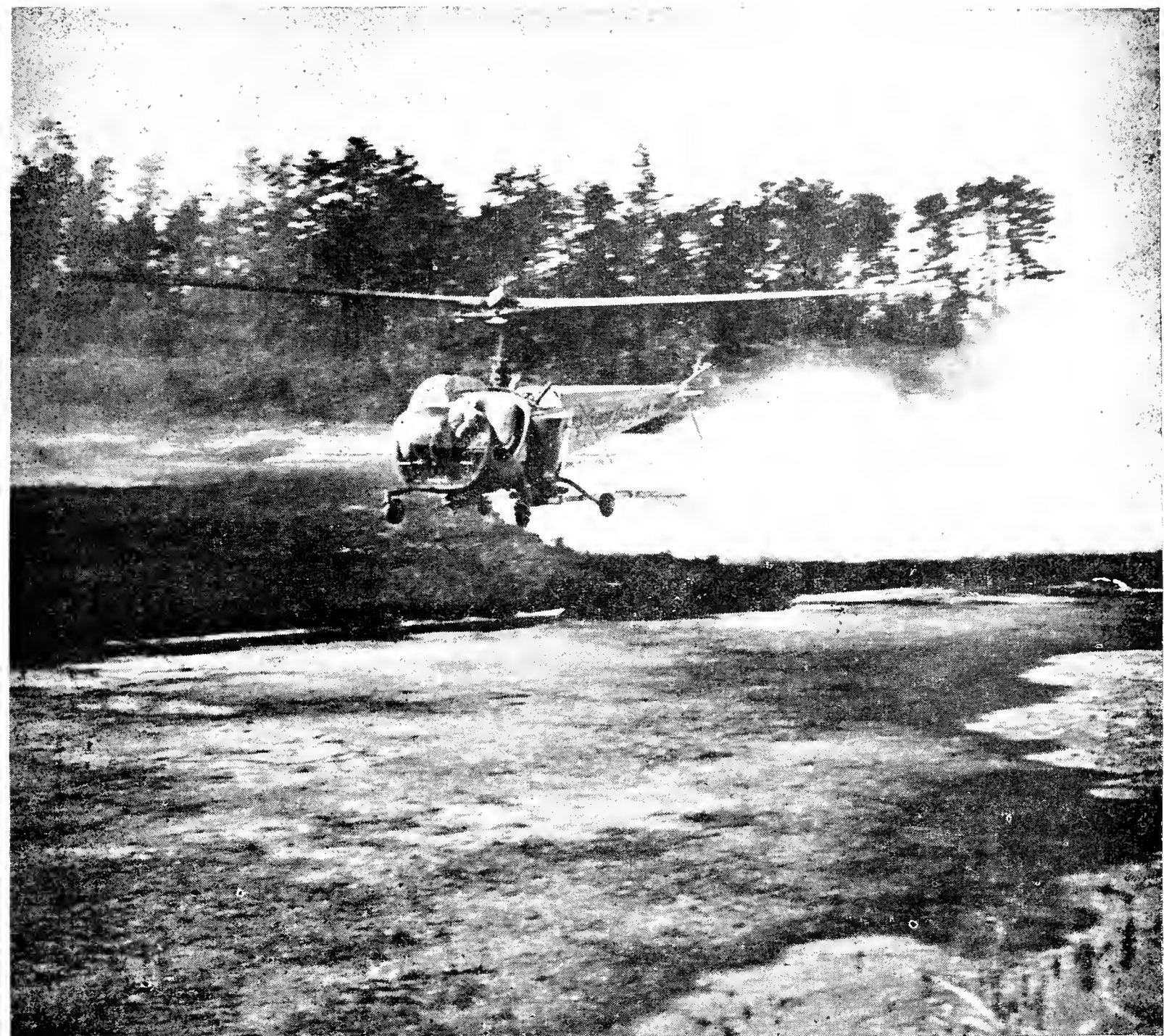


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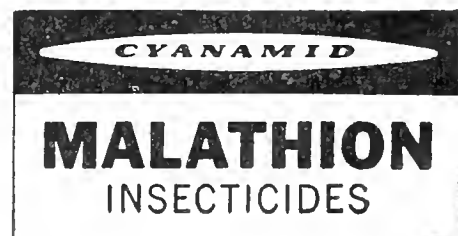
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# The Cranberry Story

## PROCESSED CRANBERRIES

### PART FOUR

By  
**Gilbert T. Beaton**  
Secretary-Treasurer  
Cranberry Institute



Fourth in a series of 4 articles on the history of the cranberry industry sponsored by the Cranberry Institute.

According to the University of Massachusetts Agricultural Experiment Station bulletin No. 481, references to the American species of cranberry *Vaccinium Macrocarpon* are relatively few in scientific literature, but there are many regarding the European species, *Vaccinium Vitis-Idaea*, or Preisselbeere and *Vaccinium Oxycoccus*, or Moosbeere. Since the three species have a fairly close botanical relationship and since both Preisselbeere and Moorsbeere are usually translated as cranberry, the literature referring to the acid content of all these species is considered.

#### Preservation

Several years ago in the peat bogs of Denmark was discovered a complete and perfectly preserved body of a man stained a dark brown by the peat water. The samples of the peat formed around the body suggested the date of death as approximately the commencement of the Christian Era. After considerable research, it was discovered that the reason that the body was so marvelously preserved was because the Spagnun moss of Northern Europe is slightly acid in content. The body lay, in effect, in a weak bath of humic acid and tannic acid, the same as a tanning solution. A goat skin pouch was fastened to the side of the body and through analysis, it was proved that the pouch originally contained cranberry juice.

#### Preserving

For thousands of years men have been seeking a safe and simple method of preserving foods indefinitely. It was hard enough the way foods spoiled, to keep fresh supply in ordinary times, but during great national crises, like wars, the need was more urgent. Armies on the march had to have

good food and plenty of it. Most armies existed on salted meat, stale bread and the fresh food they picked up as they moved along. On such a meager diet as this, even a great conqueror like Napoleon could not prevent the toll of heavy losses suffered by his army from inadequate food supplies and dietary diseases. Scurvy which comes from an insufficient diet, has probably killed more soldiers than ever died in battle. While Napoleon was winning wars and lasting fame, the Government of France organized a society for the encouragement of new inventions, offering prizes for inventions that would present fresh opportunities to the people. Listed among these prizes was an award of 12,000 francs for a better method of preserving food.

Nicholas Appert had great skill with foods. He had been at times a chef, a brewer, distiller and a confectioner. In all this work with food he had been interested in spoilage problems, so for ten long years he toiled in a tiny kitchen back of his shop, patiently cooking and preserving. No one thought of using tin cans in those days, so Appert worked with

clumsy glass containers. The process, as he finally developed it, involved precooking the food, bottling it in his own containers, wiring corks in place, setting the bottles in burlap sacks and lowering them into a big kettle where they cooked a second time. After several years of experiments and failures, on January 30, 1810, Appert compiled his notes and presented them to the Government. Finally the 12,000 francs were awarded to him. Before receiving the award, however, he had to publish his findings at his own expense and send 200 copies of the book to the Government. This little book, the book of all households on the art of preserving animal and vegetable substance, marked the beginning of the great canning industry.

As stated previously in "CRANBERRIES" the original Indian method of preserving wild cranberries was followed extensively throughout New England and Eastern Canada for both wild and cultivated fruit for many years. It consisted merely in keeping the berries immersed in clean cold water in crocks and jars. Samples of these raw packed cranberries were sufficiently well preserved to be palatable even after several years.

From the story of "Nor'west John" by George Howe, a story of John DeWolfe who sailed from Bristol, Rhode Island in August 1804 to Russian Alaska, tells of his stay in a settlement in New Archangel where the dessert was invariably cranberries preserved in candlefish oil.

As early as 1817, a young Englishman, William Underwood, landed in New Orleans to start a canning business. Failing to get support in New Orleans, he walked all the way to Boston. There he founded the first food preserving firm in America. Two of his early experiments in the processing and canning of food was with cranberries and lobsters. The canning of cranberries was first recorded in a letter dated January 10, 1828 by William Underwood of Boston, addressed to

ADVT.

Captain Stauwood of the "Augusta". He starts his letter: "Dear Sir: Enclosed you have an invoice for pickles, sauces, mustards, and preserves of first quality" A little later in the letter he mentions: "The cranberries in the bottles are preserved without sugar. I name this because if any person should purchase them for sweetmeats, they would be disappointed. They are to be used precisely as if purchased fresh from the market and will keep any length of time before the cork is drawn." A little later he states: "The cranberry jam is a sweetmeat and usually brings a high price. I have frequently sold it in India for \$1.50 per jar."

The first cranberry preserving factory operated on a small commercial scale, was at Wareham, Massachusetts from 1898 to 1901. There Mr. R. C. Randall made a cranberry syrup called "Ruby Phosphate." Several small kitchen factories made and sold cranberry sauce in Boston and Providence before 1907, but it was not until 1907 that the United Cape Cod Cranberry Company was formed and interests in canned cranberries was sustained.

### Cranberry Canning

Marcus L. Urann, President of the United Cape Cod Cranberry Company, endeavored to solicit the support of other large shippers in the processing of cranberries. Failing in this, however, in 1912 he formed the Ocean Spray Preserving Company. The Ocean Spray Preserving Company was organized to market canned cranberry sauce. The first cans of Ocean Spray (number 2 size cans holding approximately 20 ounces) were packed by hand in the brick building on Main Street in Hanson, nucleus of the present plant. Its outlines can still be seen in the center of the present plant. The first years of selling cranberry sauce in cans were an uphill struggle. Grocers were skeptical, consumers were slow to try an unknown product, so with cans of Ocean Spray Cranberry Sauce in his hand, Marcus L. Urann went from customer to customer, ADVT.

opening cans, cutting samples and using every means of personal persuasion to get across the story that here was a good product with a bright future.

His first sales were in the Boston area, but because he spent part of his winters in Florida, that became the second state in which Ocean Spray Cranberry Sauce was introduced. There were all kinds of problems in the early days. The lining used in the tin cans was not adequate for cranberry sauce. There were endless experiments until the right lining was found. Tripple plate enamel stored in a warm place developed gas and swelled. These had to be taken back, money refunded, and more experiments conducted to learn how to eliminate these problems. In 1922, Mr. Urann appointed as the first sales broker for Ocean Spray, the Arthur G. Curren Company of Boston, who still represent Ocean Spray in that City.

In the years between 1920 and 1930, sales of Ocean Spray Cranberries grew from 20,000 cases to about 200,000 cases. By this time several other companies were engaged in cranberry canning. One of these was the A. D. Makepeace Company of Wareham. The Cranberry Products Company, New Egypt, New Jersey was a second. In 1930 these three companies merged to become a new cooperative, Cranberry Cannery, Inc., with headquarters at Hanson. Marcus L. Urann was President. To Marcus L. Urann, for many years both President of the United Cape Cod Cranberry Company and National Cranberry Association, belongs the credit for early visualizing possibilities in manufactured cranberry products. Thanks to his foresight, perseverance and organization, the cranberry industry has developed from a little factory at South Hanson, Massachusetts, packing about 20,000 cases in 1922, to a great industry today packing approximately 6,500,000 cases a year.

### Continuous Cooking

At the present time, approximately 58% of the total United

States Cranberry Crop is sold in processed form. Other processors who have been processing cranberries and expanding the sale of this product are Minot Food Packers, Inc., Bridgeton, New Jersey. Minot has a continuous cooking operation which streamlines their operation. Their continuous cooker furnishes cranberry sauce to the latest filling, closing and can handling equipment, one of the most modern and efficient lines in the cranberry industry. They have just completed their own freezing plant, containing approximately 110,000 cubic feet. This freezing plant, in addition to maintaining a minus 10° temperature, can also freeze 350,000 pounds of cranberries per week. Minot Foods was originally founded by Mr. Kessler and Mr. Conway. The president is John P. Morello.

Also actively engaged in the processing of cranberries are Morris April Bros. of Bridgeton, New Jersey, packing under April Orchard Brand and Eatmor; Pappas Bros. of New Jersey; C. & E. Cannery of New Jersey; Cranberry Products, Inc., Eagle River, Wisconsin. The latter is owned and managed by Vernon Goldsworthy, and besides cranberry sauce, packs wide variety of other cranberry products such as Cran-Sweets, Cranberry Apple Sauce, Cranberry-Orange Relish and Cranberry Puree. Stokley-Van Camp Company of Indianapolis is another cranberry processor, and in the West Coast area, Cranguyma Farms of Long Beach, Washington has a processing plant for specialty cranberry products. An article on Cranguyma Farms was in Cranberry Magazine a short time ago.

The National Cranberry Association has plants in Markham, Washington; North Chicago, Illinois; St. Johns, Quebec; Bordentown, New Jersey; Onset and Hanson, Massachusetts. Besides packing strained cranberry sauce and whole cranberry sauce, they also process cranberry juice cocktail, straight cranberry juice,



Uran, cranberry-orange relish, frozen cranberries and are also actively engaged in the shipment of fresh cranberries. The independent processers of cranberry sauce receive practically all their berries from the independent shippers mentioned in last month's article, "The Fresh Fruit Story."

#### Dehydrating

To complete this article we should present a brief resume of the dehydrating of cranberries. Cranberry dehydration and even compression was practiced as long ago as 1872 as revealed by a patent unearthed by John C. Makepeace. This was issued on March 19, 1872 to Le Grand Kniffen of Worcester, Massachusetts. The following quotations are from the specifications of this patent. "I have invented a certain new and useful improved process of preparing cranberries for preservation and shipment. It is well known that the cranberry is a very delicious and healthful fruit and one which contains elements which particularly adapt it for use as an accessory to Army and shipping supplies, provided it can be prepared in such a manner that it will retain its quality and flavor for an unlimited period. I have discovered from experiments that when cranberries are sliced or carefully cut into small sections of pieces, they can be readily dried. Hence my process for preparing them is to slice or cut up the berries and after cutting them, to thoroughly dry them, when they can be packed in tight cans for shipment, or if preferred, the dried berries can be condensed into a solid mass by means of properly applying pressure. One quart of fresh berries will, when cut and dried, be reduced to about one fourth of their former size and when pressed or condensed, to about one third of their bulk after being dried".

On May 27, 1913, United States Patent 1062969 was issued to Henry H. Harrison of Boston, also for the dehydration of cranberries. The Harrison patent covered puncturing the skin of the cranberries to facilitate drying. A carload of dehydrated cranberries

shipped in 1943, contained \$106,444.68 worth of dehydrated cranberries. At that time, this was the most expensive carload of food shipped. Former holder of the record was a carload of olive oil with a value of \$35,000.00.

Improved cultivation is bringing about larger and larger cranberry crops. To take care of these additional supplies, manufacturers need to develop new products and expand the market for established products.

A consumer demand in balance with the cranberry supply is the aim of the industry.

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Correction: In last month's article, with list of fresh fruit distributors the name of Cape Cod Cranberry Cooperative, Inc., Orrin G. Colley, president, was inadvertently omitted.

#### Fresh From The Fields

(CONTINUED FROM PAGE 6)  
bogs is extremely variable this year. Some of them are near the early hook stage (May 25) while others have growth only just starting. On the bog at the Experiment Station both conditions existing side by side. This will make the blossoming season quite long although it probably will not be as late as it has been in some years past.

#### August Field Day

Plans for a field day on August 8th of this year are proceeding nicely and it is hoped to have some very interesting things to discuss and show the growers of this area. No formal program as yet but this will be done when the time comes. The Station would like at this time to extend an invitation to all interested people outside of the Washington cranberry growing area to visit it on this day. Especially the growers from British Columbia and Oregon.

Some spring planting is still going on. Most of this, however, is finished by end of May.

The blackheaded fireworm is just now starting activity in some bogs so the summer spray schedule will be under way very shortly. One insecticide spray has been applied previous to this date (May

25) on most bogs, as well as, one and in some cases two fungicide applications. To this time very little twig blight showing. It appears therefore that this disease is under control. There have been a few small spots showing on one or two bog indicating that the fungi are still present and will have to be controlled by fungicide sprays during the summer months. Station main program this year in disease control will be aimed at controlling fruit rot and field rot diseases. There has been some injury to the cranberry foliage during the spring months from this group of fungi. An exact control schedule has not been worked out as yet but the Station hopes to have one within the next year or two.

#### WISCONSIN

##### Severe May Storms

May averaged unusually warm with above normal rainfall. Most of the state received one to one and one half inches more than normal rainfall. May was noted for numerous severe storms with about a dozen tornadoes and as many more tornado funnels were reported in the central and southwest areas. Warmest day was 95 degrees on the 2nd and coldest was 20 degrees on the night of the 14th. The outlook for June is for above normal temperatures and normal precipitation. Normal is about 66 degrees and 4.75 inches of rain.

##### Ground Frost Lasted Late

Considerable frost remained in the deep peat bogs until late May and was only removed by re-flowing for ten days in early May. Most marshes re-flowed the end of the first week in May and held the reflow until mid month, removing the water following the cold night of the 14th. Since that time only one slight frost has occurred, making this one of the most frost free Mays on record. Bud dormancy was broken the early part of the month or a little earlier than normal. During the reflow period the weather was cool, windy, sunny and the water cool, so it is very doubtful if any

oxygen deficiency occurred.

#### Vine Development Pushed

Vine development was pushed by the end of the month due to the humid and warm weather. There was some evidence of side shooting on marshes that were not flooded the last week of November, when the severe cold winds persisted. Most of this side shooting seems confined to the ditch edges and to the area that was harvested last and apparently was not too dormant. It also appears that over developed vegetative buds were the buds most generally frozen. The overall loss for the state appears negligible.

#### Growers Chosen To Posts

Two cranberry growers who reside in two of the states highest producing counties were chosen by their fellow town chairmen as chairmen of their respective county boards. They are Bennett Potter, Warrens, Chairman of the Jackson County Board and Clarence Searles, Cranmoor, Chairman of the Wood County Board.

#### Tragedy

Dwight D. Duchart, three year old son of Mr. and Mrs. Donald D. Duckart Cranmoor accidentally fell into a flooding ditch on the home marsh and drowned May 16. He is survived by his parents and two brothers and a sister. Deepest sympathy is extended to the family.

#### Prospects Promising

At the end of the month crop prospects look promising in all areas. The northern marshes which had very light crops last year look exceptionally good this spring and bud counts made last fall showed a very good fruit bud set. Water supplies are adequate in all areas and insect populations are expected to be down. To date there has been only one damaging hail storm which occurred early in May in the Millston area. The storm occurred at night and large hail along with strong winds were reported to have hit three properties. As new growth was not present it was hoped the loss would be small, but there was apparent damage to the swollen buds and to last years upright growth.

## HELICOPTER PEST CONTROL



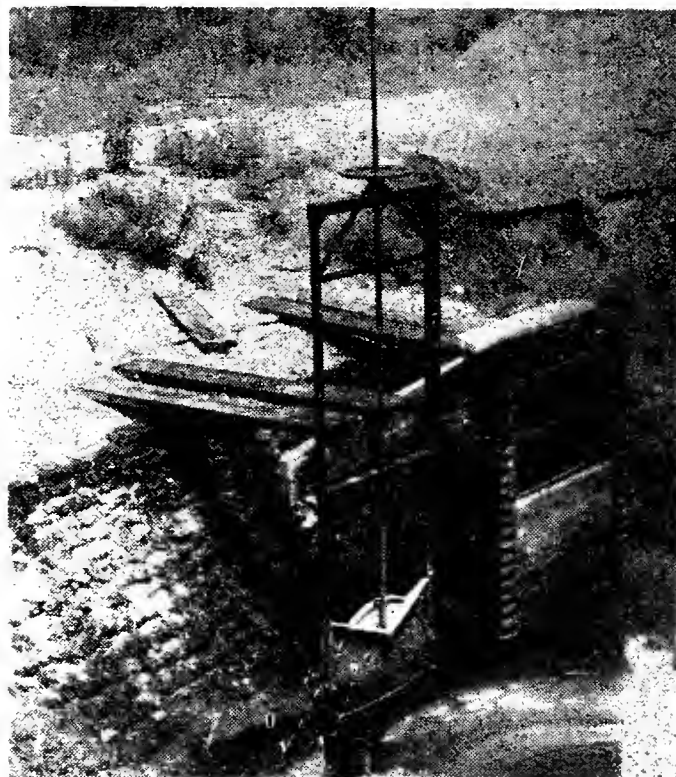
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# Cranberries In North America

By F. B. Chandler

Research Professor, Cranberry Station

East Wareham, Mass.

Seven sections or chapters, starting with last September, have combined the results of surveys of the cranberry industry in North America. This issue will contain the highlights of the articles which have been published.

From the surveys it is evident that little or no new acreage is being developed on the Atlantic Coast. Some is being developed in Wisconsin, but most of the new acreage is being planned for the West Coast. On a percented basis, the intentions to build on the Atlantic Coast are 1/3 of one percent, in Wisconsin 5 percent, and the Pacific Coast 39 percent (intended acreage divided by present acreage).

The decrease in the number of growers and the increase in the size of "Holding" is common and is a trend toward efficiency as larger units are more economical to operate per acre than small ones. Recently our Secretary of Agriculture, Ezra Taft Benson, in a radio talk said this was happening in all parts of the United States in all types of agriculture.

In Wisconsin, a change in variety seems to be associated with increase in yield per acre. This is not true on the West Coast as McFarlin has been the predominant variety since the industry started. In New Jersey, there has been a change from 13 percent of the acreage in Early Blacks in 1924 to 71 percent Early Blacks in 1955. This change has been associated with an increase in yield, but the increase in yield may be due to control of false blossom and culture improvements more than to a change in variety.

Fertilizer data alone will not explain the differences in yield per acre between the different growing sections as the West Coast had the smaller percent of growers reporting the use of fertilizer but they average about 70 barrels per acre. Yet in Massachu-

setts, yield per acre greatly increased from 1935 to 1955, and this was accompanied by a three-fold increase in fertilizer and the fertilizer was about double the strength. In other words, increasing the fertilizer about six times increased the yield per acre less than twice. Therefore, while fertilizer is important, it may not always be the controlling factor.

The high yielding cranberry sections irrigate by applying the water over the surface by flooding or by sprinkler. The common method of irrigating in Wisconsin is to apply water over the surface or flash flood the marsh. Flash flooding is used very little in the areas with low yield per acre.

Very little drainage information was available from the surveys. However, in Oregon 68 percent of the growers kept their ditches dry during the growing season. In some sections the ditches are drained by many growers following frost flows.

The kind of weeds and the method of controlling them varies from one section to another. On

the West Coast, some weeds which are not known in the east may completely crowd out the cranberries. Likewise, the west coast has some diseases which severely damage the vines. The equipment used for disease control varies with the growing section.

The method of frost forecasting varies from section to section, and the method of warning the growers also varies. The "safe" temperature in some sections appears to be higher than in other sections. In general, it appears that the sections that protect for any temperature below 32 degrees in the spring have higher yields per acre.

The method and equipment for harvesting varies greatly with the growing section and the conditions there. The newest method, the water reel, has reached surprising success in two sections.

The production of cranberries in all sections but New Jersey has increased since the turn of the century, but the production increase has not all been the same. This is brought out by the production figures and by the percentage of the United States crop. The yield per acre shows the greatest spread - in New Jersey; it is less than 30, Mass-

(Continued on Page 25)

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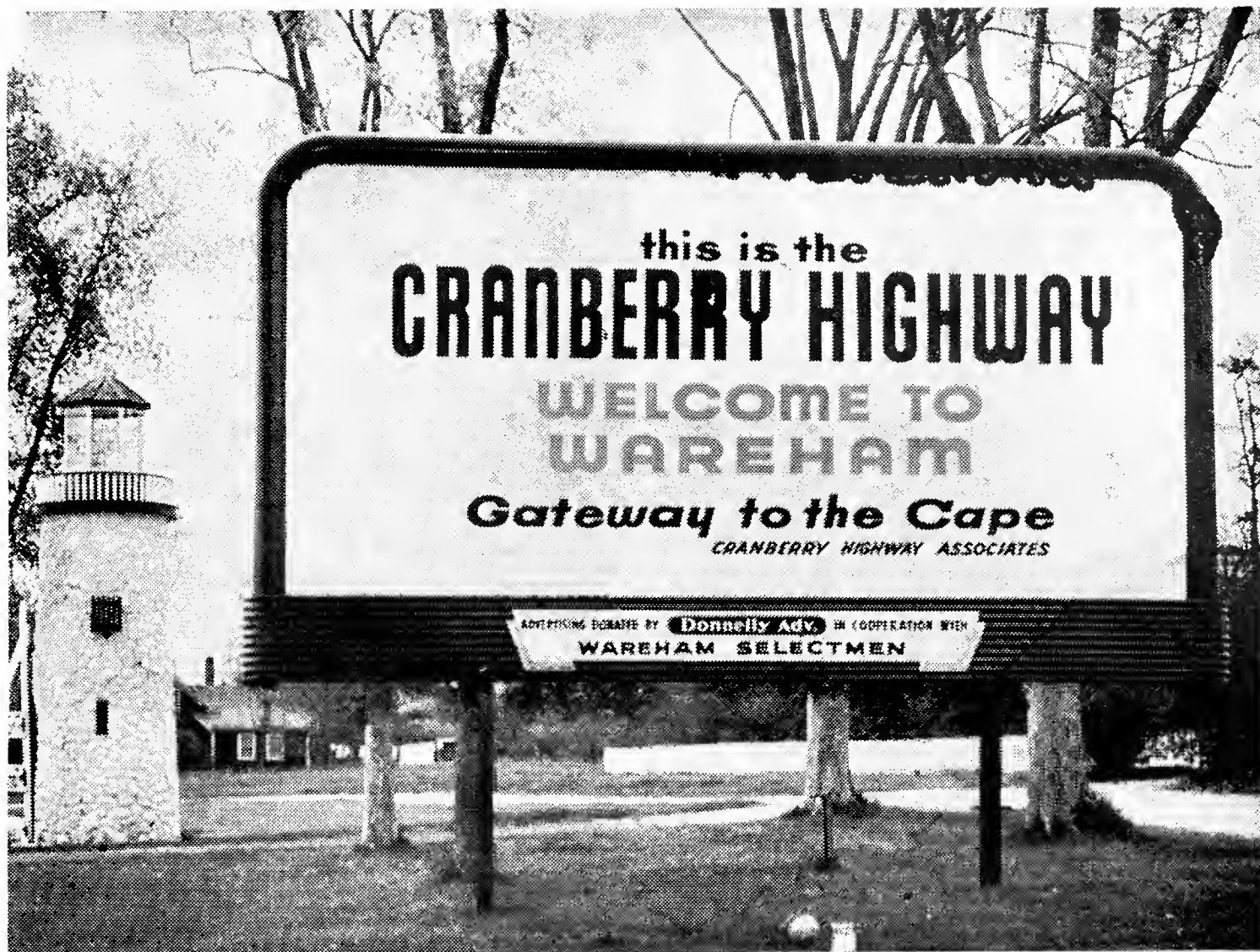
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Sign erected near the lighthouses on Route 28 states what is now official. The highway from the rotary traffic circle in Middleboro to Orleans center is now legally the Cranberry Highway.

(Wareham Courier Photo)

## Massachusetts "Cranberry Highway" Opens Officially

At least 10,000 people witnessed the opening of the "Cranberry Highway" in Massachusetts Sunday, June 7th. This route from Middleboro to Orleans, a distance of 63 miles is through the heart of cranberryland.

Exercises were held all along the way. There were more than 100 vehicles in the line of march. It took approximately 4½ hours to cover the Cranberry Highway.

The major stops were at Middleboro. National Cranberry Association at Onset, Buzzards Bay and Orleans.

At Onset, H. Drew Flegal, advertising manager and director of publicity of N.C.A. addressed the audience. So too, did George C. E. P. Olsson, president of NCA and clerk of Superior Court of Plymouth.

Others present were Alton H. Worrall of the Massachusetts legislature. Miss Eleanor Strahura of Buzzards Bay, "Miss Cranberry Highway," and Miss Priscilla Howe of Boston, "Miss Ocean Spray of 1959."

This was a gala affair and the highway officially and appropriately named "Cranberry Highway" should do much to keep cranberries in mind to the tourists visiting Cape Cod. President Robert S. Fugure of the Cranberry Highway Association expects to provide other features of interest during the coming summer.

Antique cars, pieces of fire apparatus accompanied the procession to the sounds of sirens and bells.

At the New Haven Railroad station, Buzzards Bay the Rever-

and David O'Brien, pastor of St. Margarets Church read the blessing of Cardinal Cushing for the Highway which follows:

"Almighty and most merciful God, who hast destined us to live in a land rich in beauty and comforting in its variety of natural advantage, teach us, we pray Thee, to see Thy good and gracious Providence in the blessings to which our attention is called on this occasion which brings us together in Thy Name.

"Keep us ever mindful of the glorious traditions of personal integrity and civic pride which have grown up within every town and hamlet of this rugged strip of land, of old the cradle of our nation's freedom, and in our own day a haven of peace and rest

(Continued on Page 24)





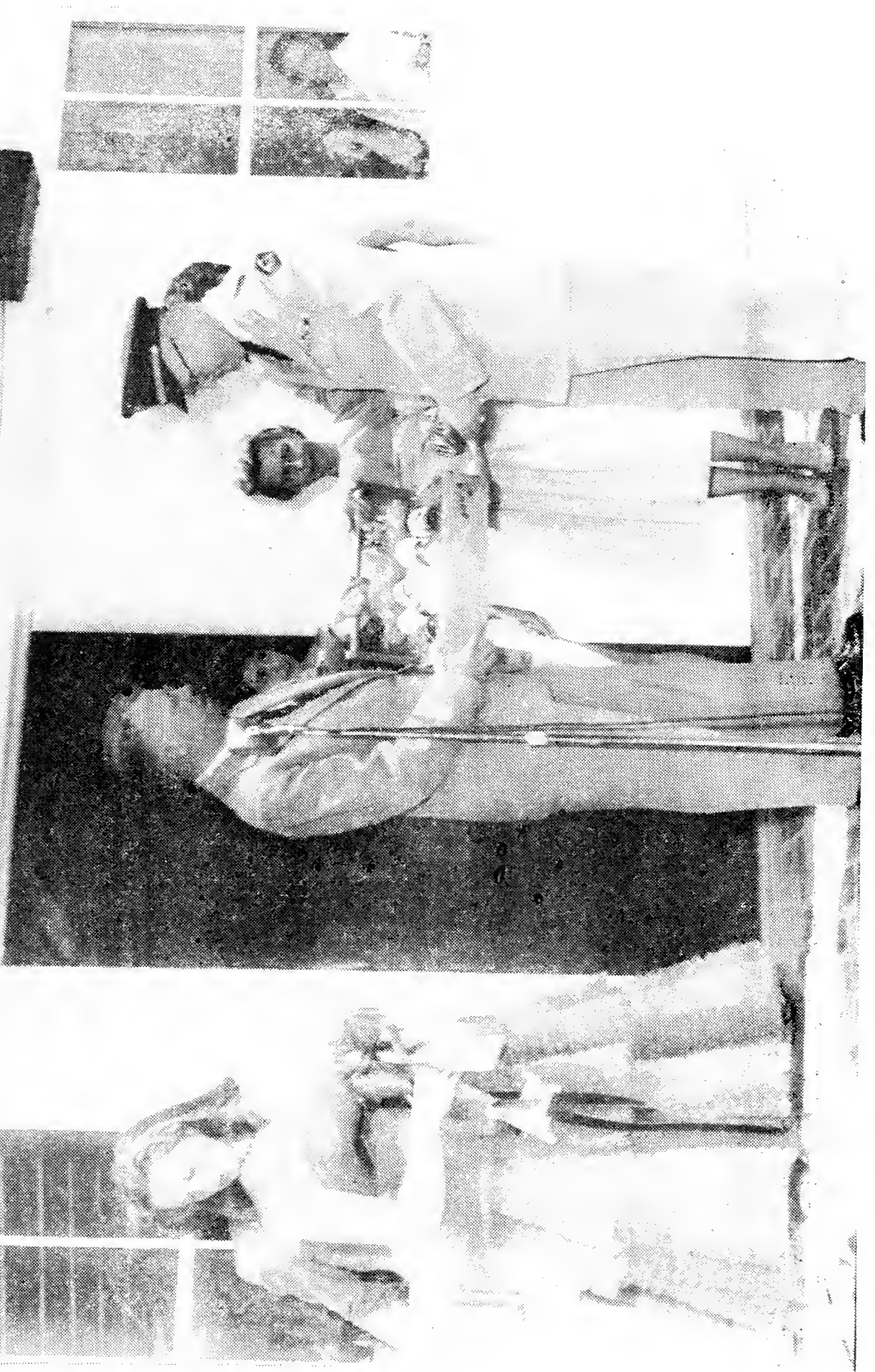
Above

H. Drew Flegal, director of advertising and public relations of National Cranberry Association makes an address of welcome. At his right is "Miss Cranberry Highway, Barbara Strahura, to his left, Emma Florindo and Miss Priscilla Howe, "Miss Ocean Spray of 1959." scene is at National Onset canning plant, where Alton H. Worrall of Wareham, State Representative, and a prime mover in obtaining action to change name of highway was also a speaker. (Cranberries Photo)

Next Page

During a major halt in the Cranberry Highway Dedication Parade, June 7 George C. P. Olsson, (center) president of National Cranberry Association made a presentation of cranberry gifts to Frank Begley, Falmouth, commissioner of Department of Public Works, representing Massachusetts Governor Foster Furcolo. At extreme right is Miss Eleanor Strahura, Buzzards Bay, official "Miss Cranberry Highway", while in background stands Miss Priscilla Howe, Boston, NCA's "Miss Ocean Spray of 1959." (Cranberries Photo)

# RIVERBERRY





# Manitowish Waters, Wisconsin, Is Wilderness Wonder — Still Growing

Editor's Note: Continuation and Conclusion

by  
**Clarence J. Hall**

## "Weber's Cranberry Acres"

One of the properties, which Goldsworthy had planned for himself is now operated as "Weber's Cranberry Acres" owned by Clarence R. Weber of Shawano. The acres make up a marsh of 33, set entirely to Searles. M. Weber was in the area on vacation as he had been for many years when he was surprised to learn of cranberry growing in the region. Goldy offered him some partly-developed property and he bought.

Mr. Weber, who is in the veneer business at Shawano purchased with the idea of growing cranberries as a side line, and to maintain it in the future as an interesting retirement project. Following through with this thought he built a summer home on the property, making extensive use of his plywood products.

He had been born and raised on a dairy farm so had a natural agricultural background. The proposition seemed to be a natural for him.

Water for the Weber marsh is pumped on by four St. Jacques pumps, not from Little Trout itself but from a deep pond known as the Ink Pot, which is connected with Little Trout. He pumps from this small pond instead of the lake proper to avoid lake sand being drawn into the pumping apparatus. He has a large two-story warehouse built into a hillside so that trucks would have easy access to the second story for their loads, which is used mostly for storage. Sorting and packaging of the fruit is done on the ground floor.

Weber production runs around 3-5,000 barrels and is marketed through Cranberry Products, Inc. Goldy is retained in an advisory capacity and keeps the marsh under close supervision, but active management is by a resident foreman, Charles Rayola. Mr. Weber, himself, spends as much time as possible up country at the marsh.

## "Alder Lake"

Herbert Indermuhle and son, Richard operate their unit at Manitowish known as "Alder Lake." The father and son have 32 acres in vines, all Searles with the exception of 3½ acres which are set to McFarlins. Production has consistently averaged better than 100 barrels to the acre, with more than 200 being reached in 1956, and some individual beds better than 300.

Mr. Indermuhle had been in the dairy business until he turned to cranberries. This was at Plainfield, where, he produced as much as 27,000 pounds of milk and was reported to be the biggest operator in dairying in Wisconsin. Richard is a graduate of the University of Wisconsin and was in service.

Regarding the current cranberry marketing situation, Mr. Indermuhle Sr. observes, "I've been in business all my life and I've had worries plenty of times.

It doesn't bother me. We will make out all right." This was said before the upturn of last fall.

There is a warehouse at Alder Lake, now several years old which the Indermuhles consider only half large enough and plan an addition in the next few years. They have two mills in the sorting room, but need a third. A Speedee Filler is used in the packing of fresh fruit.

As do all growers at Manitowish they use water from Little Trout, flooding being entirely by pumping and all the water is returned to the lake from the section.

Sanding program is to spread on ice from January to March depending on weather. Fertilizer is applied in the spring as soon as beds have dried out from winter flood and early frost floods. Several mixtures are used in quantities varying from 300 to 400 pounds per acre.

A fungicide spray is applied once or twice a year to control fruit rots and leaf-drop. For the past few years the Indermuhles report, insect control has been done with Parathion dust applied with a ground duster. Insecticide is also mixed with the fungicide



Herbert Indermuhle and son Richard

spray.

Father and son are firm believers in the value of honey bees for pollination and keep their own colonies. They have both a Case and a Getsinger picker, but it is the Case which is used mostly.

In 1957 seven and a quarter acres were scalped, and last spring it was possible to get five of them ready and planted. Three acres were planted to selected McFarlins and two set out in Searles. This spring it is hoped to get the remaining 2¼ acres levelled and planted.

Hail did considerable damage to the Alder Lake marsh as others at Manitowish early in the morning of August 7th. Many small berries were cut off and others marked badly.

They sell through the Goldsworthy distributorship.

#### Manitowish Cranberry Company

An early-built marsh at Manitowish Waters is that of the Manitowish Cranberry Company, set out in 1948. It was started by Delbert Bartling, who died in 1953 and the marsh is now carried on by his son, Frederic J. Bartling.

The marsh was scalped, levelled, some acreage planted in peat and some in sand. Beds are about 3¼ acres in size, and all vines are Searles. Bartling pumps both in and out of Little Trout as the marsh is approximately at lake level, using Lawrence pumps of 15,000 and 25,000 gallons per minute capacity.

Marsh has 23½ acres Searles, 3½ Bain-McFarland plus more to be put in. There is room for an expansion of 15 or 20 more. Marsh is water-raked. There is a warehouse 50 x 100 feet and a dryer.

Manitowish Waters Cranberry Company markets through National and production has averaged about 150 barrels to the acre, with largest crop being 220 per acre average, with some beds exceeding 300.

Young Mr. Bartling has built a new home for himself on Alder Lake which is one of the Manitowish chain.

Mr. Bartling Sr. formerly operated a creamery at Necedah

before going into cranberries ten years ago. Frederic worked with his father on the marsh from 1948 until 1950 when he joined the Navy Air Corps, his father passing away a few months before he was discharged in 1953.

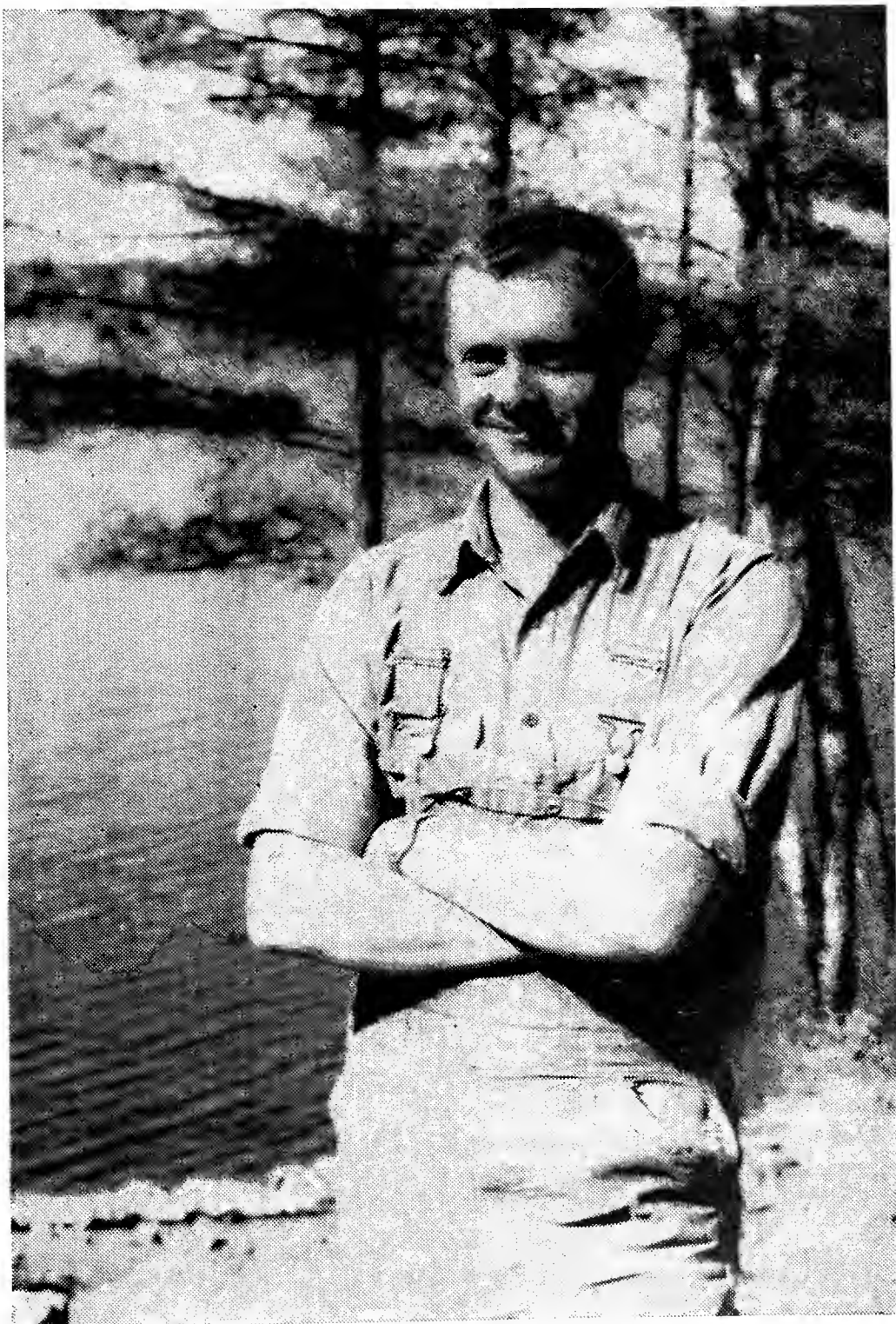
#### Cardinal Cranberry Co.

Cardinal Cranberry Company at Little Trout is operated by Harold Gross. Mr. Gross is with the United States Department of Agriculture. He knew something of the cranberry business before developing at Manitowish, as he is a native of the Mather-Warrens cranberry area.

Harold D. Gross, 7415 North

Damen avenue, Chicago, who operates as Cardinal Cranberry Company acquired his holdings after the other growers had begun development, in 1956. A period of illness contributed to delay in development. A first planting of 10 acres was not made until 1952.

Declares Mr. Gross, "During this early period much encouragement, technical advise and financial help were received from various cranberry growers, which I really appreciated. This again demonstrates the fact that cranberry growers, generally speaking, are a fine group of folks, and are most willing to lend a hand



Frederic J. Bartling, operating Alder Lake property.  
(CRANBERRIES) Photo)



when needed."

Since he undertook his development while working in Chicago, which is almost 400 miles from his Manitowish project, his objective could not have been realized without the loyal and efficient help of his foreman, W. J. McClellan, who handled all matters pertaining to marsh production management. Mr. Gross makes this acknowledgement to Mr. McClellan. At present the Cardinal Cranberry Company has 21 acres in production, with 6 more being planted this spring and he plans several more in 1960.

Mr. Gross works for the United States Department of Agriculture as an area classification and organization officer in the Personnel Management Branch of the Agricultural Marketing Service. This involves a jurisdiction of 25 states, 250 field officers and more than 3,000 employees.

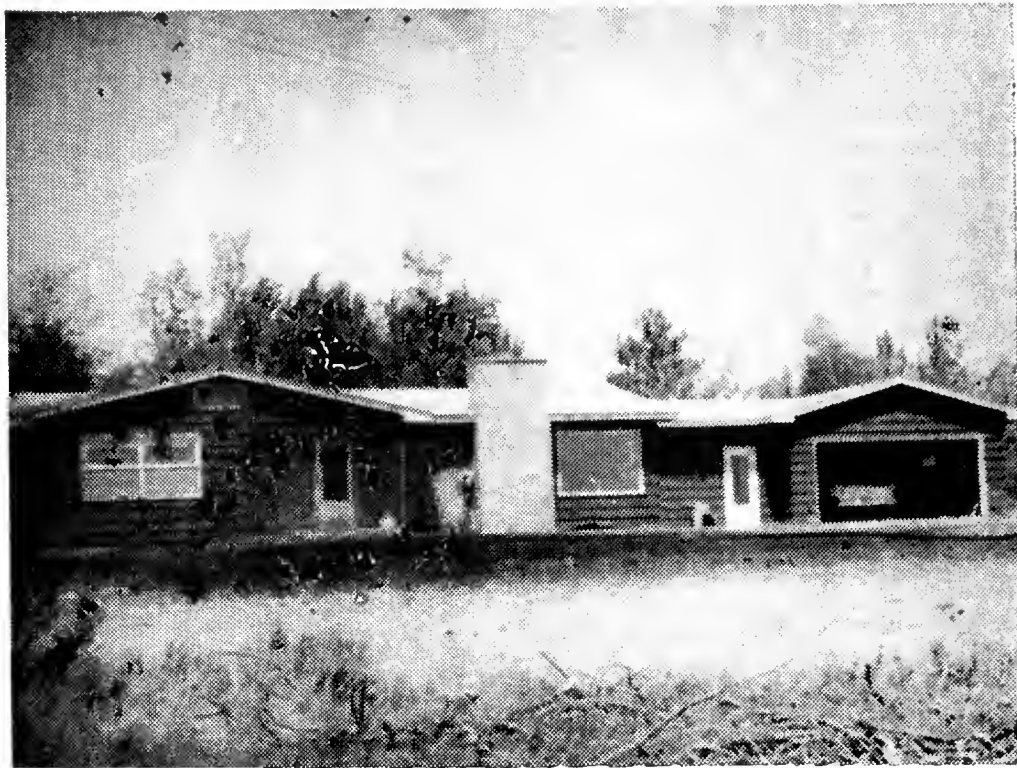
Mr. Gross is a graduate of the University of Wisconsin, is a life member of the Wisconsin Club of Chicago, USDA Club of Chicago and Federal Personnel Council. He is also a member of Tripoli Shrine Temple of Milwaukee, Masonic Lodge and Order of the Eastern Star of Necedah, Wisconsin.

## CRANBERRY HIGHWAY

Continued from Page 19)

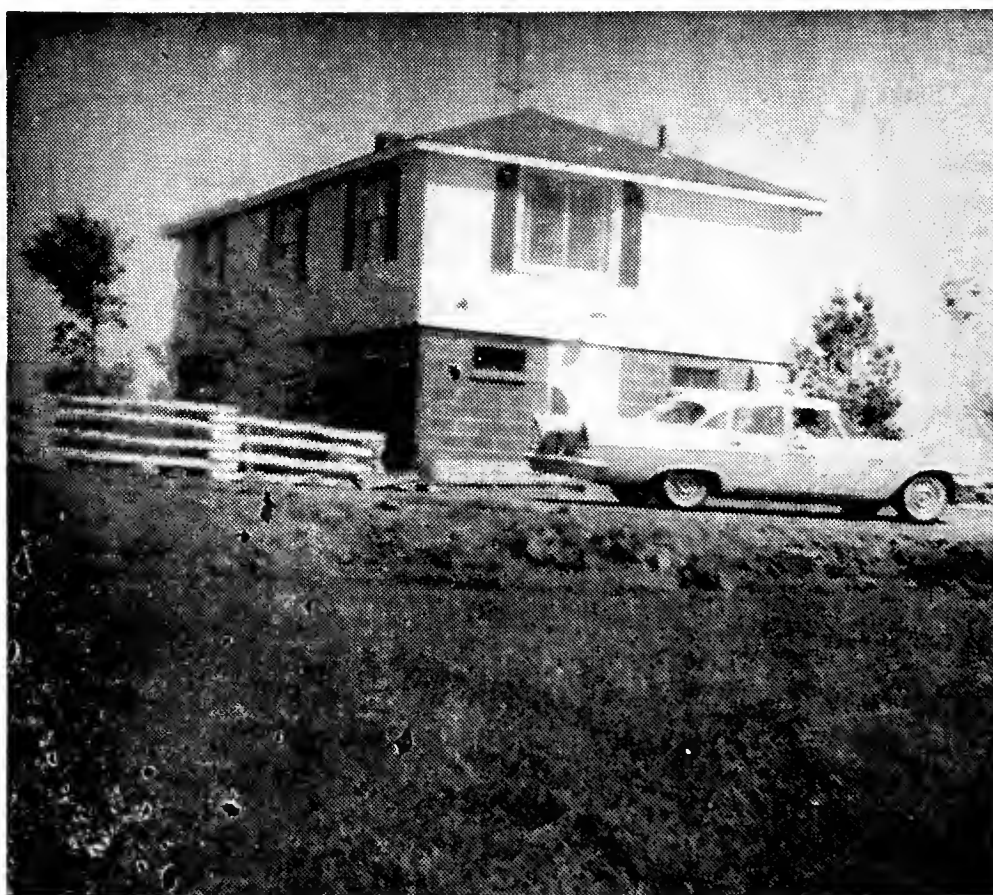
where free men may still withdraw from the tension and turmoil of competitive striving. And as we live from day to day in a world which advances in scientific achievement and becomes more efficient in its conquest of the forces of nature, let us always remember that only from Thee do we possess the means which are favorable to our success, and that only through Thee do we labor in the works by which our happiness in association with one another is sustained.

"We rejoice today in the heritage which is symbolized by this road. We have called it 'Cranberry Highway'. Thus do we proclaim our indebtedness to Thee, O God, for the abundant vegeta-



New home of Richard Indermuhle at marsh-side.

(CRANBERRIES Photo)



Marsh-eye view of the Koller home, beneath which runs flooding canal.

(CRANBERRIES Photo)

tion whose luscious fruit has found so many uses and brought to us such great measure of material prosperity. Preserve in us, loving Father of us all, a right intention in our every undertaking, and shield us from every danger in our pursuit of earthly advantage. May all who pass over this road

find Thee ever at their side; and may they be lifted up from contemplation of its loveliness and its historic associations to deep and lasting appreciation of Thine own infinite beauty and goodness, Who livest and reignest forever and ever. Amen."

## CRANBERRIES IN NORTH AMERICA

(Continued from Page 18)

achusetts just over 41, the Pacific Coast just over 70, and Wisconsin just under 80. In Wisconsin's best year, 1956, the state average for Searles was 103 barrels per acre

The author has attempted to give you information mostly from the surveys made in the different growing sections. The author hopes that this series of articles has brought information to you and that you can better understand the changes which have occurred in the past and those which are to come. There is information from experiments, observation, and research in other fields which were not reported in the surveys which will appear in later issues.

### *Cranberry Day On Nantucket July 15*

In cooperation with Nantucket's 300th birthday observance this summer, National Cranberry Association is sponsoring Cranberry Day, July 15, at the height of blossomtime on the "Big Bog".

Activities are being arranged in cooperation with the new owners of Nantucket Cranberry Company, considered the biggest cranberry bog in the world. A public tour of the big bog is scheduled from 9:30 a.m. to 4:00 p.m. when busses will carry passengers from Nantucket town through the moors to the cranberry bog. Displays of cranberry equipment will be set up in the screen house and Cranberry Juice Cocktail will be served.

A short tour by surrey from the screen house to the pump house will show the use of water on cranberry bogs and a demonstration of crop dusting is planned, weather permitting.

At its peak, the 1,141 acre tract had about 235 acres under cultivation, but producing acreage has diminished to 90 at the present time. Nantucket Cranberry Company's new management plans to improve production on the present bearing acreage and eventually rebuild the biggest bog up to its past glory.

Robert C. Congdon is president of the new management and associated with him are Albert L. Silva, Albert F. Egan, Jr., Richard Corkish and Kenneth C. Coffin, Jr., all businessmen of Nantucket Island.

### *Soaking Mid-June Rain In Mass.*

A heavy, but much needed rainfall occurred generally over the Massachusetts cranberry area, beginning morning of the 12, and continuing until the morning of the 15th, with a few scattered showers after that. This was a really soaking rain depositing 1.77 inches at Cranberry Station. It was welcome as conditions were becoming dry. Total normal June rainfall is 3.21 for the month. Subsequent rains had brought the total to 3.93, or more than normal total by the 18th.

### *Dean Sieling Mass. Resigns*

Dale Seiling, dean of agriculture at the University of Massachusetts, well known to Massachusetts cranberry growers through his frequent association and interest in the industry has resigned. He is to assume a posi-

tion as scientific director of the Army Quartermaster's Research and Scientific Command. Dr. Seiling was director of the Massachusetts Experiment Station and Extension. He will assume his new post in July.

### **PROF. TOMLINSON'S SON WINS HONORS**

George S. Tomlinson, 17, son of professor William E. Tomlinson of Massachusetts Cranberry Experiment Station and Mrs. Tomlinson has been accepted at Boston University of Liberal Arts and will enter in September.

He is the recipient of a scholarship, and a graduate of Bourne High School, living with his parents at Standish road, Sagamore Beach. He has been active in 4-H work and was elected to membership in the National Honor Society in his junior high year.

Prof. Tomlinson, an entomologist was stationed in New Jersey before going to East Wareham.

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## Round Up Of Crop Prospects

With reports from the various areas, it would appear the total U. S. crop will not be abnormally large, but plenty can happen between now and the time harvest is completed. Massachusetts does not seem to be headed for an exceptionally large crop. Maybe around a normal production which is about 550,000 barrels. Reports from Wisconsin indicate that there will be a good production there, especially in the northern sections, which were a bit light last year. New Jersey may have a somewhat larger crop than the average 88,000, possibly 100,000 barrels. Washington prospects would appear rather bright, from all over that state, which is now in third place in production. Oregon may be about normal.

As of June 12 there was indication that prospects were a trifle brighter in Massachusetts than earlier expected. Frost loss for the spring was chalked up at the Cranberry Station as practically nil. Insecticide actively was being well controlled, although there may be considerable trouble from fireworm.

The whole situation may perhaps be summed in with the state-

ment there will be a sufficiency of cranberries in 1959 to meet public demand.

### Late Wisconsin

Dr. George L. Peltier informs that up to the middle of June good weather conditions had prevailed in Wisconsin, with no bad frosts. Hooking he describes as generally good to excellent; a few blossoms were opening by the 15th with bumble bees working on the beds.

First brood of fireworm, light to severe depending on previous treatments. Some tipworm; a few yellow heads, span worms and leafhoppers. If subsequent conditions are favorable he looks for a final crop above average.

Dr. Peltier also informs us that amino triazole will not be allowed this year, except for post-harvest treatment as last year.

#### HOW TO BOIL A FROG

The way to boil a frog and have him happy and content all through the process is to give the heat to him a little at a time. If you bring your water to a boil and pitch your frog into it he'll jump out when the heat strikes him, that is, if he's an intelligent and lively frog. So put him in luke

warm water. He'll relax and take a nap. When he wakes up, the water will be warm but not yet real hot. Mister Frog yawns and goes back to sleep. Then you increase the heat, but always by sharp and sudden changes. Finally, the temperature is really hot and you will boil your frog and he won't even know it.

The amorphous process they call inflation seems to us to be like that. Little by little, the dollar becomes smaller and smaller. If at one time and sharply half the dollars a man had were taken from him, that would cause the frog to scream and to jump out of the water, perhaps. But it all happens so gradually and a little-by-little! And our reaction to the slow-boil treatment is very much like the frog's. (Food Marketing In New England)

### Bandon In Oregon Centennial

Bandon, Oregon, that cranberry growing city in the southwestern coastline is taking its special part in the state-wide centennial of Oregon. This began in June and will continue, with probably the banner event, "Pioneer Days August 1.

### Doehlert Retires In New Jersey

Charles A. Doehlert, who has headed the Cranberry and Blueberry Research Laboratory at Pemberton, New Jersey, is to retire at the end of this month. He succeeded the late Charles S. Beckwith.

Mr. Doehlert has been at the Laboratory for 28 years and prior to that, three years in the Editorial Department at Rutgers University, New Jersey Agricultural Station.

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## WISCONSIN NEWSLETTER

Our congratulations to the Wisconsin State Cranberry Growers Association, particularly on its monthly "Wisconsin Cranberry News," a newsletter which began volume one, number one in May. This is edited by Prof. G. C. Klingbeil, extension horticulturalist, department of horticulture, University of Wisconsin, who is the new secretary and treasurer of the group.

It contained reports on cranberry legislative matters, details on frost warning service, herbicides, fertilization, special weather information, a report, "Around the State," and other features.

In a note in this first issue President John M. Potter urges more active participation of members, as "we have a growing industry and we need to—plan its activities and future development." Committees have been appointed to plan meetings, to take action on legislation, to plan state fair activities, and to obtain new members. Present membership is 95, which is described as by no means 100 percent.

From several sources in Wisconsin we have heard lately that there is much interest in putting new life into the growers group. More power to it or any state association which puts on new vim and vigor.

---

## CALMING PLANT NERVES

They were reported to help plants withstand the strains of weather, such as light frost, dry weather, long heat waves and too heavy rain. They reach the plant via its leaves; they give heavier yields according to preliminary experiments. Tranquilizers can be applied in two ways, sprayed on at blossom time or by earlier spraying. The first method helps blossoms withstand bad growing conditions. The latter method seems to help increase the number of blossoms.

Plant regulators are being tried out on cranberries at least in the Washington State Bog. Results seem possibly promising.

---

CLARENCE J. HALL

Editor and Publisher

EDITH S. HALL—Associate Editor

Wareham, Massachusetts

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Barnstable County Agricultural Agent  
Barnstable, Mass.

---

### New Jersey

CHARLES A. DOEHLERT

P. E. MARUCCI

New Jersey Cranberry and Blueberry Station  
Pemberton, New Jersey

---

Before we realize it we will be **picking**—in about ten weeks or so. Harvest is only that far away.

What are our prospects as to size of crop and size of price received. It is far too early to make even a rough crop estimate, but most growers in Massachusetts are talking "down;" in Wisconsin, second producer, bud is reported as spotty in the various far-flung areas. Washington may be high. This could be a smaller year. But, there is the bugaboo of the NCA hold-over pool.



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# Cranberry

CRANBERRY MAGAZINE



Cranberry Clinic In Massachusetts (See Page 2)

(Cranberries Ph



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## Annual Cape Meet August 18th

Annual meeting of Cape Cod Cranberry Growers' Association set for 10 a.m. Massachusetts-Cranberry Experiment Station, August 18 will center around an all "cranberry growing" program. President Ferris C. Waite will preside and station experts will speak in their various fields.

At noon there will be a chicken and cranberry barbeque, very popular the past year or so. An invitation has been sent to officials of the Massachusetts Department of Agriculture and it is expected many of them will attend including the commissioner of agriculture, Charles H. McNamara.

There is much interest this year in the equipment display and there are a large number of exhibits, including Wiggins helicopter. Crop statistician C. D. Stevens will give the preliminary forecast and officers will be elected.

### OUR COVER

Growing season clinics are frequently held in Massachusetts at appropriate intervals that Cranberry Station experts may discuss and instruct in weed, insect or other control matters. They are held at convenient locations and are largely attended by growers wishing up-to-the-minute information.

Clinic pictured on the cover shows part of the gathering at a meeting at State Bog, with Prof. "Bill" E. Tomlinson, entomologist instructing on insect control.

### MEDICAL CRANBERRY SEED TO SO. AFRICA

Vernon Goldsworthy of Cranberry Products, Inc., Eagle River, Wisconsin is to send one pound of cranberry seed (*Vaccinium Macrocarpon*) to South Africa. The seed was requested for medical purposes by Mrs. S. M. Greer, Standerton, Transvaal, South Africa.

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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



## Season now Normal

One of the warmest Mays in history was followed by one of the cooler and wetter Junes. Temperatures in June averaged better than 3 degrees per day below normal and rainfall for the month at the Cranberry Station measured 6.71 inches, or over twice the monthly average of 3.21 inches. Our season, which was reported in June to be a week or so ahead of last year, is now (July 13) believed to be about normal. We have been concerned with the cloudy, wet weather experienced during the first three weeks of the blooming period. However, bees appear to have been active between showers as the berries are "setting" nicely on most bogs. Joseph Kelley pointed out earlier this month the importance of having hives of bees around our properties as extra insurance for a good set of fruit. Unfortunately, the demand for bees exceeded the supply due to the rather heavy mortality of bees during the winter months.

## No June Frosts

Frost damage this spring appears to be negligible; however "umbrellas" were common on a number of bogs, indicating that damage could have been substantial if temperatures had dropped another degree or two on these particular bogs. For the first time in several years no frost warnings were released in June. This is a bit unusual as the number of June warnings has been increasing in recent years. A total of 13 warnings were sent out this spring compared to 19 last year, 19 in 1957, and 9 in 1956. George Rounsville handled the frost forecast work in his usual capable manner. We are also in-

debted to the weather observers, telephone distributors, the four radio stations, and the U. S. Weather Bureau personnel for the important part they played in this service. The system for receiving the frost messages, including the explanation of terms used in the warnings, has received favorable comment and will be continued.

## Fungicides

The cool weather experienced in June did add two points to our final keeping quality forecast, making a total of 5 points out of a possible 18 which favor good keeping quality fruit next fall or one point more than in 1958 and 1957. It is apparent that the odds this year do not favor good keeping quality unless corrective steps are taken. We are referring of course to the proper use of fungicides. The unusual number of rainy days occurring during the

blooming period made it extremely difficult to treat the bogs with fungicides at the proper time. However, a substantial number of acres were sprayed and it will be interesting to observe the results.

## Insects

With the exception of fireworms and possibly sparganothis fruitworm, insect activity in general has been relatively light, at least up to the fruitworm season. Fireworms have been unusually troublesome and have occurred on bogs that have been reasonably free from this pest for a number of years. Considerable second-brood activity has been observed on a number of bogs which indicates that these bogs may require treatment next spring, since many of the eggs of the second brood of fireworms do not hatch this year but carry over until next spring.

We want to emphasize again the importance of checking bogs every 3 or 4 days from about mid-May to early August for the presence of insects. The hand lens and insect net are still standard equipment for locating the types and numbers of pests present so that proper control measures can be taken. A little extra effort with these tools will enable growers to properly time their pesticide treatments which is the real key to

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effective pest control.

Growers are reminded again to heed the warning outlined at the bottom of the insect and disease control chart. Too many are still exposing themselves unnecessarily to **parathion** and related chemicals.

Ditch weeds are becoming a real problem on many bogs. Effective chemical treatments have been developed, including a new treatment found in the present weed control chart. Reference is made to the use of **amino-triazole** plus **dalapon** for general weeds and is effective even with standing water in the ditches. There is no residue problem involved with this particular treatment because the dalapon in the mixture prevents berry development. **Sodium arsenite** is another effective material for general ditch weeds, but is a deadly poison and must be used with great care. The grassy-type ditch weeds can be checked with **No. 2 Fuel Oil** but the ditches should be drained for best results.

There is a definite place for greater use of weed clippers on many properties as a means of reducing the shading effect of these weeds over the cranberry vines.

#### Amino-Triazole

One final note on weed control is called to the growers' attention—a flash card on the use of amino-triazole was mailed to growers through the county agents' offices following the cranberry clinics held in early July. It is extremely important that every grower receive this information and heed the warning. For this reason, it is repeated again:

**"AMINO-TRIAZOLE** - Growers attending the recent cranberry clinics were told that there was no possibility of a tolerance being established for the use of amino-triazole during the growing season. Recent developments in the testing of this chemical prompted the chemical companies concerned to withdraw their applications for

a tolerance before the Food and Drug Administration denied their request. This means very simply that we have no approval to use amino-triazole during the growing season. After harvest treatments are still cleared and will remain so as long as tests show no residue. In fact, results have in general been more satisfactory at that time of year.

It should be clearly understood that any berries picked from vines treated with amino-triazole this year contain a residue and therefore can be condemned. Any such berries found in our screen houses could result in the complete loss of all berries in that particular greenhouse. Careless or irresponsible action on the part of one grower could result in perfectly innocent growers losing their entire crop."

#### 72nd Annual Meeting

The 72nd Annual Meeting of the Cape Cod Cranberry Growers Association will be held Tuesday, August 18, at the Cranberry Experiment Station beginning at 10 a.m. Guided tours of the State Bog will be held to inspect some of the insect, disease and weed control work, the seedling plantation and experiments in water management. Equipment displays will be another feature. The popular chicken-cranberry barbecue will be served at noon. The afternoon program will include a report of station staff members and will conclude with a crop report by Mr. C. D. Stevens. Incidentally, the crop reporting forms will be mailed out from Mr. Steven's office in late July. An accurate crop estimate is vital to the success of our marketing programs and we know growers will cooperate by returning their monthly crop estimates. President Ferris Waite invites all cranberry growers and their families to attend this meeting.



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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of July 1959 - Vol. 24 No. 3

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FRESH FROM THE FIELDS

Compiled by C. J. H.

## MASSACHUSETTS

### June, Miserable Weather

June has been noted by poets and others for its perfect days. But that wasn't the case in South-eastern Massachusetts, this June, that is for the residents. It was, however, characterized by Dr. Cross, Cranberry Experiment Station as "perfect for cranberries."

It was one of the rainiest, gloomiest, foggiest, dampest and coolest of Junes on record. The weather hampered bog work.

### Extremely Wet Month

Rainfall as measured at the State Bog was 6.71 inches or slightly double the norm of 3.21. There was recordable rain or traces on 14 of the 30 days. At Boston the precipitation, of 8.63 inches came within a half inch of shattering the 87-year history of weather recording and was second only to that of 1931.

### Temperatures Very Cool

The temperature at the end of the month was a minus 70, or more than two degrees a day below average. The final day was a perfect summer one, one of two or three of the entire month, with a maximum temperature of 92 in the shelter at State Bog, but humidity - for a change - relatively low.

### Adds Points to Quality

The weather kept the bogs moist, it retarded bloom and the work of insects. Although June was wet it was cool and that added two badly-needed points to the keeping quality score.

### Insects

About the only insect that was extremely active was the black-

headed fireworm, leafhopper millers were flying, as were sparganothis miller. A good deal of air control was practiced, mostly with sprays.

### Excellent Bloom

Bloom as July came was reported as excellent, almost everywhere. Even some of the vines which were damaged by the severe winter conditions were putting out buds and bloom. Perhaps a third of the acreage was in flower on July first.

Because of the cold, wet June the season was late, possibly a week or a little more. So good was the bloom, however, it was said that if one-quarter set, there were

indications (quite to the contrary of conditions in May) for a good size crop, although probably not a really "big" one. A guess might be hazarded that production may approach the 600,000 mark.

## NEW JERSEY

Extreme weather conditions during June kept New Jersey cranberry growers more than a bit anxious much of the month. After a very warm early first half of June, during which bog temperatures were in the high 90's and scattered hailstorms caused some worry, it suddenly turned very cool and there were

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frost warnings issued. The tender vines got by with only scattered small damage as the extremely low temperatures predicted for the 15th to 18th did not materialize. At the end of the month bog temperatures were near and over the 100° mark for five days and it was feared that blossoms would get "cooked".

#### Rainfall Normal

With the two extremes canceling each other out the temperatures averaged about normal, which is 71°F. The total rainfall was 3.33 inches, which is about a half inch shy of the June average.

#### Prospects Up

There remains very good prospects for a larger than average crop for New Jersey. Throughout the State bloom is thicker than usual and pollination is proceeding in good fashion. A better than usual effort was made against the early season cranberry insects, with much interest being evinced in airplane spraying.

### WASHINGTON

The month of June was, on the whole, fairly warm and free from frost. Temperatures have been low enough to require sprinkler protection on two occasions. June 12th and 14th, the minimum for these two days was 31 and 32° respectively. Except for these two days the temperature had not been below 38°. The maximum temperature was 70° on June 18th. There was very little difference in day and night temperature (from 10 to 15° between the daily maximum and minimum) most of the month. There were several stormy periods with rain, and quite a bit of cloudy weather.

Cranberries at end of month were about 50 to 75% or 80% full bloom. As in the past years, there would have been better pollination conditions if the temperature were higher. Along with these rather mild temperatures there were high humidities. Both of these conditions combine to make the pollen remain damp. Generally have, in spite of this, a fairly good set of berries. Most of the bogs have a fairly heavy bloom

and the crop on the whole should be good.

The first brood of the black headed fire worm has come and gone with very little damage to the bogs in this area. The moths are flying now and probably will have a second brood about the time full blossoming season is

over. The black headed fire worm remains major insect pest with the cranberry fruit worm coming in second. Occasional outbreaks of weevil and occasional injury from lecanium scale. Lecanium scale is rather easily controlled by parathion application. One interesting

(Continued on Page 17)

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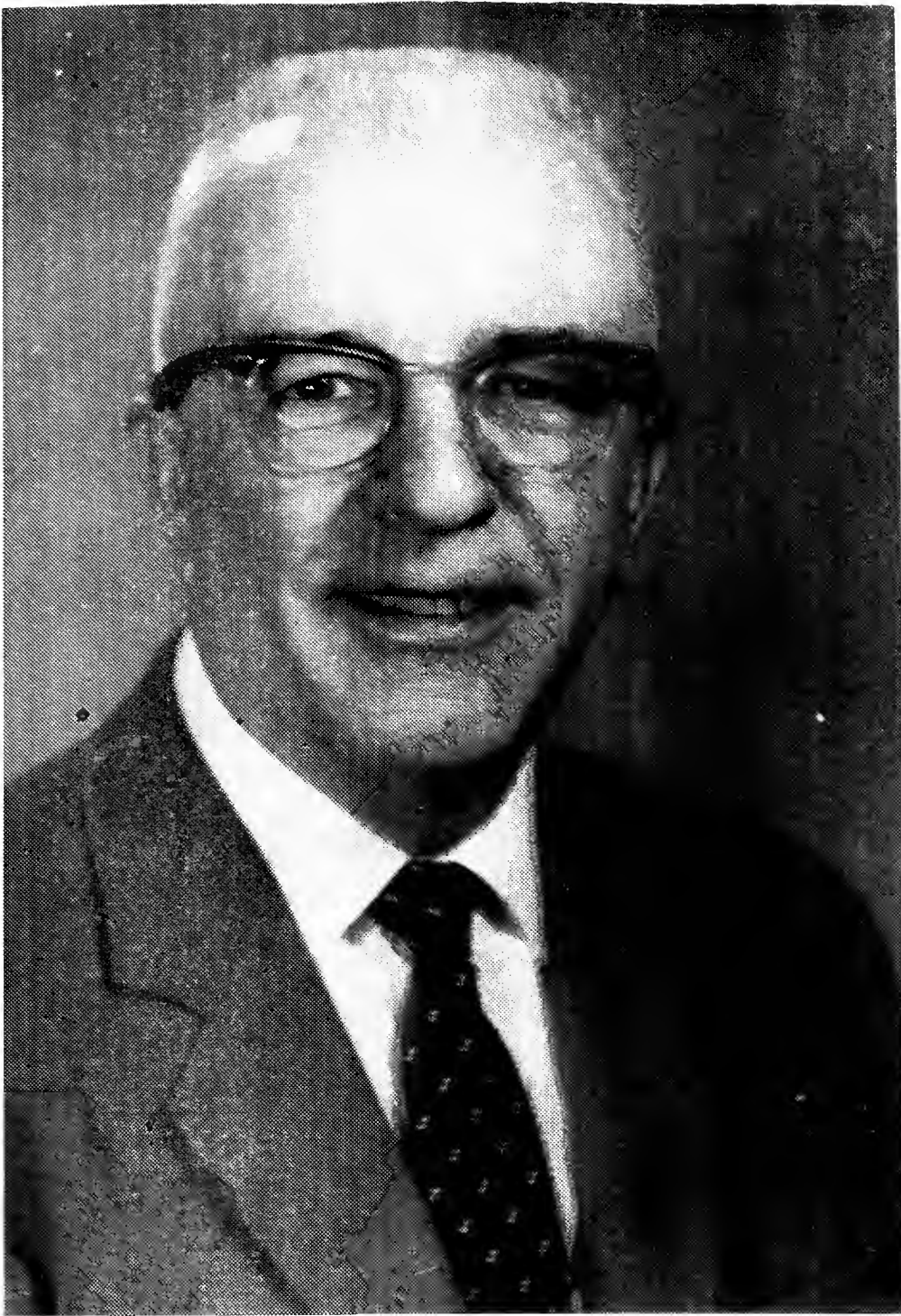


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had moved to Northhampton with his family when very young. During the First World War he was a member of the Signal Corps, but did not get overseas.

**Began County Agent Work  
38 Years Ago**

He came back to graduate at Smith's Agricultural School at Northhampton and also to be graduated from the University of Maine. In 1919 he was agricultural instructor at Concord High, Concord, Mass. Then he was agricultural agent in Washington County which is the most easterly county in Maine, that easternmost of the States. The chief cash crop of the area was the blueberry, the low-bush native variety. There he helped promote three co-operative canning factories. Then he was county agent in Essex to the north of Boston and then came his entry to Cape Cod and cranberries work.

He learned of cranberries, and largely from that best of instructors the late Dr. Henry J. Franklin, so long director of the Massachusetts Cranberry Experiment Station. He conferred with "Doc" and both agreed that growers should take more scientific interest in their profession of cranberry cultivation.

But, perhaps this may be best told in the direct words of Mr. Tomlinson, himself.

"One of the first things that impressed me and the Cape Cod Cranberry Growers Association was the need of doing something about controlling the spread of false blossom disease, and you may recall that we carried on an effective three-year campaign to educate growers as to the menace of this disease, and also effective control measures.

"I believe during the course of the three years, every person that was in the business of growing cranberries, learned about control measures and the need for controlling the blunt-nosed leaf hopper.

"I was in the habit of attending practically all the meetings of the Cranberry Association, but I noticed that comparatively few growers from Barnstable County were in attendance, and I decided

**BERT TOMLINSON, RETIRING, CAPE.  
"FATHER" OF CRANBERRY CLUB IDEA**

**Came to Barnstable County, Mass. as County Agent in 1924**

It was on August first way back in 1924 when Bertram Tomlinson came to Cape Cod as county agent of Extension Service for Barnstable County; July 31st of this year he retires. During that intervale he has done much to improve cranberry knowledge, not only on the Cape, but over a much wider field, and of course accomplished service to other Cape producers than those of cranberries.

As a matter of fact, he deserves more than anyone to be called the father of the cranberry club idea, now spread across the nation.

That these long years of service have been recognized is proven by honors he has been enjoying recently. These have included a dinner held in the Pilgrim Congregational Church, Harwichport. This was attended by a good representation of friends, co-workers from the University of Massachusetts, and most of the county Agent-Managers of other

counties. Members of the Cranberry Station staff were in attendance. At the close of the ceremony David Crowell, Chairman of the Board of Barnstable County Trustees, made the presentation of a gift.

Born in present Newton Heights, near Boston, "Bert" Tomlinson knew little of cranberries when he came to the Cape. He



to try to stimulate their interest in cranberries by having local meetings.

#### Cranberry Clubs

"In consultation with local growers, the idea of organizing cranberry clubs was developed, and in 1935 we established the upper and lower Cape Cranberry Clubs. These met with immediate success, so it seems that meeting in the evening, and starting with a supper, there was a fine opportunity for sociability before the education features of the program commenced, which was usually around 7:30 or 8 o'clock.

"These meetings were so popular that many of the growers came down from Plymouth County, and shortly thereafter, Cranberry Clubs were formed in that area. In fact, the news spread rapidly, and shortly afterwards, Cranberry Clubs were formed in New Jersey, Washington and Oregon. At the time, I thought these clubs might serve the purpose and last for five or ten years, but I have been rather amazed to find them still in existence and going strong.

#### Control Charts

"I remember very early in the work with cranberry growers, I recognized the need of putting out clear-cut directions for their insect control, patterned after spray schedules that had been in use for our fruit growers, in other parts of the state. I remember requesting George Short, who was our first part-time extension worker, to keep in mind the need of preparing an insect control chart. It took about three years to work something practical in shape, but finally through a series of grower committee meetings, we had something that had the support of Dr. Franklin, and Barnstable and Plymouth Counties joined in establishing the first cranberry pest control chart. Later similar charts were prepared by New Jersey and Wisconsin, but for many years I believe, it was the practice for these growers to use charts prepared here.

"I believe we had been preparing these insect control charts for five or eight years, when I determined through a cranberry sur-

vey, that our growers were having as much difficulty controlling weeds, as they were with insects. This work was reported at a spring meeting of the Cranberry Growers Association, and resulted in that association allocating five hundred dollars to start a research program on weed control. The following summer a botanist was employed (I believe, from Bates College), and after a few years of summer work, enough progress was made to warrant the work being put on a full-time basis, with Dr. Chester Cross in charge.

"In due time, enough information was assembled to make a weed control chart possible. Still later, there was expressed the need for fertilizer information, and this information was put in the form of a chart, easy to use by growers.

#### Marketing Angle

"While most of our extension work involved production problems, we were not entirely unconcerned with the marketing of the fruit, and as you know, I was always enthusiastic about the great possibilities of developing the market for processed berries in the form of cranberry sauce, cocktail or any other way that would make them easy to use by the consumer. While I believe growers should do all possible to maintain high quality and sell as fresh berries all that the market would take at a reasonable price, a study of consumer trends, convinced me some time ago that processed foods were showing tremendous increases.

"I believe the present marketing program is on a very sound basis, and have been pleased to note the gradual increase in the returns made to cranberry growers.

"It seems to me that our entire farm business is undergoing a tremendous evolution. The trend is toward larger units per farmer or grower, and the use of more labor-saving devices. The cranberry business is no exception. All our farm enterprises are now becoming highly specialized, and the farmer who wants to be a success, must not only be highly skilled in his particular specialty, but he

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must be a good manager. He must know his cost of operation and keep in a competitive position at all times."

As to future plans, Tomlinson, has no definite ones, except that, with his "green thumb", he will take more care of his garden at his home at South Yarmouth, perhaps enlarge it; take better care of his home grounds. Then, too, as with every busy man retiring he says there are a multitude of "small things," he has been waiting to do. "I'll have no trouble keeping busy," he asserts.

## SUCCESSOR

Succeeding Mr. Tomlinson as Agent - Manager, Barnstable County Extension service is Edward H. Knapp, who is now serving as 4-H County Club Agent and head of that department in Middlesex County Extension Service. Mr. Knapp will be in general charge of extension work and in addition will be handling the 4-H division.

Oscar Johnson will continue to carry on all horticultural projects, including cranberries.

## Communication

To the Editor:

I am much interested in the small article about Alaska Lingen berries in the June issue of your magazine.

The north american lingenberry is *Vaccinium Vitis-Idaea* L. variety minus Lodd. It grows naturally and without cultivation on rocky or dry peaty acid soil throughout subarctic America. It is found in Greenland, all across Canada into Alaska and in the colder regions of eastern Asia. At no point does it grow any further south than the mountains of New England where I have collected many baskets of the berries.

Now this american lingenberry (also called the "mountain cranberry", the "rock-cranberry", "cowberry", "lingen", "lingenberry", or in Quebec "Pomme-de-Terre",) is a small berry, usually much smaller than the "pieberries" of the cran-

berry growers. It occurs in clusters of 2 to 6 at the ends of tiny branches. The berries do not color uniformly - the side facing the sun attaining a good cranberry red color while the underside is still green. In fact, they are apt to resemble the "green butts" which sometimes plague the packer of "early-water" fresh cranberries.

Perhaps the greatest surprise to one familiar with our crisp, juicy and acid cranberry, comes in tasting a raw lingenberry. It is dry! These mealy, acid or slightly bitter things are good only when made into a sauce or relish. Perhaps because they are not juicy, they are phenomenally resistant to frost, and because of this are said to be superior in taste after overwintering on the vines and when gathered at melting of the snow.

In any case, their small size and the consequent difficulty of picking any quantity of the berries makes them a specialty product of no great commercial promise.

Finally, the american lingenberry is a small variety of the true species of *Vaccinium Vitis-Idaea*, the true lingenberry of Scandinavia and northern Europe generally. Our variety of lingen has smaller leaves, smaller ber-

ries, shorter stems and lower stature than the typical variety of Europe. To some, this small lingenberry may have "more flavor and color" than the American cranberry (*Vaccinium macrocarpon* Ait.), but every year I see and eat vine-ripened Early Black cranberries which to my (prejudiced?) eyes are darker and more uniformly colored, and which to my taste are far more poignantly flavorful. In addition, they are juicy enough to make a very delicious, healthful and zestful drink.

I cannot agree, Mr. Editor, that "The lingenberry is a variety of cranberries". But in spite of all this, my best wishes to Mrs. McPherson and Arctic Alaska Berries. Incidentally, does she harvest in the fall or in the spring when the snow melts?

Sincerely,  
Chester E. Cross  
Head of Department  
Mass. Cranberry  
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# WHAT IS THE FUTURE OF THE CRANBERRY BUSINESS?

By Frank P. Crandon

First, I want to say I have been in the cranberry business for 55 years. I have seen many changes, both up and down during this period.

In the early years, all cranberries were sold fresh. They were shipped in 100 lb. barrels, later in ½ barrel boxes, then ¼ barrel boxes and more recently in 1 pound cello bags and window boxes. All of these changes were brought about by changes in the marketing field. In most instances these changes happened, it cost the grower more to get the crop to the consumer. At the same time the national crop has been increasing. We now have had three consecutive crops of over 1,000,000, and the prospects are for still greater increases than decreases. We have learned how to produce faster than the consumer is buying which brings about a surplus. Most of agriculture is in this same position.

Now what are we going to do about it?

Everybody interested in the cranberry business has a part in the problem we are facing. We are producing faster than the consumer is buying. How can we get the consumer to buy more? To me this is the job of the advertising and selling department of the agencies marketing cranberries. The whole industry is not doing it's part in the advertising and promotion of cranberries. This is short sighted in my judgement. I personally would not sell a berry to an agency that does not take a part in advertising and promotion of cranberries.

What can the growers do?

The grower should realize he has to grow cranberries of quality and be able to do so at a net return to him of \$11 to \$12. I believe this can be done with good bog management. If we in the cranberry industry were paid on quality of fruit delivered rather than quantity, it would be one step forward. The public demands quality at a reasonable price

today. We are obligated to pack quality. **4**

The saying that a poor quality berry makes a good sauce or a good drink is not correct. If we want to increase our sales we must supply for fresh or processed the best quality berries possible to obtain.

I have been in several other fields of agriculture and when I packed quality the net returns were greater.

(Editor's Note: Mr. Crandon is a former president of National Cranberry Association and currently a director.)

## Wisconsin To Dedicate Marker At Growers' Meet

Annual summer meeting of Wisconsin State Cranberry Growers' Association, Saturday, August 8, 10:00 a.m. at the Roy Potter Marsh, west of Port Edwards will have a special feature this year. This highlight will be the dedication of a cranberry memorial marker. Dedication will be by Gaylord Nelson, governor of Wisconsin. Arrangements for the dedication are being made by the Wood County and State historical societies in co-operation with the grower's association.

This is a tribute to the cranberry industry, with historical incidents concerning it going back to 1829. Marker is on route 24 near the Potter Marsh.

Speakers at the business meet-

ing will discuss weed control, show weed control plots, discuss developments in frost warning, disease control and other items of interest to growers.

Machinery and equipment manufacturers and dealers have been asked to exhibit near the Potter warehouse area. Lunch will be served at noon.

## SPRAYER-STOPPER

Charlie Lewis of Shell Lake Wisconsin, widely known throughout the industry says he knows every square inch of his sprayer—seems he was in the midst of a timely spray application when suddenly the sprayer lost pressure.

He cleaned and repaired all valves, all gauges, all regulators, etc., and still no pressure. After much cussing and discussing, he started on the pipelines. This is what came to light—the foreman's wrist watch.

Seems he had lost it last summer. Now I don't know what brand of watch he had, but it must have been a dandy, for, after a year's soaking in solvent Bordeaux, weed sprays, and who knows what all, it ran as good as new when he wound it. (Wisconsin Cranberry News)

## READ

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## ***Vinton N. Thompson Named Acting Director Jersey Market Division***

**Widely-Known Grower Gets Full-Time Position with Dept. of Agriculture—Will Still Supervise "The Birches"**

Vinton N. Thompson of Vincentown, New Jersey, well-known grower, has been appointed as Acting Director, Division of Markets, New Jersey Department of Agriculture. While he will devote his full time to the new position he will also direct the affairs of the "Birches," the Thompson properties near Chatsworth in Burlington County.

These interests operate 125 acres of cranberries of which about 100 are in bearing, the other 25 being replanted over the past few years, a few acres of blueberries, about 100 acres of farmland and about 12 of woodland.

Vinton, born in Philadelphia, January 12, 1923 has been a vice-president of Growers' Cranberry

Company, Pemberton, 1948-1955, now an independent selling agency, but formerly affiliated with the late Eatmor Cranberries, and a director of National Cranberry Association, 1950-1953.

He attended Vincentown elementary schools and Pemberton High, 1936-1940. In college, Cornell University, Ithaca, N. Y. 1940-1944 he majored in agricultural economics (fruit and vegetable marketing) and has a B.S. degree. His college activities included football, Student Council, Cornell Religious Student Board Scarab (Ag-Hotel Honor Society), president Council 4, chairman senior class day committee; Sigma Nu Fraternity of which he was treasurer and business manager. He was instructor in Agricultural Economics 4, Sage Chapel Associates, Cornell-in-China Club and ROTC.

He enlisted in the Reserve Corps October 5, 1942 and served to May 22, 1943. He was in the U. S. Army from May 23 to June 14, 1944. He also served from June 15, 1944 to October 1946. He is in the United States Army Reserve as an officer, entering that in 1946.

His military assignments included Troop Movement officer at Fort Lee, Virginia as second lieutenant and as training specialist at Fort Lewis, Washington.

From January to June in 1945 he was stock control officer, European Theatre as first lieutenant. From July to December 1945 as labor efficiency officer, Manila, P. I. In 1946 he was in class I, supply officer at Manila, with rank of captain. From November to the present he is executive officer, 387th QM, BN, Camden, New Jersey as Major.

His military education included quartermaster candidate school at Fort Lee and quartermaster technology school at Chicago, this latter a graduate level course including the procurement, manufacturing and marketing of food products. In January to March of 1955 he was at the quartermaster depot supply school, Fort Lee and in May of 1955 attended the national resources conference,



New York, N. Y.

He has been manager (and partner) of the Birches Cranberry Company at Vincentown since 1947. He is business agent of the Ernest M. Haines Estate at Vincentown and an executive director Rural Advisory Council, New Jersey Department of Agriculture since 1957 to date.

He has been and currently is engaged in many other activities, these including; executive committee member, Burlington County Board of Agriculture. He was president in 1957 and 1958. He is a member of the New Jersey Water Police and Supply Council, beginning last year. He is also a member of the New Jersey Cranberry Industry Advisory Committee, starting in 1954. He is a member of the camping committee, Burlington County YMCA since 1955.

He is a member of the troop committee, troop 31, Boy Scouts, Burlington County. Also a member of the Southhampton Township board of education and was vice president in 1957 and president in 1958-59.

Also a member of the Southhampton and Tabernacle Township Taxpayers's Association; was leader of Vincentown YMCA Boys' Club, 1953-'58. member of the Military Order of the Loyal Legion of the United States, 1940 to date. He is a member of the New Jersey State Farm Bureau and of Vincentown Grange P. of H. No. 67.

He is associate director, New Jersey Federation of Official Planning Boards and of Burlington County Girl Scout Advisory Committee. Other groups to which he belongs are the Burlington County Planning Advisory Committee; New Jersey Agricultural Society; New Jersey State Advisory Committee for Vocational Agriculture and of the Cranberry and Blueberry Research Advisory Committee to the New Jersey State Agricultural Station.

Since 1951 he has been a deputy warden, New Jersey forest fire service.

Thompson is the author of five magazine articles on farm sub-

jects which appeared in the New Jersey Farm and Garden Magazine in 1958. He also authored "Report on Progress of Rural Planning and Zoning in the State of California," published by the New Jersey Department of Agriculture last year.

Also "New Jersey's Changing Rural Scene," in New Jersey League of Municipalities Magazine in May of this year. He is the author of "Farms and Open Spaces Saved by Greenbelt Zoning Jersey Plans" in the spring issue of this year of the New Jersey Department of Conservation and Economic Development publication.

Thompson was married to Iris Marie Coville in June 1944 and the couple has three children, Vinton N. Thompson III, 12; Lydia M. Thompson, 11 and Patricia M. Thompson. His home is in Vincentown.

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## ***County Agent Wash. Turns To Be Grower***

Ralph E. Tidrick Montesano, who has been county agent in Washington and author of the interesting "Cranberry Vine" newsletter has turned cranberry grower. He has resigned from his position and has bought the Leonard Morris cranberry bog on the Peninsula.

Leonard C. Morris, a widely-known grower has been a director of NCA since 1948. He has now resigned from that position and at the Peninsula Cranberry club Norman Brateng has been elected his successor for the National Board.

Tidrick had been with extension service for 9 years working closely with growers in Pacific and Gray's Harbor countries. He was raised on a farm near Kalama, Washington and was graduated from Washington State College in 1950. He served as a radar operator during World War II in an anti-aircraft battery on the battleship West Virginia.

His wife, Donna Lee, is a native of Willipa Valley and was ac-

tive in 4-F as a member and leader. Both are interested in youth and hope to work with them as soon as they have learned the ropes of the cranberry business. They have one daughter Nancy 6.

Mr. Morris (CRANBERRIES April, 1950) had long been a leader in West Coast cranberry affairs, taking great interest not only in cranberry cultivation, but in marketing affairs. He bought his first cranberry property in 1924. He was one of the larger growers with considerable acreage. His bogs are irrigated and protected from frost by sprinklers.

He is a native of Alva, a village in the Cherokee Strip which was in the western part of Oklahoma where he was a rancher and wheat grower. He made many trips to various cranberry areas, particularly Massachusetts as a director of National.

He has retained possession of the old Litschke place near Long Beach, next door to the home they have been occupying and plans to remodel this for their future home and will put in a new bog nearby.

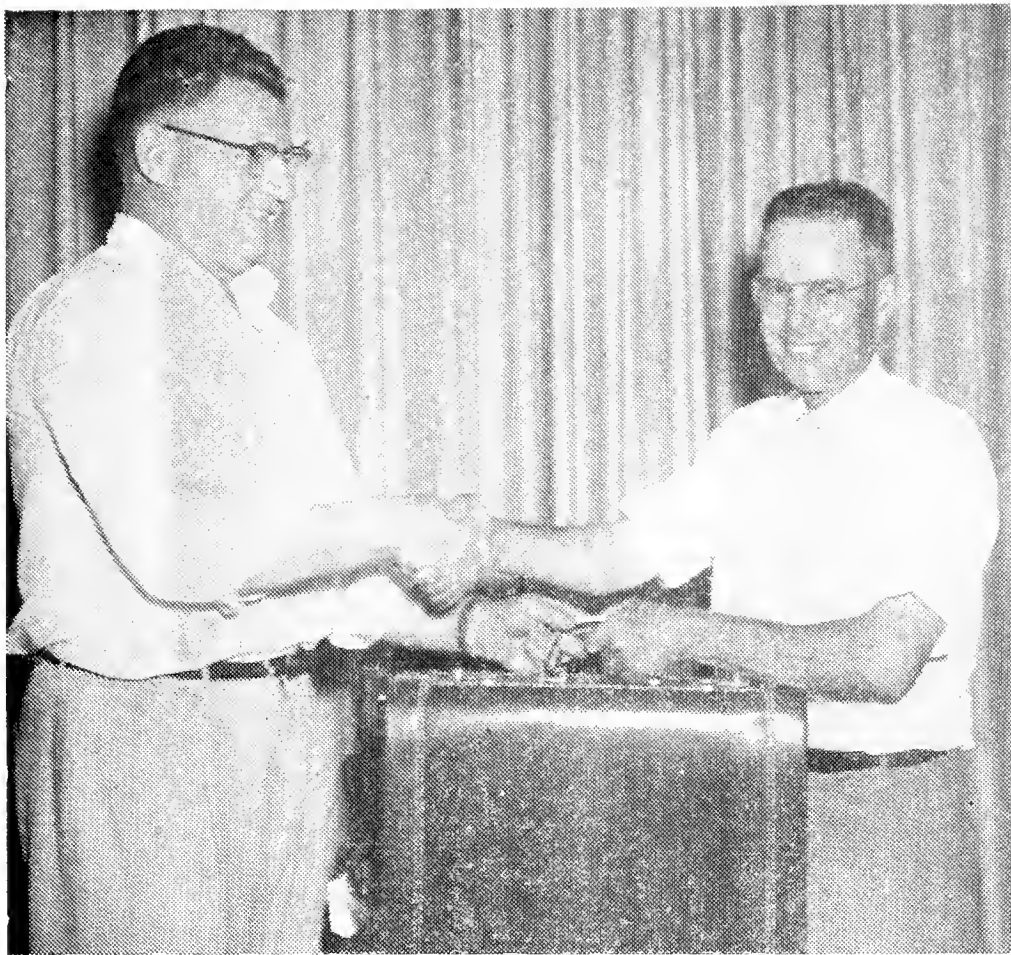
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## ***Name New Acting Dean Mass. College Of Agriculture***

President Jean Paul Mather of the University of Massachusetts has announced the appointment of Fred J. Jeffries as acting dean of the College of Agriculture. He succeeds Dr. Dale Seiling, whose resignation was announced last month.

Jefferies is currently serving as director of the Stockbridge School of Agriculture and associate dean of the College of Agriculture.

He began his new work July first and will continue for an indefinite period. He will also serve as director of Extension Service as did Seiling, and as such will be in contact with Massachusetts cranberry growers.



Charles A. Doehlert (right), receives a set of luggage from colleagues in the Department of Horticulture at Rutgers University as he retires as research specialist from the Cranberry-Blueberry Research Laboratory in Pemberton. Making the presentation is Dr. Norman F. Childers, chairman of the department.

## ***Doehlert With Jersey Cranberry And Blueberry Work 38 Years***

### **Couple will remodel 1775 Quaker Church Into Home for Themselves**

Charles A. Doehlert who has retired as associate researcher at the Rutgers University Cranberry and Blueberry Research Laboratory at Pemberton, New Jersey came to the laboratory March 1, 1930. From 1921 to 1924 he had been assistant editor and acting editor at the New Jersey Agricultural Experiment Station.

Some of his most interesting research experiments have included:

Working on the problems of scooping. Previous to the use of mechanical pickers, Jersey experimental tests showed that the injury to vines by scooping as compared to hand picking was due more to the attitude of the workers and the foreman on the job than to the scoops themselves. Getting the desired attitude is difficult. Therefore it was evident that what was needed was a mechanical devise that automatic-

ally provided a constant protection to the vines.

He worked in developing a flight pattern for uniform airplane distribution of fertilizers on cranberry bogs. This resulted in greatly increased use of fertilizers for cranberries. Finding was that fertilizing June 15 (even as little as 100 pounds per acre) resulted in large berries; fertilizing August first was found to increase the set of fruit buds and fertilizing in October strengthened the fruit buds so that their flowers set more and larger berries.

It was found that fertilizer, up to 21 pounds of nitrogen per acre did not cause any increase in fruit rot of cranberries, and that in mid-winter a dosage of rotenone per acre would give the first control of blueberry fruit fly, with applications by aircraft.

He developed faster ways of pruning blueberries.

He worked in organizing the search for the vector of blueberry stunt disease, accomplishing the first transmission of the disease with a mixture of blueberry leafhoppers. A seven-year test demonstrated that the roguing of diseased plants twice a year can keep the spread of stunt disease arrested. Philip E. Marucci and William E. Tomlinson, Jr., the latter now at the Massachusetts Cranberry Experiment Station, carried the larger part of the job of isolating the vector and working out its control, so that the control of blueberry stunt disease was established in a relatively short time. Martin T. Hutchinson assisted in the finishing touches.

For the immediate future he, and Mrs. Doehlert, the former Irene Nielson of Metuchen (teaching in the Jobstown public schools) plan a unique project. They will be busy completing the job of adapting a 1775 Quaker Meetinghouse into their home. This venerable landmark is on the Columbus-Mt. Holly road.

The Doehlerts have three children; Charles Jr., is a specialist in internal medicine at Madison, Wisconsin; David is an industrial statistician with E. I. Du Pont at Newark, Delaware and their daughter, Margaret is a junior at Swartmore College.

Doehlert succeeded the late Charles S. Beckwith, as chief researcher. Doehlert says, "I shall certainly miss the daily association with many growers and the stimulating contact with research workers in New Jersey and other stations. We will welcome visitors and friends who stop in at our new home."

Mr. Doehlert is a member of Phi Beta Kappa and Sigma Xi honorary fraternities; the American Society of Economic Entomologists and the American Society for Horticultural Science. He is secretary-treasurer of the American Cranberry Growers' Association. From May 1930 until 1943 he was editor for the New Jersey Mosquito Extermination Association.

## Onset Tours Open For The Summer

Summer travelers on Cranberry Highway, Southeastern Massachusetts are invited to visit the Ocean Spray processing plant at Onset for a cranberry tour. Tours opened July 6 and will continue week days through September 3, Mondays, Tuesdays, Wednesdays and Thursdays from 1:00 to 3 p.m. and on Fridays from 9 a.m. to 11 a.m. and 1 to 3 p.m.

Guides are Virginia Whelan of Middleboro and Buzzards Bay, Beverly and Diane Sullivan (twins) Wareham, Janis Weaver, Marion and Mary Lou McNearney, Middleboro.

This is the second year of Ocean Spray's summertime plant tours and last year as many as 750 visitors a day followed the route of the cranberry from freezer to shipping case.

The "Welcome" shop has a new front and has been freshly painted inside and out under the planning of Miss Jean Griffin of the Cranberry Kitchen. Mario Lince, plant manager, has had a movie theatre set up inside the plant where "The Cranberry Story" will be shown to the public every weekday. There is also the Cranberry Museum with cranberry tools and equipment of yesterday and today, also open to the public.

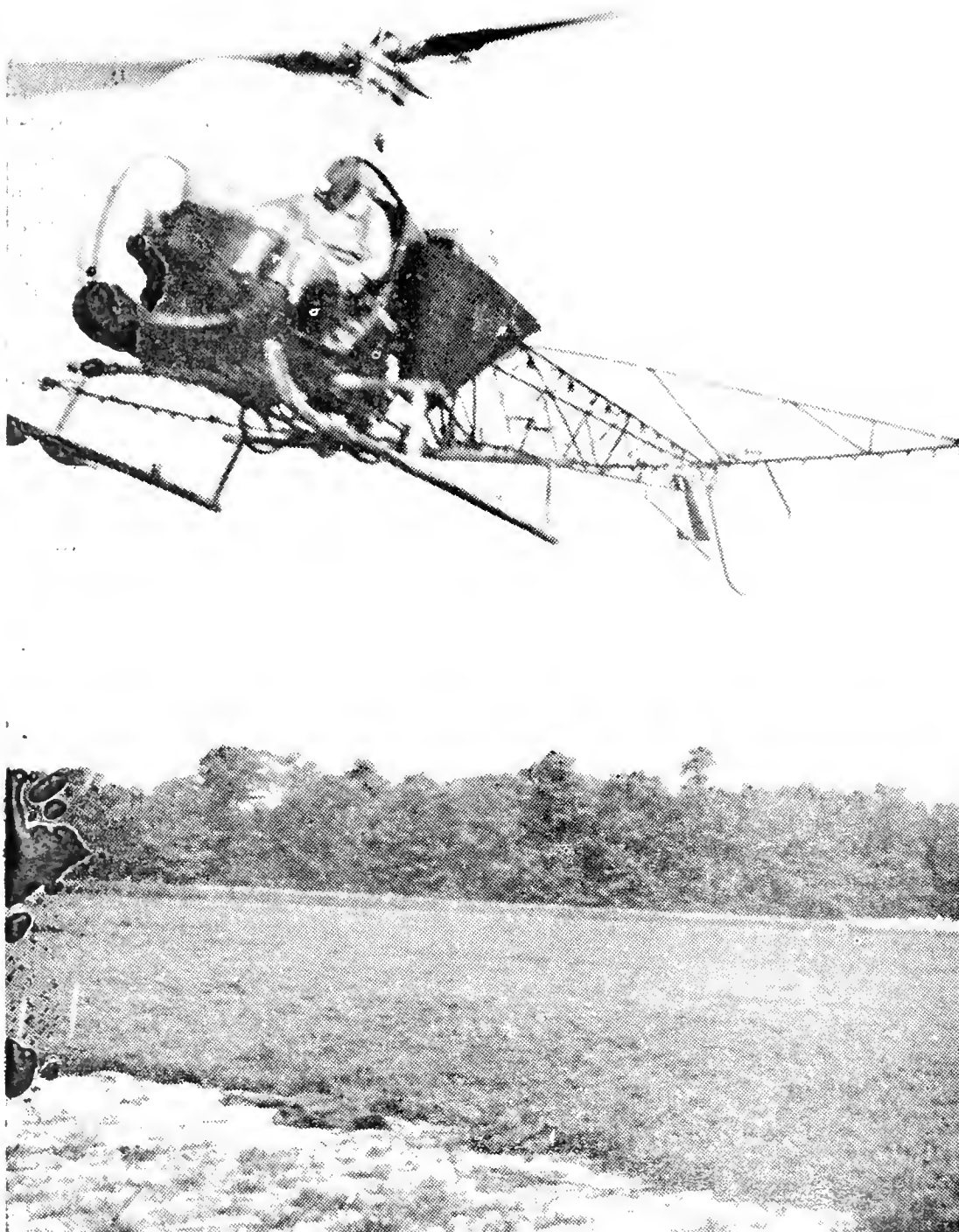
### NATIONAL PAYS ANOTHER DOLLAR

Ocean Spray growers received June payment of \$1.00 per barrel on cranberries harvested last fall. First payment on 1958 berries was \$5.60 per barrel at the time of delivery to Ocean Spray receiving stations, and a second payment of \$1.00 a barrel was mailed to growers in March. The June payment brings total returns to date up to \$7.60 per barrel.

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## ***New Bog Buggy Designed At Mass. Station***

Prof. John S. Norton, head of the engineering department at Massachusetts Cranberry Experiment Station has designed an all-purpose "bog buggy." This, with a ditch digger and a separator of a non-bounce type are expected to be on display or demonstrated at annual meeting of Cape Cod Cranberry Growers Association, August 18th at the State Bog. Norton describes the experimental bog vehicle as follows:

The experimental bog vehicle is being designed and built with the main purpose in mind of providing a means of transportation of heavy loads on the bogs that will do a minimum of damage to the vines. For example, it is hoped that a payload of four yards of sand or 500 gallons of spray material, or 100 boxes of cranberries, might be transported on the bog without injury to the vines. It is also hoped that the vehicle will be able to span ditches up to 3 feet wide without bridging.

It is emphasized that this vehicle is strictly experimental. It is neither inexpensive or light in weight. It weighs approximately 5500 pounds. There will undoubtedly be a number of shortcomings become apparent as the machine is tested. However, efforts will be continued to overcome these problems as they appear.

The basic design of the machine centers around the theory that a wide belt with closely spaced support rollers would distribute the weight of the vehicle and its load over a large area just as the track on a track-type tractor does. Thereby reducing the unit pressure on the vines.

The belt on the machine is 4 feet wide and the drive rollers are 10 feet on center. This provides a contact area of 40 square feet or 5760 square inches. With 4 yards of sand the weight per square inch will be approximately 3 pounds. The support rollers are 9 inches apart. This spacing of the support rollers will undoubtedly-



Front view of experimental bog buggy, designer John Norton in operator's seat. (Cranberries Photo)

ly permit some concentration of the load under each roller with a lesser amount of the load being supported by the belt between the rollers. The degree of this load concentration has not yet been determined.

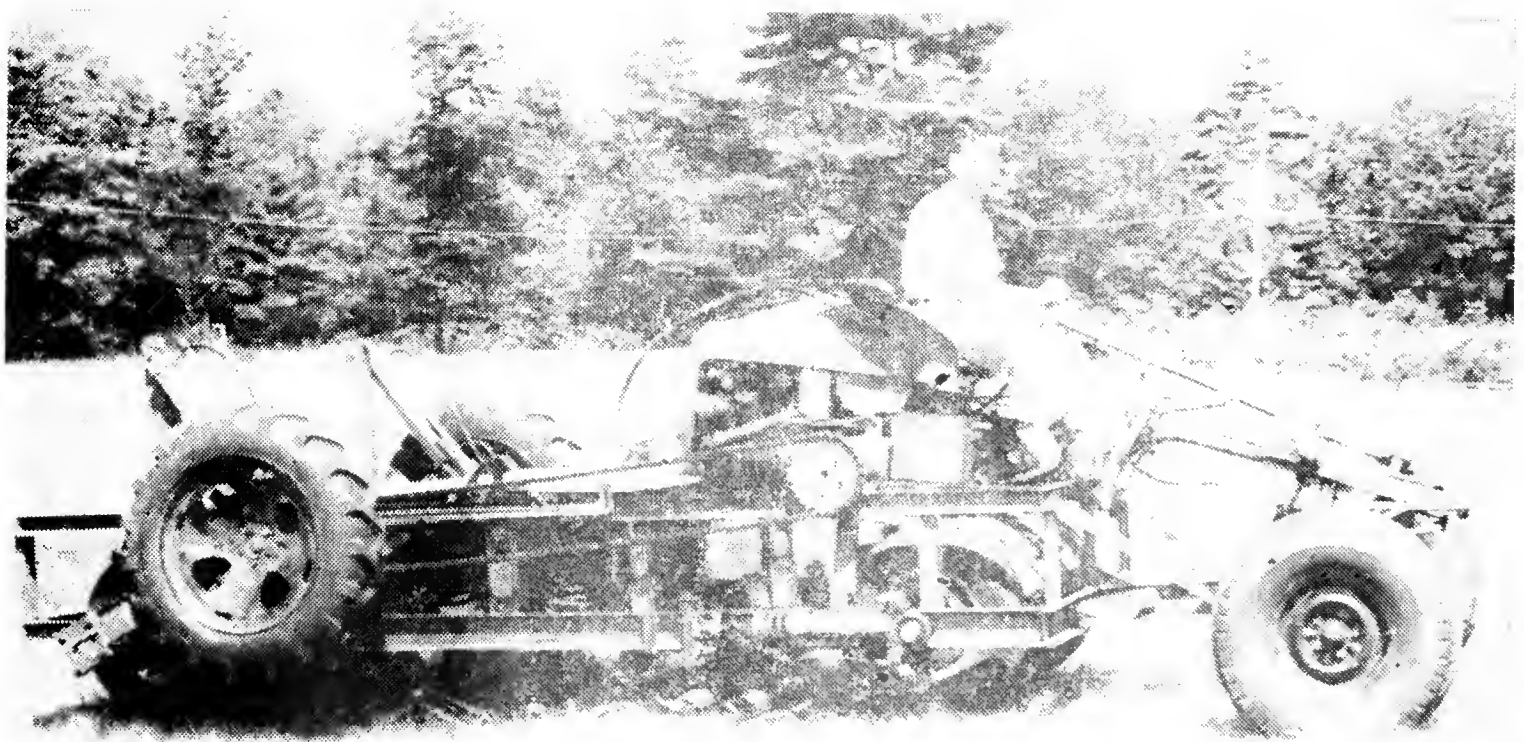
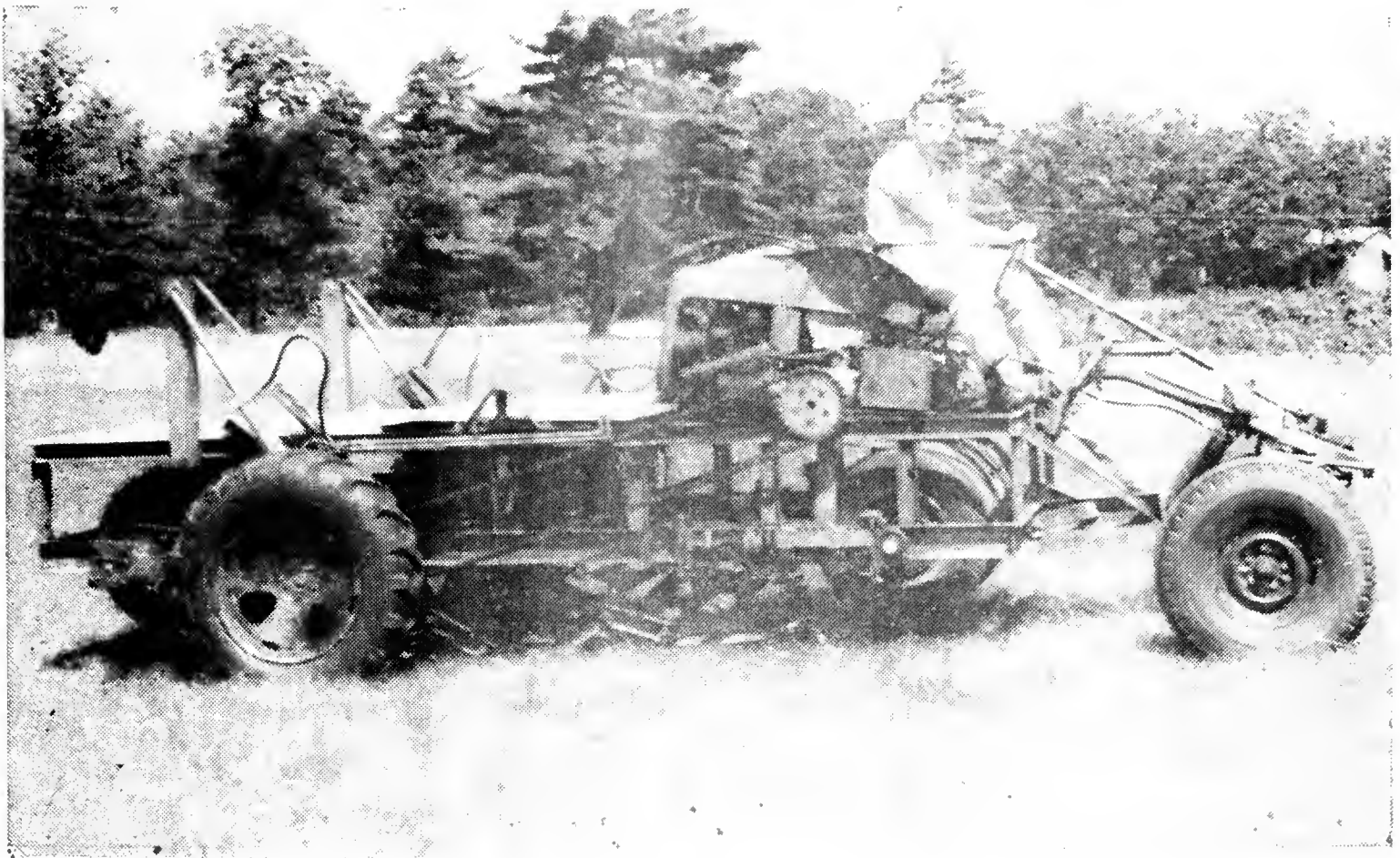
The machine is 18 feet long with the clear deck to the rear of the tractor engine being 8½ feet long by 5¼ feet wide. The four wheels are necessary to provide maneuverability. For operation off the bog and for turning, the wheels must be lowered and the belt raised off the ground. The support rollers are allowed to follow the contour of the ground

through the system of springs and linkages to which they are attached. The power unit is an Allis-Chalmers Model G tractor.

If an engine of sufficient power but with a shallow enough depth to mount between the upper and lower runs of the belt can be obtained to replace the Allis-Chalmers, the machine could either be shortened and lightened or five feet more length for payload could be made available.

**READ CRANBERRIES**





Side view of experimental bog vehicle with rear wheels down for turning. Lower shows the wheels up and the machine resting on the belt as in actual operations. (Cranberries Photo)

## FRESH FROM FIELDS

(Continued from Page 6)

thing becomes apparent when the commercial bogs are compared with old and abandoned cranberry bogs, we have been unable to find any lecanium scale on these bogs that have not been sprayed for a number of years. Contrary to this the commercial bogs that have been sprayed with DDT become infected with lecanium scale readily if applications of parathion are not combined. It would appear from this that there is a natural predator in these old bogs which apparently can be killed out by the use of the more effective insecticides.

### Improving Drainage

Much interest is present this year in improving the drainage and water control throughout the cranberry growing area, both in Long Beach and in Grayland. Systems of drainage are sought that will take off the excess water but at the same time will hold the underground water at a beneficial level. It is found that in these peat bogs if water is drained too deeply the peat deteriorates and sinks and makes a problem of the bog becoming continually lower. In previous years the drainage districts have made no effort to control the amount of drainage they have only worked to keep drainage ditches open. This work is being done with the aid of the Soil Conservation Agency.

## OREGON

### Cranberries In Centennial

Every county, town or community in Oregon is doing something in an old fashioned way to observe the Oregon Centennial year. Beards are flourishing, long handle-bar mustaches are very much in evidence among the male population, while the ladies occasionally break out in styles in vogue when grandmother was a girl.

Figuring in Centennial publication in Coos County history through the years often is featured photographs depicting the changes in the cranberry indus-

try, as well as other Coos County agricultural enterprises. It is very interesting to look back at pictures taken when all cranberry bogs were hand picked with each picker taking his row between two tightly stretched strings across the bog. A grower reminisces that he can remember providing an area around his home to park over sixty automobiles driven by berry pickers to his place. Now he harvests the entire crop alone.

Other such interesting stories are coming forth, such as the cranberry bog up in the Hauser area in Coos County which was supposed to have been established near the time Oregon became a state and was harvested by the Indians. It is still in production.

### New Cranberry Acreage

More recently we can report an interest in increasing cranberry acreage by various growers. The biggest new establishment is by Jack Dean and Bob Norton, who are working toward a fifteen acre addition to the present Jack Dean bogs. Other growers are expanding, too.

Lots of overhead sprinkling systems are being installed. This in part is a result of a water conservation program set up by the local ACP office, where it can give assistance to growers desiring to shift from flood to sprinkler irrigation.

This year the bloom on the vines looks good for this time of the season. The fruit set is o.k. and full bloom was the 4th of July, which is right on schedule.

Some fireworm infestation is reported, but the DDT and malathion recommendations, if applied timely, seem to hold the damage to a minimum. It is reported that more fungicides than ever are being used by the growers this season.

## WISCONSIN

### June, Warm, Humid

June was warm and humid. The month started with showers and above normal temperature, then entered a prolonged warm dry spell for over two weeks with

the last week in the month producing over half of the month's total precipitation. Temperatures ranged from four to five degrees above the normal of about 66 degrees. Precipitation was the heaviest in southwestern Wis. and lightest along the eastern sections of the state. The central and northern areas had 50-75% of normal. The rains the last of the month were badly needed as drought conditions were developing. This also gave the vines a good soaking into bloom. Warmest day was the 9th when the temperatures reached 96 degrees in northeastern Wis. and coolest was the 16th and 9th when temperatures dropped to the low 20's in the same general areas. The outlook for July is for abnormal temperatures and below normal rainfall. Averages for the month are about 70 degrees and 3½ inches of rain.

### Early Bloom

The warm humid month with

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Information Contact

**TONY JONJAK**  
**HAYWARD, WISCONSIN**

little frost flooding developed the vines so that a scattering of blossoms was noted on some early young vines the first of June. This was the earliest for many years. Had it not been for the rainy cool weather the later part of June all varieties with the possible exemption of natives and Howes would have been or past full bloom by the first of July.

#### Prospects Look Good

Crop prospects looked very good at the end of the month and with no severe rains or hail developing in that storm period, it was felt by most growers that little if any damage had been done as far as set was concerned. Early set looked remarkably well and if the season continued warm the berries could expect to size well and color early, which was in complete difference with conditions last year at this date.

#### Some Northeastern Frost Loss

Some frost loss was reported in some northeastern marshes occurring on the early cold weather of June. While figures are not available it is estimated a total of four marshes were affected with a possible loss of thirty acres in total. This marks the fourth consecutive year that some economic loss to frost has occurred in that growing area of the state. In all instances adequate water supplies were on hand to afford ample protection. This loss will not affect the state crop by much.

#### Insects

Insects were light for the most part and controls appeared to be doing a good job. Weather conditions were favorable for dusting. The second brood fireworm millers and larvae were showing up the latter part of the month, which was about a week to ten days ahead of normal. Infestations were expected to be light. Fruitworm millers appeared late and in small numbers as of the end of the month. The writer believes the severe early cold weather we had last fall could have killed many of the pupating worms, as the worms were late

last year and were still feeding in October. Traps were being put out to check miller emergence.

### NOVA SCOTIA

#### Prospects Good

E. L. Eaton, senior horticulturist, Canada Department of Agriculture, Kentville, Nova Scotia says the general cranberry prospects are better than average, although there was a lot of damp weather, which on the Cape would have been conducive to poor keeping quality. He reports that very few bogs are receiving adequate care because of the price situation.

#### Prince Edward Island

He also reports some interesting plots of cranberries on Prince Edward Island, on relatively dry land near the shores of that Province. A combination of amino triazole and sulphate of ammonia has given excellent results. The past winter was severe from the standpoint of killing since these dry areas are not susceptible to flooding. He adds that with amino triazole, still unacceptable to U. S. Food and Drug except in post-harvest use it might seem no commercial expansion would be justified as a result of this successful research.

### LATE MASSACHUSETTS

#### Looking Up

As of mid-July the crop was looking up, excellent bloom, good set. Apparently it could be comparable to the second-largest of record, the 610,000 barrels of last season. In spite of a wet and cool June, bees were working well, vine and berry growth was termed extremely "lush and tender."

#### Insects Troublesome

Insects were becoming rather troublesome as the season advanced and control had not been helped by persistent, foggy and rainy weather.

In order they were fruitworm, tipworm, sparganothis, blackheads and leafhoppers.

#### Warmer

Up to July 13 temperatures had averaged 26 plus, or two a day, quite contrary to weather of June. To the 13th at State Bog there had been a total of 2.54 inches of rain, with the normal for the month 3.60. Of this precipitation 1.45 inches was due to the tail of Hurricane Cindy, which hit the Carolina coast earlier, passing New England out to sea. Some communities got more than 2 inches accompanied by high winds.

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## OF AN ANCIENT TRIBE

That cranberry juice was in use as approximately as early as the beginning of the Christian era, or some 2,000 years ago, was brought out in our last issue. This was in an article by Gilbert T. Beaton, writing in a series sponsored by the Cranberry Institute.

We trust this article was read and may be tucked away in the knowledge bin of cranberry growers. We do not believe that every fruit or vegetable can trace its lineage back that far.

It is true the cranberry juice came from the European variety of the cranberry and not the American fruit, *Vaccinium Macrocarpon* but it is still the cranberry. The fact of use was proven by the scientific study of a pouch found beside the body of a man in Denmark, preserved in a peat swamp. A number of years ago there was an article in CRANBERRIES Magazine, concerning an Indian chief, whose name was translated as "Cranberry Eater." He was active in the Middle Ages, perhaps about 1550.

Some day it may be discovered that American Indians used the American cranberry as early as did the man of Denmark use the European variety. Probably they did. At any rate it is proven the cranberry is no Johnny-Come-Lately in human consumption. We who deal in cranberries are truly of an ancient tribe.

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## SELLING, NOT PRODUCING

What the cranberry industry needs right now (as the possibility of another sizeable crop, plus hold-over looms up) is every effort toward selling. With all due respect to the difficulties of raising a crop, cultural problems are becoming licked. Does publicity help in selling? We believe it does, at least to an extent.

NCA is doing a good job at this, this summer in opening the Onset plant to visitors on escorted tours. It is a smart move. This is the second season of this. These visitors are more apt to buy cranberries in the future.

CLARENCE J. HALL

Editor and Publisher

EDITH S. HALL—Associate Editor

Wareham, Massachusetts

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Barnstable County Agricultural Agent

Barnstable, Mass.

---

### New Jersey

CHARLES A. DOEHLERT

P. E. MARUCCI

New Jersey Cranberry and Blueberry Station

Pemberton, New Jersey

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Also, while the Massachusetts Cranberry Highway Association, was not designed to aid cranberry selling, it will be of benefit. In fact the association capitalized on the name "cranberry" as an attraction to itself. Yet it is working out both ways, with a headquarters at Onset, various signs stating this is "Cranberry Highway," business establishments placing the address on their stationary and in advertising, there is bound to be more and more attention drawn to cranberries.



# SERVING THE WISCONSIN GROWERS

## National May Change Name To "Ocean Spray"

At the annual meeting of stockholders of National Cranberry Association, Hanson, August 19 a vote will be taken on a change of

corporate name. Board of Directors meeting recently recommended the name be "Ocean Spray Cranberries, Inc."

An affirmative two-thirds vote by common stockholders and an amendment in the charter and by-laws is required to accomplish the change.

It is pointed out by directors that the name "Ocean Spray," is so well known that it has been felt for some time that more advantage could be gained if the cooperative was always referred to as Ocean Spray rather than National.

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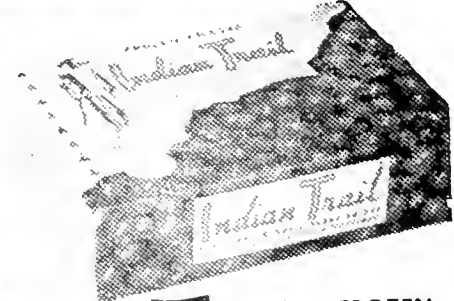


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EAGLE RIVER, WISCONSIN

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*[Faint, illegible handwritten text on the left side of the page]*

# Cranberry

CRANBERRY



TWINS, Beverly and Diane Sullivan are summer tour guides at Ocean (Onset, Mass.) cannery. See page 1. (Cranberries



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## Our Cover

The 17½ year-old twins, Beverly and Diane Sullivan, are among the guides who this summer took parties of vacationists through National Cranberry Association plant at Onset, Mass. Last year as many as 750 a day visited the "Welcome" shop and were shown through the plant, and in this, the second year of the tours, a larger attendance is expected before season ends.

The girls are the daughters of Mr. and Mrs. Walter Sullivan of Braintree, but live in Wareham with their grandfather Roy Hitchcock. They are June graduates of Wareham High School and in the fall plan to enter Fisher Junior College, Beacon street, Boston where both will study to be legal secretaries.

## JERSEY SUMMER MEETING AUG. 25

Summer meeting of American Cranberry Growers' Association this year was scheduled to be held Tuesday, August 25 at Clayton's Cabins near Barnegat, starting at 10 a.m. Meeting is usually held the last Thursday in August but the change was made for this year only because of a tour by the American Society for Horticultural Science in eastern Pennsylvania August 27 and 28.

Charles A. Doehlert, who recent-

ly resigned as chief of research staff at the Cranberry-Blueberry Laboratory, Pemberton, and was secretary-treasurer will continue as treasurer until the election at the annual meeting in February while Philip E. Marucci, also of the station will act as secretary until the election.

## NEW JERSEY BERRY STATISTICS

New Jersey Agricultural Statistics, issued by the New Jersey Crop Reporting Service show that last year 88,000 barrels were harvested on 2,500 acres in that state. Average yield per acre was 35.2. The total value was \$1,056,000 at a value per acre of \$422. Blueberries were harvested on 5,400 acres to the total of 1,404 trays, total value \$1,056,000 and \$663 per acre.

In 1957 78,000 barrels of cranberries were harvested on 2,800 acres, for a total value of \$936,000 and an acre value of \$334, average per acre, 27.9.

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### MORRIS HONORED FOR SERVICES

Leonard G. Morris, who resigned as director of National Cranberry Association after selling his 25-acre cranberry bog at Long Beach, Washington, last month was honored by fellow directors while at directors' meeting at Hanson, Mass. He received a barometer and weather forecaster. The gift was presented by David Pryde of Grayland, Washington and James Olson of Bandon, Oregon.

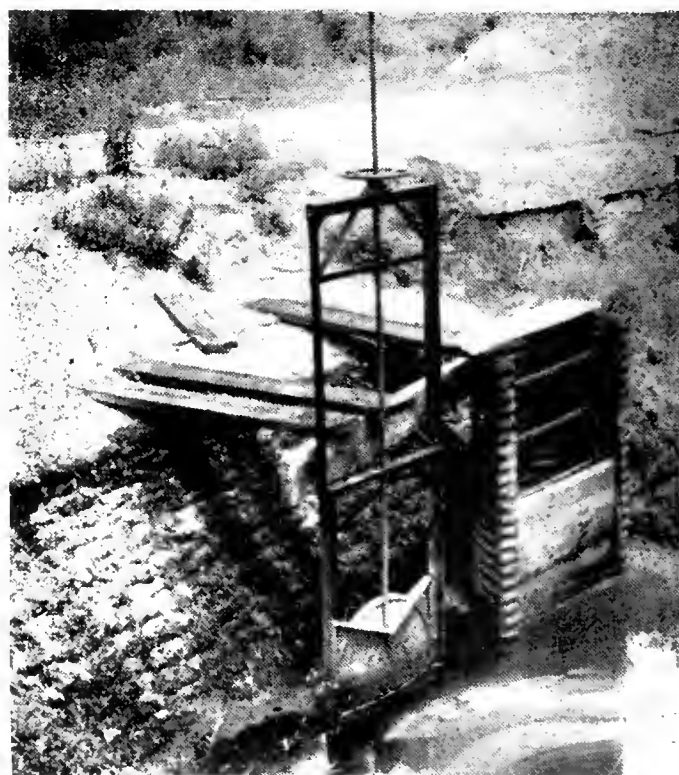
Besides the good wishes of the board, Mr. Morris received commendations for his contributions to Ocean Spray from Ambrose E. Stevens, general manager and executive vice president.

He will continue to be a cranberry grower and has recently planted three acres of new vines.

### Late Massachusetts

First of Month Dry and cooler

August for the first two weeks was dry and cooler than normal. Temperatures had averaged a minus 20. Rainfall as recorded at State Bog on the 14th was .97th inch with measurable precipitation on three days and traces on 3 others. Normal rainfall for the month is 3.60.



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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



## Joe Kelley

The highlight of the 72nd annual meeting of the Cape Cod Cranberry Growers Association held August 18 at the State Bog was the well deserved recognition given to Joe Kelley for his long and faithful service to the cranberry industry as he approaches his retirement this fall. The old expression that "it couldn't have happened to a nicer guy" expresses the feeling of his many friends. Much will be written in this issue of **CRANBERRIES** concerning Joe's outstanding service to his industry, but the writer would like to add his own personal tribute. It was largely under Joe's guidance that a very green Vermonter was trained in ways of our industry. His help, patience and understanding is deeply appreciated. Those who have had Joe as a teacher as well as the many growers that he has helped have tremendous respect for his practical, down-to-earth approach to bog problems and agree that they have yet to meet his equal in this regard. We all wish Joe and Mrs. Kelley the very best in the years ahead.

## The Massachusetts Crop

Massachusetts growers have produced another fine crop of cranberries, according to the estimate released August 18 by C. D. Stevens of the New England Crop Reporting Service at the annual meeting of the above association. Mr. Stevens placed the 1959 Massachusetts crop at 610,000 barrels which equals our second largest crop if this estimate holds up throughout the harvest. He also stated that the number of crop reporters have decreased from a record high of 238 in 1958

to 218 this year. While these co-operators represent 56 percent of the crop, more are needed. We sincerely hope that the next 3 monthly requests for this vital crop information will show an increase in the number of co-operators. Accurate crop estimates are necessary for the development of sound marketing programs and are a very tangible way in which growers can assist their marketing agencies. Berry size is reported to be average or better and present indications point to a harvest that is expected to begin shortly after Labor Day.

## Labor Problem

Adequate supplies of harvest labor is usually a problem and this year will be no exception. The Massachusetts Division of Employment Security will be recruiting labor as they have in the past. We understand that they will be

establishing field offices at the National Cranberry Association, now known as the Ocean Spray Cranberries Inc., in Hanson and in the Wareham and Middleboro areas. Their home offices in Brockton, Hyannis, New Bedford, Plymouth and Taunton will continue to serve growers. Those needing harvest labor should place their orders as early as possible.

## Quality Control Study

Another quality control study has been approved for our station this fall, making the fifth successive season that we have been engaged in this type of work. Our new project involves a study of the effect of zineb and phaltan, one of the newer fungicides, on the shelf-life of fresh cranberries. Last year's work was far from conclusive and pointed to the need for further investigation as to the value of fungicides as a means of extending the shelf life of fresh cranberries at the retail store level. Irving Demoranville, as usual, will be working with the writer on this project.

## Market Reports

Since 1954, a cranberry market report has been prepared by the Agricultural Marketing News Service in Boston. This weekly market report is issued during the fresh fruit season and furnishes

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growers and shippers with information on rail and truck shipments, prices in leading markets and helpful information on the condition of our crop. The Cape Cod Cranberry Growers Association sponsored this report and furnished their mailing list so that growers could receive this useful information. However, interest has declined to a point where only 28 growers are now receiving this report. We have requested that certain revisions be made in the format to make it more useful and have also asked that it be mailed out this fall to all members of the association plus any others that may be interested. If at the end of this season there is lack of interest, it will be discontinued. We felt growers were due this explanation.

#### Amino Triazole

There is a tremendous amount of interest in the use of amino-triazole after harvest this fall. Those planning to use this chemical would do well to consider the following points:

1. It should be confined to asters, nutgrass, panic grasses, white violets, and cutgrass as outlined in the weed control chart. In addition, rushes and some of the sedges can be controlled with this chemical.

2. Areas to be treated should be picked as early as possible in order that the weeds will still be green at the time of treatment.

3. Bogs to be treated should be flooded immediately after harvest to help revive the vines after the rough picking operation which in turn helps prevent damage from the use of amino-triazole. The bogs should then be drained for 24 hours before using this chemical. The "fall clean-up flood" is extremely beneficial to bogs.

Those bogs that lack water for this flood should not be treated with amino-triazole until about 3 days after harvest.

5. If there is danger of frost on bogs that are to be treated even though the crop is harvested, it would be well to flood in order to protect the weeds and keep them green.

Thin areas of bog that are to be treated with amino-triazole, should be fertilized later this fall or next spring in order to thicken up the vines which will help crowd out young weed seedlings that usually develop in such areas.

We are please to report that Robert Alberghini has returned to our station after 2 years service in the Coast Guard. Bob is a valu-

able member of our staff and we are most happy that he is back on the job.

READ

CRANBERRIES

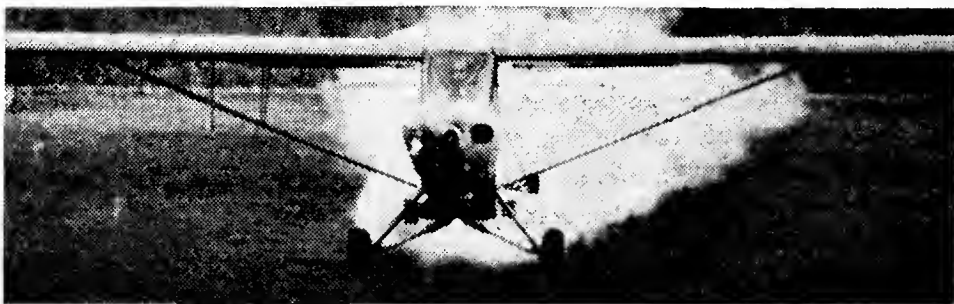
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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of August 1959 - Vol. 24 No. 4

Published monthly at The Courier Print Shop, Main St., Wareham, Massachusetts. Subscription \$3.50 per year.  
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FRESH FROM THE FIELDS

Compiled by C. J. H.

## MASSACHUSETTS

### Difficult Month

July 1959 was a most difficult one in many ways. There were more foggy nights and mornings than in an entire normal summer. It followed a rainy June—6.71 inches which all but shattered rain records in that month for the 87-year weather history, bringing a total of 5.04 inches with normal July rain 3.21. Yet it ended in the weird fashion of constant fog yet drought conditions beginning to prevail.

### Fog Yet Drought Conditions

Most of the rain occurred in the first and middle part of the month, there having been rain on 10 days with traces on two others. Last rain was on the 20th with only .01 and prior to that the 17, .15 inch.

### Hot Month

It was a hot month, extremely humid tropical, with a 77 degree plus or about two and a half degrees above normal. Clear, sunny days could be counted on one hand.

### Insects Hard to Control

So much rain, fog, haze raised havoc with insect control schedules. This is a bad insect summer through no fault of the growers. Blackheaded fireworm, in particular has been bad—it has destroyed some bogs entirely; spargonothis has been prevalent and fruitworm, as well.

### Much Fungiciding

Such weather conditions were also obviously good for fungous diseases, although growers applied much fungicide—and will probably be glad they did at end of season.

It was weather not conducive to good keeping quality.

### Berries on Schedule

At end of the month the coming crop seemed to be about on schedule, as far as early water was concerned. Late water, however was definitely retarded. The early water fruit promised to perhaps be slightly larger than normal on the whole. There should be picking in early September.

### Blueberries Good

The cultivated blueberry crop was ahead of last year, when it was late, and harvest was at its peak by end of July, first of August. The crop was reported as good.

## NEW JERSEY

Persistent and heavy rains throughout most of July made harvesting of blueberries extremely difficult. Heavy losses resulted from cracking of berries and excessive droppage. Cranberry growers suffered dam wash-outs in a few places but since the monsoon did not start until well after pollenation had been accomplished, damage to cranberries was as yet not considered to be serious.

At the Haines and Haines cranberry bogs at Hog Wallow upwards of 12 inches of rain occurred, while at the Cutts Brothers property a few miles closer to the

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shore more than 16 inches fell. The Colasurdo property at Mays Landing probably received even more than this. At the Cranberry and Blueberry Laboratory at New Lisbon it rained on 14 days and the total accumulation was 7.52 inches, about 3.20 inches in excess of normal.

#### Temperatures Normal

Temperature-wise the month was about normal, averaging 71.9° F. as compared to the norm of 75.6° F. There were only seven days of 90-degree weather, the maximum being 96° F. on the first of the month. The minimum of 48° on the eighth was the fifth coldest July temperature ever recorded at the laboratory. Since this is an upland station where the minimum is usually about ten degrees warmer than some nearby bogs, it is quite likely that there were readings in the thirties on cranberry bogs in New Jersey on July 8th.

#### Good Crop

Veteran cranberry observers are still looking for a good crop. The set has been excellent and fruit-worm damage appears to be light. Rot or "scald", which sometimes develops rapidly during hot spells in August, is the last impediment in the way of a better than average crop for New Jersey.

## WISCONSIN

#### "Old-Fashioned"

A real old fashioned summer continued through the month of July in Wisconsin. Temperatures were above normal with high humidity and very warm nights. There were no frost warnings issued during the month. Warmest day was 95 degrees the last of the month and the coldest was 37 degrees the middle of the month. Precipitation was deficient in most of the cranberry areas. Except for the northwest all other areas had 50 to 75% of normal rainfall. Rain fell over most areas during the first few days of the month and also on the 10th.

The remainder of the month brought very dry conditions and drought conditions were develop-

ing. Sand marshes had been irrigating and water was raised in most ditches. Reservoir supplies were beginning to drop due to evaporation and irrigation, but conditions were not considered serious. The outlook for August was for continued dry and above normal temperatures. Averages for August are 63 degrees and 3.63 inches of rain.

With the continued ideal growing season prevailing through July vine development continued about two weeks ahead of normal. Full bloom was reached in early July, set was better than average and berries were growing rapidly by the end of the month. Upright growth was stimulated due to the ideal weather and response from

(Continued on Page 13)

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## *Wisconsin Historical Makes Dedication Of Marker Honoring Cranberry Culture In Central (Wood County) Of The State.*

**Held as part of summer meeting of Wisconsin State Cranberry Growers' Meeting, near Port Edwards, August 8 — Notables Present.**

Dedication of a Wisconsin Historical marker honoring cranberry culture in Central Wisconsin was a feature of summer meeting of Wisconsin State Cranberry Growers' Association Saturday, August 8 at 2 p.m. The marker is located near the Potter Marsh West of Port Edwards. About 150 attended. Master of ceremonies was Clarence A. Searles, a leading cranberry grower.

He introduced honored guests who included W. W. Clarke, State Senator, William J. Schereck, State Historical Society and Arthur W. Piltz, State Highway Commission. The address was by Dr. George Peltier of Wisconsin Rapids.

There was a welcome by Marshall J. Buehler, president of the Wood County Historical Association, and an address by John M. Potter, president of the growers' associ-

ation. Invocation was by the Reverend David A. Spear, and benediction by the Reverend Joseph Marx.

The address of Dr. Peltier follows:

"We are met today to pay homage to a small group of sturdy, tough-minded men, with an everlasting stick-to-itiveness, who in spite of numerous trials and tribulations, due to the continual hazards of frosts and fires, floods and drought, plus the ups and downs in prices, managed to build an industry in spite of the vicissitudes of a harsh and raw environment.

The spark which ignited the cranberry industry in the former glacial bed of Lake Wisconsin in South Wood County stemmed from the expansion and boom in the Berlin area from 1850 to 1870.

In 1870 some of the younger

men without sufficient capital to buy suitable land at inflated prices in the Berlin area started out to locate desirable areas of inexpensive government lands. During this decade, Whittlesey and R. Smith bought raw land in this area (Cranmoor) to be followed shortly by the Bennetts, Potters, Searls, Fitches, Rezins, Gaynors, Arpins, and others, until by 1900 approximately 1000 acres were under cultivation, in spite of the disastrous fires of the eighties and nineties, which broke the spirits of the weakhearted and left a core of rugged individuals to carry on.

We should not forget, however, the part that the women folks played in the development of the industry, since by their encouragement and willingness to share the daily hardships, made life bearable for their menfolks and families. It is indeed interesting to note that the descendants of the pioneers, thru to the fourth generation, control either directly or indirectly upwards of 75% of the present cranberry acreage in the state. I can speak from my personal contacts, since I knew and

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worked with most of these folks during my four summers on the cranberry station (1908-11).

As it turned out, the Berlin area went into a rapid decline in the eighties due primarily to the use of the alkaline waters of the Fox River for flooding. Somewhat later bogs were established in Juneau, Jackson and Monroe Counties. After World War I bogs were carved out from the wilds in the Northwest and since World War II, in the Northeastern part of the state, until today the total acreage in Wisconsin is in excess of 4,000 producing acres, with a crop value of 4 million dollars, which exceeds the value of either apples, cherries, or strawberries produced in the state.

In the beginning small areas of wild cranberries were located and fenced in. Early it was discovered that they had to be protected from frosts, so that a plentiful supply of water became imperative and reservoirs were established with a series of ditches to move the water on and off the beds. This in turn necessitated level beds, so scalping, leveling and sanding soon became the standard practice. During this period, hand tools for cutting ditches, planting and other chores were developed as well as scalping plows and other horse drawn equipment.

Also during this epoch, the observant growers selected from the wild vines what they deemed to be outstanding types. Of some 30 to 40 such selections grown, only one became outstanding; i.e., the Searls which was selected by Andrew Searls in 1893. At the present time over 60% of the acreage in the state is now planted to this productive variety.

In 1903 the College of Agriculture established the cranberry station (opposite the Gaynor marsh) which contributed to the general advance of the industry in the use of fertilizers, control of insect and fungal pests, water management and proper cultural practices. Un-

fortunately, the station was discontinued in 1917 due to the lack of funds. In this connection it is well to mention some of the scientists responsible for aiding to solve some of the pressing problems.

The following names come to mind: Malde, Hardenberg, Rogers, Stevens, Bain, and Goldsworthy. Each made distinct contributions in his special field.

May I briefly mention some of the outstanding developments of the industry in Wood County by decades:

1870-80 The beginning.

1880-90 Improved methods of water control for frost protection, scraping, sanding and drainage.

1890-1900 Disasterous fires and replanting. Selection and propagation of the Searls variety.

1900-10 The experiment station established. The founding of the American Exchange with A. U. Chaney in charge of sales.

1910-20 Expansion of acreage, either by additions to going marshes or the start of new developments.

1920-30 The outstanding discovery of the cause of "false blossom" and methods for its control.  
1930-40 The digging of the "cranberry ditch" from the Wisconsin River to the Cranmoor area which fortunately afforded supplies of sufficient flood water for the then stricken drought area.

1940-50 Rapid increase in acreage, due to the inflated prices received during the war years.

1950-60 The impact of the machine age, with mechanical rakes, driers and diverse labor saving equipment. The introduction of the organic phosphorus for insect control as well as the carbomates for fungus diseases. A new approach to the fertilizer problem. The introduction of chemical weed killers - all of which have contributed to increased

yields, which in 1958 averaged over 90 bbls. per acre as contrasted to less than 20 bbls. per acre in 1900. Truly a remarkable achievement.

What of the future? I visualize with our present "know-how", average yields of 100 bbls. or more per acre with an annual state production of ½ million bbls., without too much expansion in acreage.

Improved methods of storage, milling and packaging a better quality product are in the offing. Yearly increased yields will force the development of new methods for disposing of the crop. This serious problem is now facing the growers. Will the present generation have the fortitude, courage, and judgment of their forefathers in facing up to the problems of the future? Only time will tell."

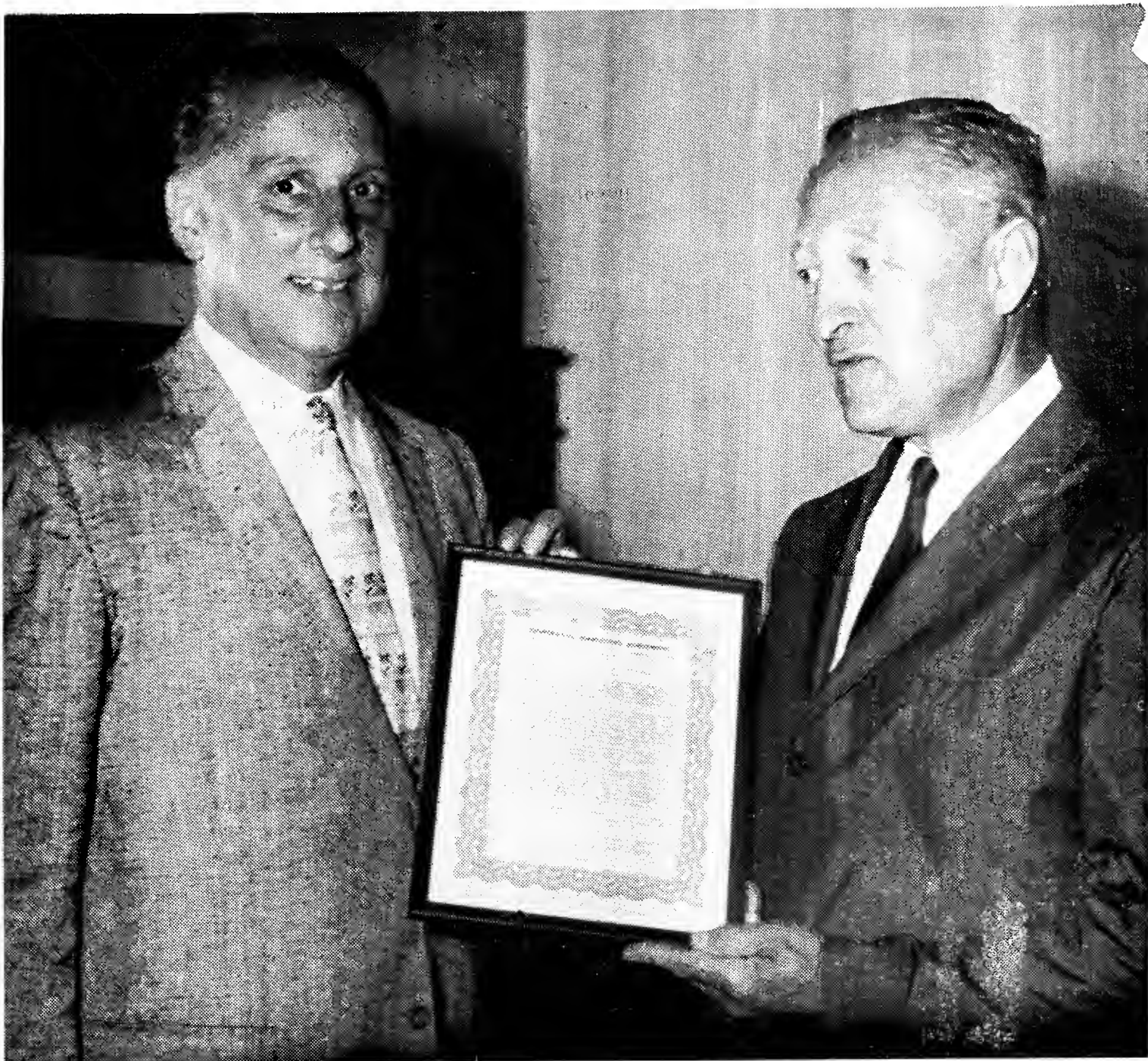
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#### The Marker reads:

"For countless ages the wild cranberry flourished in many marsh areas of Central Wisconsin. In 1829 Daniel Whitney mentioned the purchase of three canoe loads of cranberries brought down the Yellow River from the Cranmoor area by Indians. During the decade of 1870-80, a few hardy souls literally carved out by hand the bogs in this area and in spite of many hazards such as fires and lack of water succeeded in establishing a new crop. With time the native vines were supplanted by higher producing selections which have materially aided in the production of the highest yields per acre in the nation.

At the turn of the century hand picking predominated. Later, improved rakes replaced the colorful family groups together with their nightly entertainment. Today the "machine" has replaced "hand labor" in the operation of the bogs and many of the simple pleasures and intimate associations accompanying the laborious tasks on the cranberry bogs are now only memories of the past."





President of Nantucket Cranberries Inc., Robert D. Congdon, receives Ocean Spray Cooperative Marketing Agreement from Director of Advertising H. Drew Flegal. Certificate makes new management of Nantucket Cranberries, Inc. Ocean Spray member.

## *Five Nantucketers Start On Voyage Of Cranberry Recovery*

**Businessmen plan Venture to Restore "Big Bog", on that Island, Once World's Largest In Single Piece**

Five Nantucket businessmen have started on a voyage of "recovery," not discovery in this whaling town of the same name—town, county and island. They are the new owners of Nantucket Cranberries Inc. which once operated the worlds largest cranberry property in a single unit, the so-called "Big Bog," once at about the turn of the century of approximately 200 acres.

It was not an auspicious start

as plans had been made July 15th to make this an official "Cranberry Day" celebration sponsored by National Cranberry Association as a part of the Island's 300th observation. The rains and fog of July twice postponed the event. It was finally cancelled as "Cranberry Day." There had been plans for air crop dusting, surrey rides and other events.

The new owners of the property are: Robert D. Congdon, who is

president of the corporation and a real estate and insurance man of Nantucket; Albert L. Silva who operates two garages and sells Chryslers, Plymouths, and Volkswagens and Willys; Albert Egan, Jr., who is president of the Marine Lumber Company thus carries on a building supply business and also a retail hardware supply business; Richard B. Corkish, a contractor probably the largest on the island. The manager of the property working part-time on the bog is Kenneth Coffin, Jr., who is the youngest of the group, and of a famous island name.

Thomas Larrabee is the only full time employee at the moment.

Mr. Congdon said he had been



interested in this restoration of about 90 acres for many years as an intriguing proposition and finally gathered together a group of men who were also interested and financially able to go into such an enterprise. He hoped to bring the bog back in the next ten years and have another 50 to 80 producing acres.

It is believed by the group that the bog can be made a paying proposition. The 1958 crop consisted of 2,540 barrels. The group hopes to raise this to as high as 10,000.

Although there was no "Cranberry Day" H. Drew Flegal, advertising director of NCA presented the group with a certificate of Ocean Spray Cooperative Marketing agreement.

## **Wisconsin State Growers Ass'n. Hears Reports**

President Jack Potter welcomed nearly one hundred members and guests of the Association, Saturday Aug. 8 at the Potter & Son Cranberry Co., Cranmoor. Twelve years ago this month the first outdoor meeting of the Assn., was held at this same marsh and since that time the meeting has been held in various cranberry growing areas of the state.

Professor George Klingbeil, Secy-Treas. of the group, reported on the financial condition of the group and explained that added memberships and frost warning dues were solicited from those growers who had failed to pay. He said 105 growers had paid dues on about 3100 acres for frost warning. He said the group would have a booth again at the State Fair in Milwaukee late in August. He further reported that the various committees appointed by the President were working and he also reported on pending legislation.

Dr. M. N. Dana, Dept. of Horticulture, University of Wisconsin, reviewed the experimental work he had been doing with systematic herbicides. He reported that pre-

harvest clearance had not been granted for the use of amino triazole and cautioned growers using it during that period on producing beds. He also reported simizan and maleic hydrazide had not been cleared for use on producing beds. He did give a recommendation for the use of 10-12 lbs. of actual amino after bloom for the control of small wiregrass and cotton grass.

He further suggested that large gallonage per acre of water be used to thoroughly wet the crown of the grass. He suggested treating additional weeds and grasses that stay green after harvest using the same rates and applying as soon after bloom as possible.

James Georg, meteorologist in charge of the Wisconsin Cranberry Frost Warning Service reported on his work for the season. He said that overall it had been a good growing season as far as frost was concerned. He mentioned nine frost warnings were issued in July, although few if any were verified. He reviewed the conditions leading up to the damaging frost which occurred the night of June 16th., stating his forecast was not low enough even after a revision. He remarked he was handicapped in forecasting for the northeast area as there are few

weather stations in that area and no cranberry weather station to verify forecasts.

He further reported that the net raidermeters in operation in Cranmoor and at Madison were giving some accurate and beneficial readings. He felt coverage was being delivered well by the radio and TV stations and remarked they were getting some new reports on weekends to effect more complete coverage on weekends.

Guests introduced at the meeting were Prof. Earl Wade, Dr. O. B. Coombs, Dr. D. R. Boone all of the U. of Wis. and Everett Swingle, Farm Editor of the Milwaukee Sentinel.

Growers observed weed control experimental plots on the marsh and also saw a demonstration of cranberry equipment on the premises. Growers were also able to inspect the deer farm and mink ranch on the property. A fine lunch was served at 1 P.M. by the Cranmoor Homemakers Club.

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# Japanese Experts Study Cranberries

A group of six high-level agricultural experts from the Japanese government visited the Ocean Spray plant, Onset; the Cranberry Experiment Station, East Wareham; and made a tour of Makepeace bogs in Carver July 21.

The group made up an agricultural productivity team and had been making a three-month tour of the United States, (chief interests of the group were the land and water resources and irrigation in the country).

The group was made up of engineers, economists and scientists, members were Junichi Hayashi, leader; Shoichi Iida, Jiro Kawakami, Hitoshi Kosugi, Katsunosuke Moroi and Setsuzo Kikawa, secretary.

They arrived in three U. S. Army Engineering Corps Cars under the direction of Maurice J. Langley, Irrigation Division Bureau of Reclamation, Washington, D. C. In charge of the local trip was John M. Lund, New England Division, Corps of Engineers, Waltham.

Dr. C. E. Cross, director of the Cranberry Station, and J. Richard Beattie, accompanied the group on the tour through the plant, to the station and the bogs. Miss Betty Buchan, NCA director of publicity arranged the cranberry plant tour and Russell Makepeace of A. D. Makepeace Company took the unit to the bogs.

## Fresh From The Fields

(CONTINUED FROM PAGE 6)  
fertilizer applications. Growth stopped the latter part of the month and buds for next year were forming on some varieties. If August continues warm and dry berries can be expected to reach extremely large size which could be a very important factor in determining this years crop.

### Second-Brood Fireworm

Second brood fireworm completed work the third week of July, which was earlier than normal. Generally speaking infestations were light and scattered and losses were expected to be light. From all reports and observations fruitworm appear to be the highest in years. Few were caught in the blacklight traps and larvae were working in first and second

berries at the end of the month. Second brood tipworm appeared more widespread than normal, mostly on the older, un-sanded marshes. Grasses, weeds and ferns were maturing earlier than normal due to stimulated growth. Fall weeds such as asters, phlox, golden rod, etc., were in bloom at months end. Marsh work was mainly confined to clipping and ditch cleaning, along with bulkhead replacements.

## WASHINGTON

### DRY

The month of July has continued to be mild except for the last few days. There was one hot spell this year when it became necessary to start the sprinklers to prevent sun scald. July 30th the temperature climbed to around 92° with the humidity dropping down to 38%. On this date we had the sprinklers going from 10 a.m. to approximately 3 p.m. Except for this date, the highest temperature was 77° on July 18th. The minimum temperature here was 37° on July 28th. This month has been one of temperature extremes. The lowest humidity recorded was on July 30th. Our rainfall has been quite low and things are actually quite dry.

### Crop Good

The cranberries, on a whole, look as good as could be expected considering the rather late bloom. They have gained size quite rapidly and if we get warm temperatures this next month we will have a good crop here in this state. Some of the berries are 2/3 grown, as of this date (July 31), while others are the size of match heads and are just starting to grow. These smaller ones may not size properly if we do not get warm temperatures during August.

### Fireworm

Our second brood of fire worm started hatching about July 15th to 20th and is completely out at this time; only one or two bogs have a serious fire worm infestation. This insect pest seems to be fairly well under control. We have not yet found any larva of the fruit worm. They will appear a

little bit later probably.

The two fungi which are the main cause of the "twig blight" in this area started sporelating on about July 20th. These two fungi are Lophodermium oxycocci and L. hypophyllum. Most of the growers have applied or are applying a fungicide to control this disease. There are several small areas here where this disease was present this last year so control measures continue to be necessary. It seems to be rather easily controlled when we know the approximate time of sporelating.

Our cranberry disease work this year has been concentrated on finding controls and time of applications of fungicides for field rot and storage rot of the cranberries.

## READ CRANBERRIES

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# Largest Crop On Record Is Estimated News Released At Cape Cod Meeting

Was a Day of Honor for Retiring  
Station Technical Assistant,  
Joe Kelley; Gilbert T. Beaton  
Elected President

That the coming cranberry crop of this Fall may exceed all previous crops was the big news in the preliminary forecast given by C. D. Stevens of the N. E. Crop Reporting Service at the annual meeting of the Cape Cod Cranberry Growers' Association August 18 at the Cranberry Experiment Station. Estimate is for 1,263,500 barrels. Largest previous crop was in 1953, with 1,203,000. Last year the U. S. total was 1,165,000, which was the second largest crop in record.

More than 300 growers and guests at the East Wareham station heard this with mingled emotions in view of cranberry surpluses still existing. This was a meeting well filled with interest, and one of the longest as the day's program was delayed by morning rain. Growers also elected officers and it was a day of trib-

ute to Joseph L. Kelley, East Wareham, technical assistant of the station staff who is retiring after being at the station since 1913, a record which made him the senior member there in point of years of service.

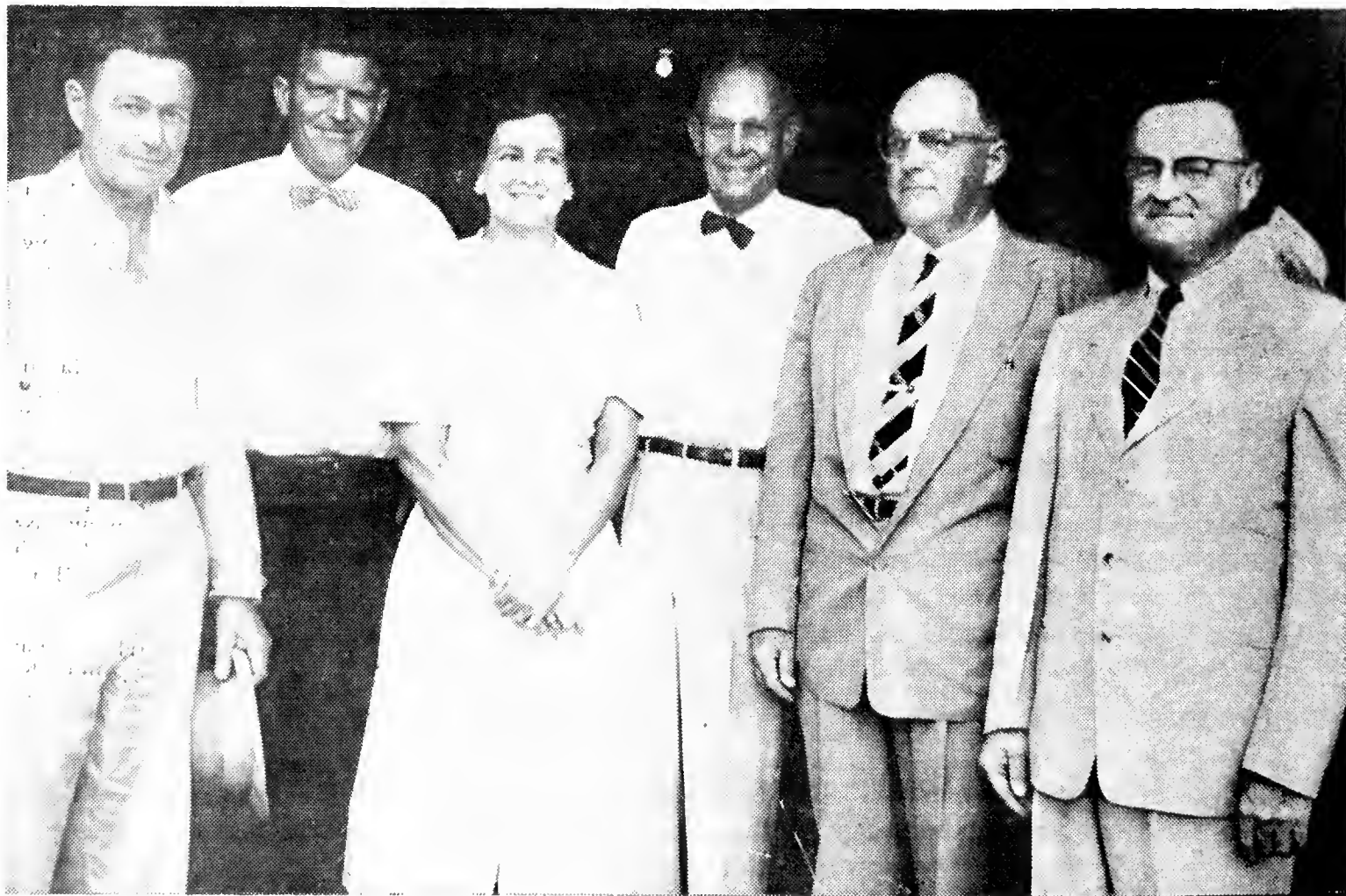
The Massachusetts' crop was estimated to be 610,000 barrels. Crop came after one of the most severe Winters in history, bringing conditions of winterkill and loss from oxygen deficiency causing losses estimated at 50,000 barrels. Due to the rains, fogs and mists of this Summer, this has also been a bad insect year, particularly of blackheaded fireworm which has taken a toll, and in fruitworm which will continue to cause losses. There was no direct spring frost damage. Final historic figure for Massachusetts 1958 crop is set down as 598,000 barrels with the 10-year

average 555,500 barrels.

Stevens said indication was for fruit of a good size with some growers reporting very large fruit. Percent of Early Blacks is 61; Late Howes 34; and others, five. He also said his reports were based upon returns from 218 growers based on 56 percent of production. He commented on the fact only about 40 percent of the crop is now being sold fresh; this being so last year and probably true this year.

Wisconsin came up with a whopping 495,000 as compared to last year's 389,000, average, 243,000. New Jersey estimate 110,000, last year 89,500; average 86,300. Washington 94,500, last year 57,300, average 49,860. Oregon estimated 44,000, last year 32,300, average 22,790. Thus in all states there is an estimated excess.

With a session scheduled to begin at 10 a.m., including guided bog tours, and an unusually-complete equipment exhibition, those present did little except seek shelter in the Station garage, under trees or in the Station basement where the first session of the meeting was opened at 11:40.



New Officers of the Cape Cod Cranberry Growers' Association are (left to right) Robert C. Hammond, 2nd vice president; Philip H. Gibbs, first vice president; Mrs. Ruth A. Beaton, treasurer; Ferris C. Waite, retiring president; Gilbert T. Beaton, president; Raymond H. Morse, secretary.  
(Cranberries Photo)



It had been hoped the rain might stop and the meeting would be held in the open as is the custom.

President Ferris C. Waite opened the meeting with a presentation of a bouquet to Mrs. Henry J. Franklin, widow of Dr. Franklin, who in turn presented a corsage to Mrs. Joseph Kelley.

Reports were heard, including that of the treasurer, Mrs. Ruth A. Beaton. The association now has 259 paid members, three sustaining members, eight staff members and one honorary member. J. Richard Beattie, reporting on frost warning, said that in spite of 198 subscribers and an income of \$1,729 there had been a slight deficit due chiefly to the fact there is an important new observer located west of Worcester.

Ralph Thacher of Marion reported for the vandalism committee, saying loss from this source is important to some growers and less to others. He requested that any vandalism be reported to the vandalism committee at the Station which would report to the proper police officials.

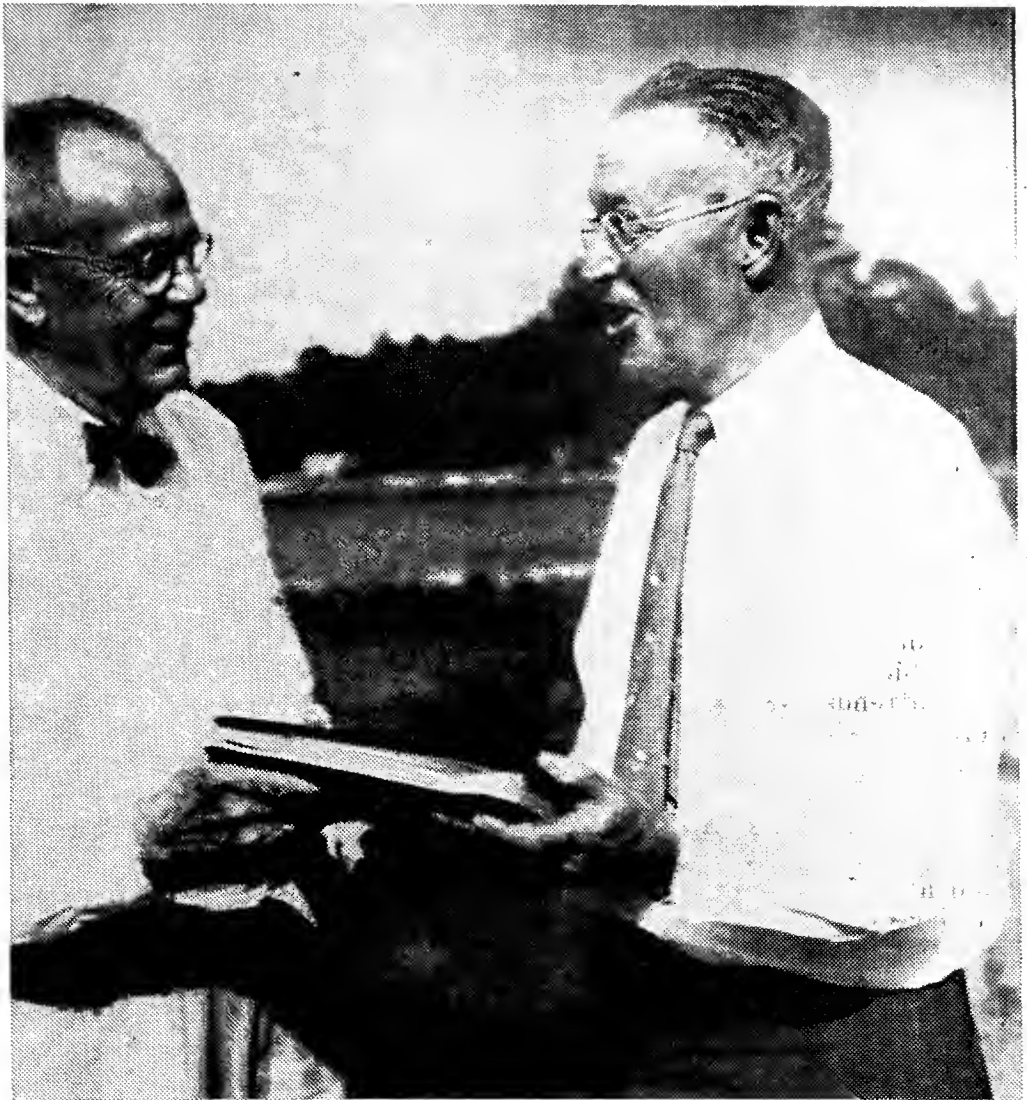
Louis Sherman, reporting for the nominating committee, submitted the following slate which was elected. It is customary for each president to serve two years, a term Waite had completed. The slate:

President, Gilbert T. Beaton, Wareham; first vice-president, Philip H. Gibbs, West Wareham; second vice-president; Robert C. Hammond, East Wareham; secretary Raymond H. Morse, West Wareham; Mrs. Beaton, remaining as treasurer.

Directors: Ralph Thacher; Gibbs; Mr. and Mrs. Beaton; Hammond; Louis Sherman, Plymouth; Waite; Paul Morse, West Wareham; Anthony Briggs, Marion; Kenneth D. Beaton, Wareham; Oscar L. Norton, Rochester; Alvin Reid, Hanson; Howard Hiller, Marion; F. Maynard Gifford, Cotuit; Francis Kendrick, East Harwich. Honorary: Chester A. Vose, Marion; Dr. Herbert F. Bergman; J. Richard Beattie.

A chicken and cranberry barbecue was served at noon with the second session beginning out in the open at 2 p.m. as the storm ended. It was at the conclusion of the barbecue that Joe Kelley was honored. As president, Waite presented Kelley with an album of letters which had been sent in by fellow growers and others. This was followed by the presentation of a large TV set by "Gibby" Beaton, a gift from the association.

A thumbnail biography of Joe Kelley could be pretty accurate if it went something like this. He is one of the recognized authorities



President Ferris Waite (left) presented bound album of testimonial letters to Joe Kelley. (Cranberries Photo)

on cranberry and blueberry culture, his reputation extending beyond the bounds of Massachusetts. He was a tireless worker until his illness of a few years ago slowed his pace down somewhat.

Besides beginning his work at the Experiment Station only three years after it was founded, he is a cranberry and blueberry grower in his own right. He has probably visited almost every bog in Massachusetts from the Outer Cape to the innermost parts of Plymouth and Bristol counties. He has been called in for consultation on many of these bogs many times. He has been called to most of the few bogs in New England which are located out of Massachusetts. He has been to the bogs of Nova Scotia and is familiar with a good many properties in New Jersey.

For years his was a 365-day a year job: cranberry pest emergencies, work on frost problems, oxygen deficiency and such things have no regard for Sundays or holidays. During the active season which starts from April and lasts until after harvest, he often received 10 to 15 calls a day. They came anywhere from 7 a.m. until any hour at night.

Often a question asked of the Cranberry Station on some very

specialized matter of a particularly practical or localized subject has brought the response, "You'd better ask, Joe." This has been told even to newsmen. Joe has always gotten around a lot and knows the situation. There was always a deliberate, carefully phrased and concise answer forthcoming.

Joe also had the reputation of being one of the better cranberry growers in his own right. He has produced crops on one of his properties that averaged more than 100 barrels to the acre. He has been a grower since about 1931. He got into the business with the idea of sending the Kelley daughter, now Mrs. Jasper Balano of East Wareham, to college. His cranberry growing did that, too.

It is probably safe to say that Joe and his wife Mabelle were the first to propagate cultivated blueberries in Massachusetts. That was in 1928. The Kelleys, particularly in the days when blueberries were newer in Massachusetts, were really the rallying point for the young industry.

Joe's title of "technical assistant" meant to him exactly what it was. He once said, "It is my job to assist Dr. Franklin as director of the Station in every way in which



I am capable. And that is what I do." Naturally, he has done the same for Dr. Cross since the death of Franklin.

As to his blueberry propagation, the Kelley cuttings of the plants have been sent to many states in the union, to Canada and to England.

Joe was born in East Wareham Nov. 10, 1887, but spent his boyhood in Plymouth and had his schooling there. His father, the late Joseph E. Kelley, brought the family back to Wareham in 1913. Then Joe began his preliminary cranberry work. The elder Mr. Kelley, who worked for many years as a street car conductor, later worked at the Cranberry Experiment Station.

Joe's hobbies are hunting and fishing. He attends the East Wareham Methodist Church.

Kelley's response to the presentations was:

"I want to thank the Cranberry Growers Association, the Station staff, and all who donated toward this gift. I certainly appreciate it. I appreciate the kind things you have said. I hope I am worthy of them. It reminds me of the time I gave a talk on radio in Boston several years ago. They said so many nice things that I began to wonder who they were introducing.

"I have greatly appreciated the letters which I have received.

"I have enjoyed working with the cranberry growers for over 40 years, during which time I have made many close friends.

"I have always enjoyed my work at the State Bog from the time when Dr. Franklin and I were alone, until the present time, when we have a large staff. They are, and always have been, a fine crew and work together as a team. I owe a great deal of my success to Dr. Franklin. I worked and studied under him for many years, and our years together were very happy ones.

"Through the years, I have especially enjoyed the young men who wanted to learn the cranberry business through the Station, and, as far as I know, they have all been successful in their endeavors.

"I am retiring from the Cranberry Station, but I have a great many things planned to keep me busy, and will have a lot more time to look after my own cranberry bogs and blueberries. In the meantime, I plan to do a little hunting and fishing.

"I hope to keep in contact with you growers through meetings and occasional visits with you. I will still be on duty through November.

"Again, I thank you all."

Final phase of the all-day session was led by Dr. Chester E. Cross,

Station director, who introduced each member of his staff who responded with a talk.

Dr. Frederick Chandler told the growers there is a bulletin on new varieties, summing up a work begun 19 years ago. Three named varieties have been developed which show much more productivity than either Blacks or Howes. He urged growers to drain their bogs well and to apply moisture from above via sprinkler systems.

Beattie spoke on marketing studies which had begun in 1954 and were continuing. He also told growers they should get higher barrelage per acre to compete with other areas, particularly Wisconsin and the West Coast.

William E. Tomlinson, entomologist, reminded the growers of the death of two Puerto Rican field workers at Taunton, who had failed to use masks while using the pesticide parathion and warned that caution was of vital importance in the use of this chemical. He told of a new chemical, an organic phosphate, which showed great promise.

John S. Norton, Station engineer, told of several new pieces of equipment he had developed; these including an all-purpose bog buggy, a ditch cleaner, a weed clobber. He also spoke of his frost sprinkler studies. He made the statement that there could be a five degree variation in temperature in two thermometers, one placed two inches lower than the other.

Irving I. Demoranville, who is in control of weed work, spoke chiefly of amino triazole, the new chemical which has been cleared for post-harvest work, but not yet for after-bloom, chemical has shown much promise to the industry.

Dr. Bert M. Zuckerman, Station pathologist, who had an interesting display and greatly enlarged photos of nematodes said:

"The survey of plant parasitic nematodes inhabiting cranberry soils has been completed. From this survey we have been able to determine the types of nematodes present and their abundance. Further studies are currently underway to gauge the damage done by these nematodes to the cranberry. We hope to discover what symptoms, if any, are associated with nematode root feeding, and the effect of this feeding on yield. Nematode-killing chemicals have been tested to determine what dosages the cranberries will stand, and what dosages are needed to reduce nematode population in the soil. It will be some years before we know if these microscopic animals are a serious economic pest of cranberries, but in view of sim-

ilar work on other crops, our efforts in this direction appear to be justified."

A change in meeting date was voted at the business session. Change, first in many years, was due to a change in the crop reporting system. The 1960 meeting will be August 23.

## **Krushchev Invite To Massachusetts**

Russian Premier Khrushchev has been indirectly invited to Massachusetts.

Ambrose E. Stevens, general manager of the National Cranberry Association, read a letter at the Hanson annual meeting to President Eisenhower inviting him to visit this region, citing the hazards of the Kittansett Golf Club, Marion as an inducement for himself. Letter said that while the President was playing golf, Ocean Spray would be pleased to take Khrushchev on a tour of the cranberry bogs.

## **CROSSES VACATION IN NOVA SCOTIA**

Dr. Chester E. Cross, director, Massachusetts Experiment Station, Mrs. Cross and three sons, Peter, Christopher and Timothy left August 19th for a vacation in Nova Scotia. They drove to St. John's New Brunswick, took the ferry to Digby and then to Annapolis Valley, where they rented a cottage. Plans were to visit the ocean side of the Province and for Dr. Cross also to visit several of the cranberry properties of the island.

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# National Cranberry Association Now Is Ocean Spray Cranberries, Inc.

## Stockholders so vote at Annual Meeting

### Without Objection—Most of Same

### Directors and Officers Re-elected—

### 550 Attend Harmonious Session

Members of the National Cranberry Association meeting at Hanson Aug. 19, voted to change the corporate name to Ocean Spray Cranberries, Inc. This necessitated a change in the by-laws and a two-thirds vote. Motion was made by Miss Ellen Stillman for the board of directors who had decided to put the change before the membership.

Reason for the change is that the brand name of the products is better known than that of the corporation; that because of this, definite benefits will accrue. Change will make the products and the corporation the same. However, the old name National will be retained. Some time will ensue in making the change complete in all details.

Approximately 550 persons attended the all-day session which was marked by a harmony which has not been present in some sessions of the past. There was no real dissension of any kind.

One other proposed change in the by-laws was lost. This was that common stock should be issued only to producers of cranberries and not to producers of agricultural products as the by-law now reads. This did not pass with the needed two-thirds margin.

There was some discussion on the matter, the chief objection being put forward by attorney Withington, speaking for United Cape Cod Cranberry Company, Inc., which is the largest stockholder. Withington said the change might produce hardships in certain cases. He said efforts should be made instead to make stock go up in market value from \$10 or so to its book value of \$25. "I'd rather see this effort made instead of the change in by-laws," he said.

Attorney Robert Briggs of Plymouth also argued against the changes, saying the change actually accomplished nothing.

Russell Makepeace of Wareham took the opposite side and said that other attorneys had held opposite views and "the value of this co-op will be protected only so long as it is owned by growers."

He added, "the stockholders should consider the question as cranberry growers and vote for what is best for us as cranberry growers. This is a cooperative of cranberry growers for cranberry

growers."

In the balloting for directors, the membership returned the same slate as last year with the exception of two resignations: Alden C. Brett of Massachusetts and Leonard G. Morris of Washington.

Vote was taken that there be 24 directors and the following were elected:

Massachusetts: Walcott R. Ames, Osterville; Lawrence S. Cole, North Carver; Frank P. Crandon, Acushnet; William E. Crowell, Dennis; Carroll D. Griffith, South Carver; Russell Makepeace, Wareham; George C. P. Olsson, Plymouth; Lawrence S. Pink, Middleboro; Elmer E. Raymond Jr., Braintree; Alvin R. Reid, Hanson; Chester W. Robbins, Onset; Miss Ellen Stillman, Hanson; Marcus M. Urann, Duxbury. From Washington: Norman I. Brateng, Long Beach; David E. Pryde, Grayland. From New Jersey: John E. Cutts, Vincentown; Thomas B. Darling-ton, New Lisbon; William S. Haines, Chatsworth. From Wisconsin: Tony Jonjak, Hayward; Richard J. Lawless, Wisconsin Rapids; Bert Leasure, Manitowish Waters; Charles L. Lewis, Shell Lake; John M. Potter, Wisconsin Rapids. From Oregon: James Olson, Bandon.

Following the general meeting, directors met in executive session and elected officers for the 1959-60 years. Re-elected were: president, George C. P. Olsson, Plymouth; vice-president, Charles L. Lewis, Shell Lake, Wisconsin; secretary, Russell Makepeace, Wareham; treasurer, Chester W. Robbins, Onset; Ambrose E. Stevens, general manager and executive vice president; John F. Harriott, assistant secretary and treasurer.

In an open discussion period, Charles Savery of Cotuit moved that the president appoint a committee of three to look into the feasibility of raising the interest of common stock from four to six percent. He said this might solve the stock problem better than the limitation of stock ownership to growers by making it more desirable. Attorney John M. Quarles said directors only could fix the dividend, but a committee could be formed. It was so voted and the committee is to report back at next annual meeting.

There was a note of more than a little optimism as to the future of the cooperative and the in-

dustry in the address by general manager and executive vice-president Ambrose E. Stevens and others. Stevens in his address, said.

"As we meet here again, one year later and one year older it is against a background of one pool, the 1957 pool, having come in better than any of us, including your manager expected. It is possible we have turned a corner. It is possible that a long-term trend has been started in the right direction of consistent earnings for our patrons. I do not know this for sure. With you I can only hope that it is true, and work hard to make it so. Only time will tell."

He pointed to the fact that a pattern of uniform price at all shipping points had been established. This was encouraging to the trade. He said last year fresh fruit sales volume of 235,000 barrels was the largest in the co-op's history. He recalled the average sales price for the season was more than \$16. a barrel, and the net return on fresh berries was \$10 a barrel.

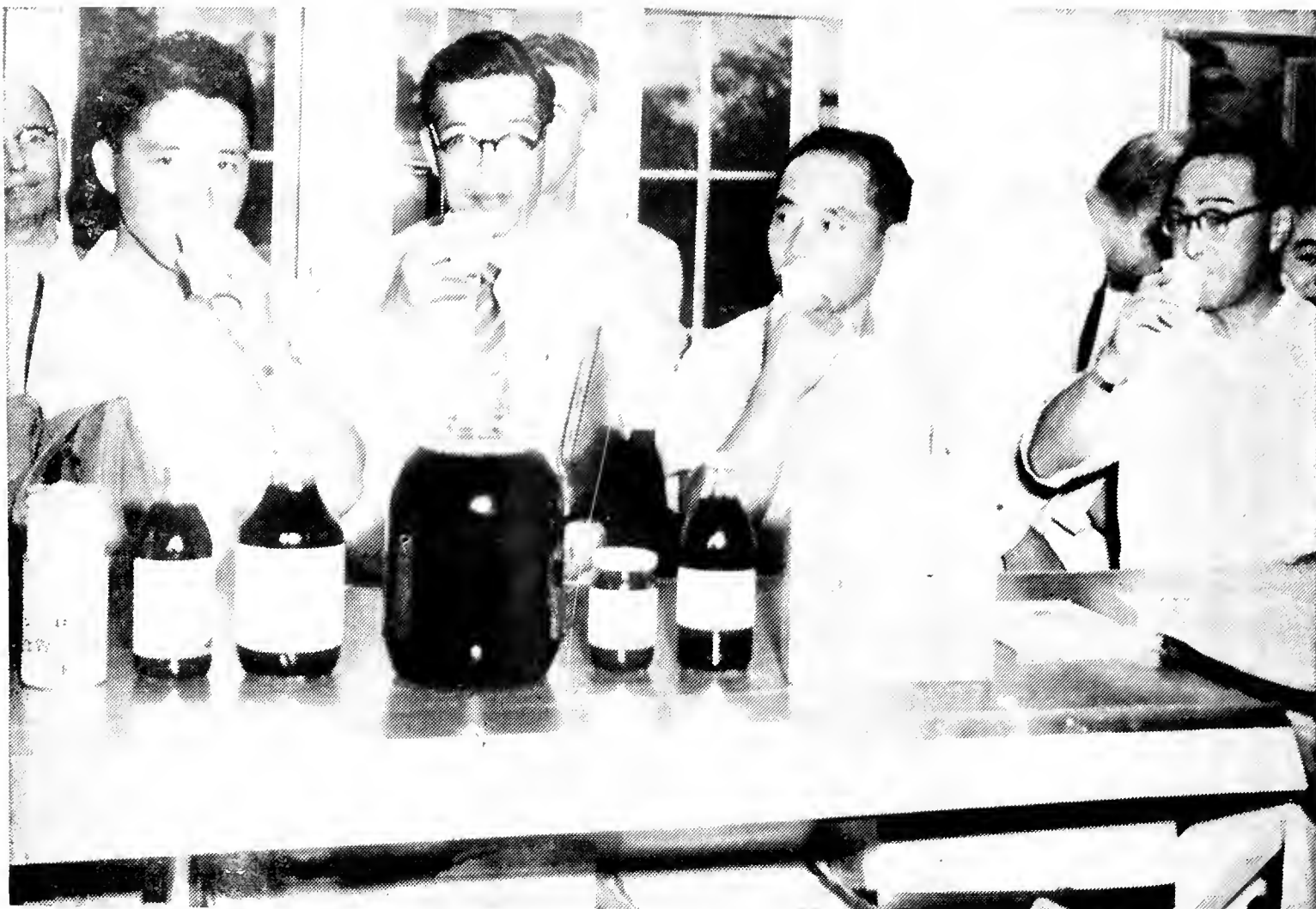
He said processed goods sales had been going up. He pointed to the improvement in the sales picture by the demand for cocktail. He said a special sales department had been established for the sales of "institutional" products: that is to restaurants, hospitals and others which could further improve the picture.

Principal speaker of the day was Charles R. Brower who is president of Batten, Barton, Durstine and Osborn, Inc. of New York, fourth largest advertising agency in the nation. He spoke on "Advertising, What It Has Done and Is Doing for Farmers." He said, "People who are accustomed to the advertising roar will still notice an idea that is different." NCA last year spent about \$5.00 a barrel on advertising.

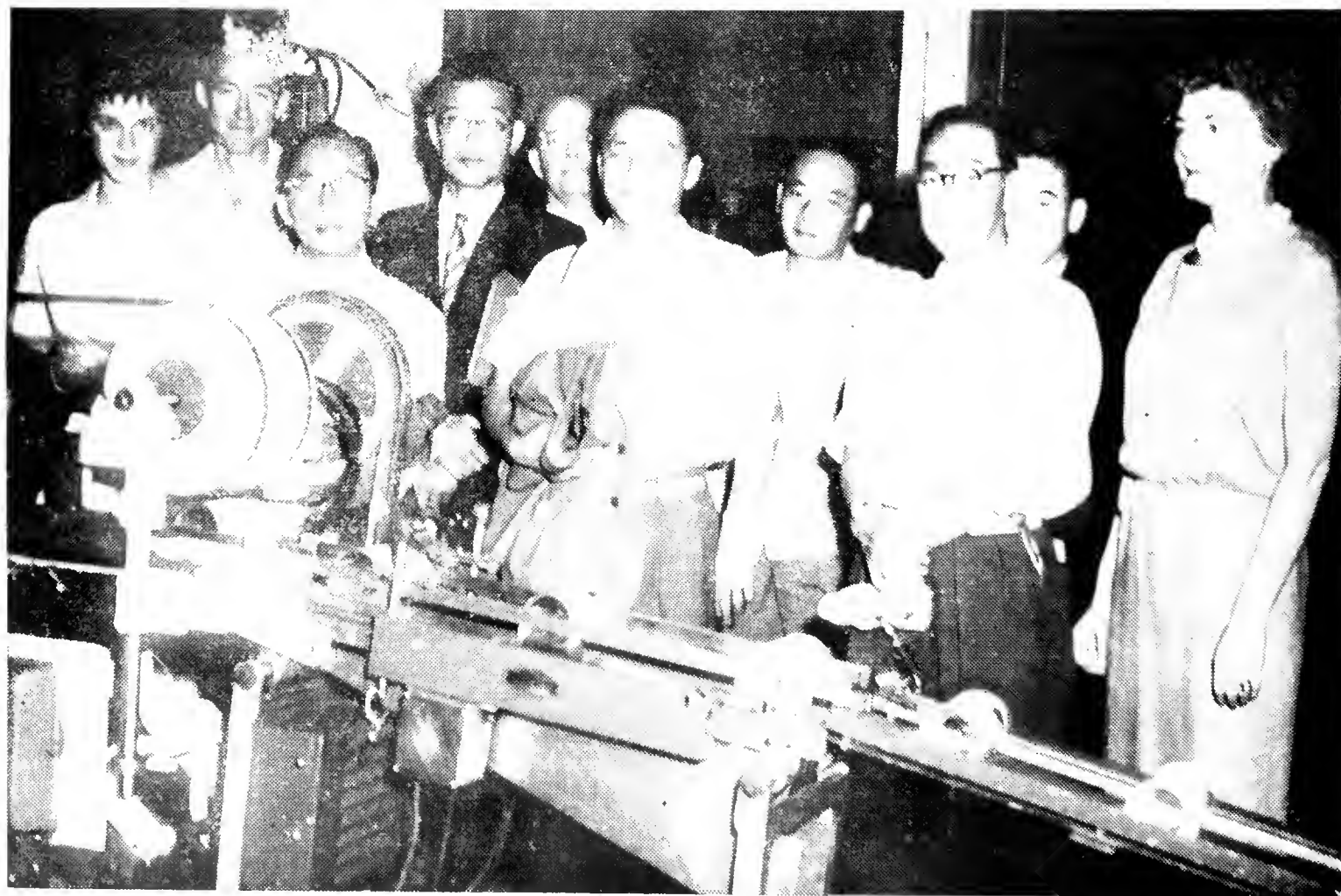
During the session it was brought out that NCA now handles 75 percent of the country's crop. It has 1194 marketing agreements plus five in Canada, a net gain of 29 over last year.

Among the guests honored by special introduction was Joe L. Kelley of East Wareham, whose retirement as technical assistant for the Massachusetts Cranberry Experiment Station had been observed at the annual meeting of Cape Cod Cranberry Growers' Association the day before.

It takes big money today just to keep up with the times.



For the first time these Japanese members of a Japanese government agricultural production team taste cranberry sauce at the Onset plant of Ocean Spray. The team toured the Massachusetts area. (CRANBERRIES Photo)



The Japanese Government study group watch cans of sauce whirl by at Ocean Spray Plant, Onset. Miss Betty Buchan, director of Publicity at Right. (CRANBERRIES Photo)

## SMALL CROPS NOT GOOD

Some growers may have been a little inclined this year—and other years, too—to hope for a “small crop,” on the well-founded fact scarcity creates demand and demand creates high prices. It doesn’t look as if we were going to get a small crop this year, by any means, and we think this is for the best.

Small crops do not help the industry. That is, as a whole. They may bring a little more income to the fellow who has a particularly fine crop, but they are tough, obviously, on those who have not.

Nature provides no way of taking an equal proportion off each grower’s production so that the loss of berries to provide a small crop is shared evenly by all—at higher prices. The grower who has few berries is not happy even though prices are up.

It is not good for the industry to have a “poor” year, that is really “poor,” and it does not look as if there would be such a season soon. Selling a big crop is admittedly a hard job. NCA, now controlling about 80 percent of the crop, reports that in the second quarter of 1959 increase in products sales over the second quarter of '57 was 29 percent. The net result is to reduce the comparative excess of surplus. We trust the 1959 crop can be moved with a reasonable degree of success.

---

It is encouraging to Massachusetts and to the entire industry that there is to be restoration and improvement of 95 acres at the “Big Bog” at Nantucket. At the turn of the century, this was a vast undertaking, the building of this bog of more than 200 acres, and it was usually known as the “world’s largest cranberry bog.”

Now five Nantucket businessmen are investing in its restoration. They must have faith in the future of cranberry growing in Massachusetts, and at the same time they hope to aid in the economy of Nantucket, that historic and beautiful island 30 miles off the Cape Cod Mainland. We have recently talked with two or three

CLARENCE J. HALL

Editor and Publisher

EDITH S. HALL—Associate Editor

Wareham, Massachusetts

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---

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Cranberry Consultant

Wisconsin Rapids

Wisconsin

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Cranberry Specialist

Long Beach, Wash.

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### Massachusetts

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Director Mass. Cranberry Experiment Station

East Wareham, Mass.

EDWARD K. KAPP

Barnstable County Agricultural Agent

OSCAR P. JOHNSON

Barnstable, Mass.

---

### New Jersey

P. E. MARUCCI

New Jersey Cranberry and Blueberry Station

Pemberton, New Jersey

---

younger growers, who are confident the Massachusetts cranberry industry is a good thing to be in. They foresee a future for themselves.

Confidence and recovery in any part of the industry strengthens it as a whole.

---

We think the stockholders of National Cranberry Association in changing the name to “Ocean Spray Cranberries, Inc.” have made a wise move. “Ocean Spray” is so universally known, why indeed should not the corporate name be the same?



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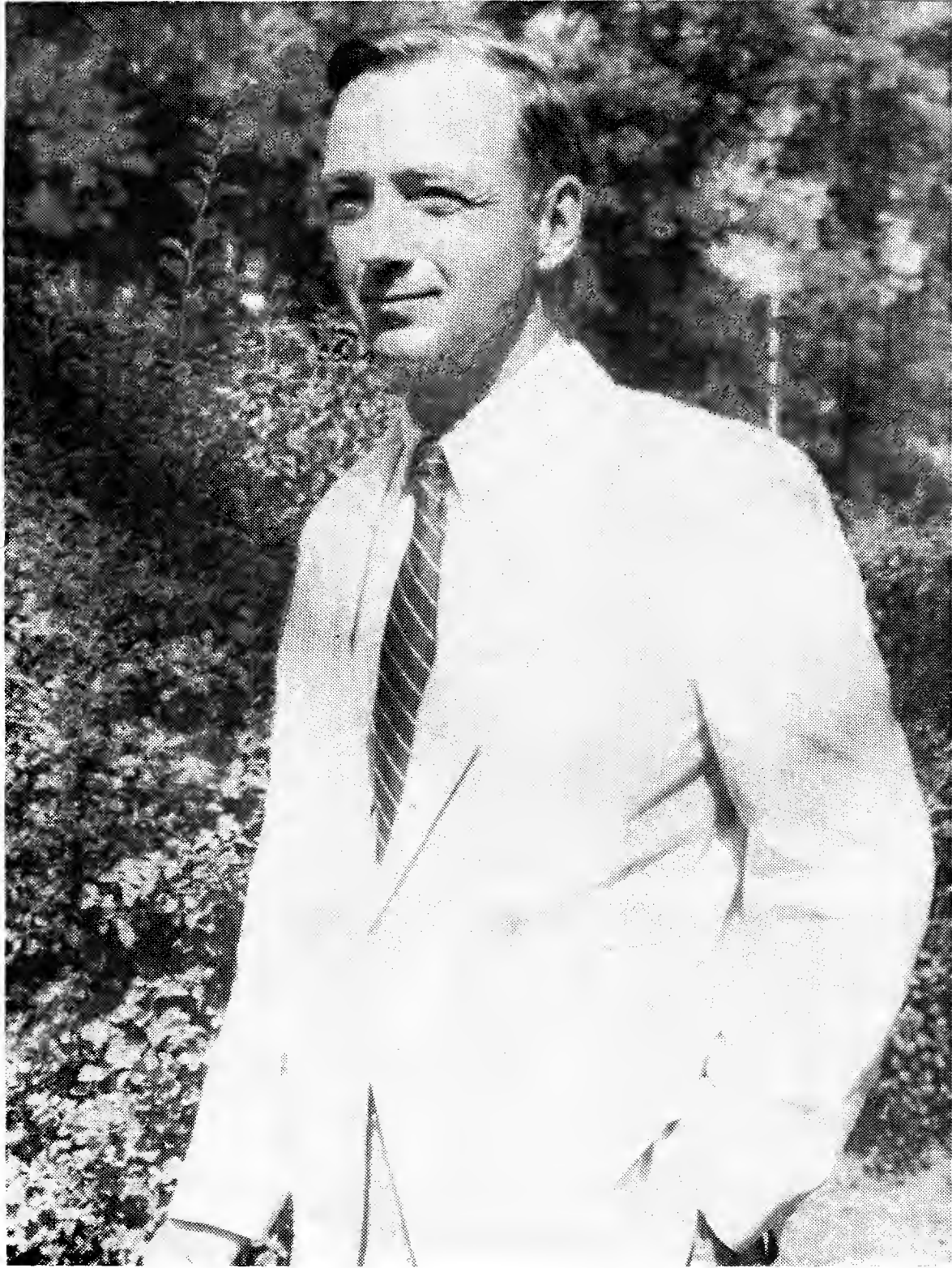
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# Cranberry

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## Ocean Spray '58 Crop Sold Out Announces Stevens

Telegrams were sent to the press Saturday by Ambrose E. Stevens, general manager of Ocean Spray Cranberries, Inc., announcing the sale of the entire 1958 crop. Telegram read:

"Ocean Spray's 1958 cranberries sold out, with harvest still a month away. Ambrose E. Stevens general manager of Ocean Spray announced that as of noon today Ocean Spray has orders on hand to sell out their entire 1958 cranberry crop.

"According to available records, this is the first time in more than a decade that a current crop has been sold prior to the new harvest.

"In analyzing this outstanding performance, H. Gordon Mann, salesmanager, said that this year's accomplishment indicates that our new policy of aggressively selling cranberries twelve months of the year is a sound one, and it would

seem that consumers agree that cranberries are 'the natural mate for ever meat.' "

## MASS. RESEARCHERS ATTEND A.I.B.S. MEET

The annual meeting of the American Institute of Biological Sciences has just been held (August 31 - September 2) at the Pennsylvania State University, University Park, Pa. There were 1400 papers scheduled to be presented on subjects pertaining to agronomy, horticulture, handling and processing, extension, soils and interpretation of experimental results.

Those in attendance who were interested in cranberry culture were F. B. Chandler, Massachusetts; N. F. Childers, New Jersey; George M. Darrow, USDA; Haig Derman, USDA; Donald Scott, USDA; and Bert Zuckerman, Massachusetts.

There was one paper on cranberries, "Availability of several nitrogen sources to the cranberry (*Vaccinium macrocarpon*)", presented by Walter J. Kender and Norman F. Childers of New Jersey. Bert Zuckerman presented a paper on "Coryneum canker of highbush blueberry".

There were well over 3000 people registered for these meetings and it was estimated that with the wives and children, there

were over 5000 in attendance. Besides representatives of all the United States and Canada, there were people from Europe and Asia.

## CRANBERRY PRODUCTS, INC. INCREASING FACILITIES, PACK

Cranberry Products, Inc. of Eagle River, Wisconsin has added 7,000 square feet to its facilities. This year the corporation is to use liquid sugar which will speed up operations. According to Vernon Goldsworthy it is expected to double the pack of cranberry sauce this year, and to increase very substantially the pack of specialty items, which are becoming more and more an important part of the business.

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## Late Massachusetts

As this issue goes to press (Sept. 18) whether the Massachusetts crop was underrunning or overrunning the August and September U.S.D.A. estimates of 610,000 could not be determined. Harvest was expected to have begun immediately after Labor Day, but unprecedented hot and humid weather held back ripening. Picking did not really get underway until a week or ten days late, the week of September 14th.

Up to the 11th temperatures had racked up a whopping 88 degrees plus or nearly 8 a day. Then the weather turned more fall-like. The hot weather had caused a good deal of scald on some bogs. Dr. C. E. Cross of Massachusetts Cranberry Station, however, said he felt this loss, in general, would be made up, or more than made up in growth in size of berries as they remained on the vine and in quality. Irving E. DeMoranville, of the Station who made a check of berry size says they are in general large, still growing, and considerable larger than the fruit of last year.

September was an exceedingly dry month to date, only .81 of an inch having fallen, mostly in two storms, one on the 15th which would help to swell berry size. Normal for September as a whole is 3.65.

Reservoirs of many growers were extremely low, but not as bad as some years. However, there was much worry beginning that frost, or a series of frost nights could raise havoc with the supply. Bogs were so dry they would soak up an enormous quantity.

Demand for early shipment of processed berries was reported as heavy, Ocean Spray Cranberries, Inc., having orders for 400,000 barrels. The week of the 14th saw rapid shipment from the Onset Spray plant as high as 20 and 21 cars a day being shipped some days.

Shipment of fresh fruit (Blacks) in volume was expected to begin

the week of the 21st from Massachusetts and from Wisconsin the week of October 5th, according to Ocean Spray.

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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



## Harvest

General picking began in Massachusetts about mid-September. Lack of color of the fruit and unusually hot, humid weather in late August and early September were responsible for the delay in the harvest. There was some earlier picking on bogs that were to be treated with amino triazole this fall. Incidentally, we would like to stress again the importance of flooding the areas to be treated whenever practical and then drain for 24 hours before applying the chemical. If bogs lack water for this flood, we urge growers to wait at least 3 days before treating. This will allow the vines to make a partial recovery from the rather harsh picking operation and result in a minimum of damage to the vines and buds.

## Berries Big

Irving Demoranville has been carefully checking samples of berries from the State Bog again this fall as a part of his growth studies which he began in 1953. His records show that the present "early water" Early Blacks are the second largest in size and weight, comparing very closely with samples collected in 1953. "Late water" Early Blacks, as of September 17, were the largest and heaviest that Mr. Demoranville has sampled, exceeding by a small margin similar samples collected last year. It will be interesting to see, after sufficient infor-

mation has been collected, if there is a relationship between the size and weight of the fruit and the size of the ultimate crop. A complete report, including the Howes variety, will be available later this fall.

## Water Short

The ample water supplies of June and July have been dwindling rather rapidly during late summer with the result that adequate frost protection could be a serious problem for many growers if we encounter an active frost season. We sincerely hope that growers will have sufficient water, not only for the frost period but also for the "fall clean-up flood" which helps revive the vines and removes much of the harmful trash that collects each year. For best results a bog should be "float-boated" as soon as possible after it is picked. Joe Kelley heartily endorses this practice. Before leaving the subject of frost we call attention to the below radio schedule which supplements the telephone frost warning service sponsored by the Cape Cod Cranberry Growers Association. This is exactly the same schedule that was in effect last spring. Incidentally, the first general frost warning of the fall season was released September 16.

## Picking Schools

For the third successive year, picking machine schools were held in late August for the purpose of

acquainting those concerned with general maintenance, adjustments, operational techniques and simple repairs of these machines. Approximately 125 growers and operators attended these sessions and received one and a half hours of instruction per machine. We are indebted to Robert St. Jacques and Louis Sherman who were our capable instructors for the Darlington and Western machines respectively. Mimeographed outlines of instruction were prepared for each machine and enabled those present to follow the lecture and demonstration at each session. Extra copies are available at the county extension offices and here at the Cranberry Experiment Station.

## Station Guests

The staff at our station were hosts in July and early September to visitors from Israel, Denmark, Germany and Japan. We also thoroughly enjoyed the visits of several cranberry growers from Washington, Oregon, New Jersey and Wisconsin during the time of the annual meeting of Ocean Spray Cranberries, Inc. The number of visitors from other areas—in fact, from other lands, is truly impressive during the course of a year. We welcome these guests and benefit from the exchange of ideas. Possibly a brief description of the latest delegation to visit our station would be of interest. It was composed of a group of 16 Japanese state and federal representatives, including a number from Hokkaido University. There has been a close relationship between this university and our own University of Massachusetts, dating back over a period of 80 years. In fact, a former president of the University of Massachusetts helped found the Agricultural College of Hokkaido University, and at present two of our professors are teaching at Hokkaido on an exchange basis. The group was interested in the various aspects of our industry, including marketing and referred to themselves as a team representing agricultural development in cold and cool

Station	Place	Dial			
		A.M.	F.M.	Afternoon	Evening
WEEI	Boston	590 k.	103.3 mg.	2:00	9:00
WBZ	Boston	1030 k.	92.9 mg.	2:30	9:00
WOCB	W. Yarmouth	1240 k.	94.3 mg.	3:00	9:30
WBSM	N. Bedford	1230 k.	97.3 mg.	3:30	9:00



regions of Japan. This was the second delegation from Japan to visit our station this summer. We enjoyed their brief stay and introduced them to several cranberry products.

### **GREAT CONTRIBUTION BY DR. BERGMAN**

Dr. H. F. Bergman, a retired worker formerly with the U.S.D.A. and known to cranberry growers throughout North America, has made a great contribution to our knowledge of plant growth. This article is entitled "Oxygen deficiency as a cause of disease in plants" and was published in the last issue of *The Botanical Review* which contains 68 pages covering all phases of oxygen deficiency to all parts of all plants.

Dr. Bergman reviewed 235 articles to obtain this information, and quite a few of these articles were published in foreign countries. Several of these articles represented Dr. Bergman's original work. The summary and conclusion requires 4 pages; therefore, it is impossible to make a "brief summary" for *Cranberries Magazine*, but one thing that might be of special interest is that high water tables or soils which are too wet are deficient in oxygen. This deficiency kills roots and dead or weak roots may be attacked by fungi. Weak roots can only support weak tops, and weak tops cannot support the best crops.

Dr. Bergman first published on his oxygen studies in relation to roots in 1920. The following year he published on the oxygen content of water and its significance in cranberry culture. It was a number of years before cranberry growers used this information, but by using the results of these findings, it has been possible for them to grow many more barrels of fruit.

### ***Mass. Director In Real Estate***

Alvin R. Reid, Hanson (Cranberries July, 1958) new Ocean Spray Cranberries, Inc director

from Massachusetts, succeeding Alden B. Brett is engaged in real estate and insurance in Hanson. He is president of Cranberry Credit Corporation and an active member of the South Shore Cranberry Club. He owns bogs located in Hanson and Halifax.

Very active in affairs of his

community, he serves as chairman Library trustees, trustees Cobb Library, chairman, Industrial Development Commission and member of Planning Board, Hanson.

Mr. and Mrs. Reid have two children, Raymond A. Reid and Mrs. Judith Mitchell.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of September 1959 - Vol. 24 No. 5

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FRESH FROM THE FIELDS

Compiled by C. J. H.

## MASSACHUSETTS

### Started Cool

Following the first slightly cooler than normal two weeks of August, heat set in, mostly humid and sticky. By the 21st there was a plus 51 and on the 20th the thermometer was 92 in the shelter and still hotter at other points.

In spite of this berries were coloring well and growing in size.

August was on the verge of breaking heat records for above 90 degree days—there having been 12, with two 95's in the shelter and hotter at other points—when on the 22nd there came an abrupt change. There began autumn days in August, lasting a short period. Then summer temperatures returned with days of 90 plus again

### Broke Heat Records

The month ended having broken records for heat since 1923 which was equalled in 1944. There were eleven days (Boston) in which the temperatures rose to 90 or better and at least that many in the cranberry area, or portions of it. All the 90's came after the 11th. It was mostly extremely sticky, humid, uncomfortable weather with humidity indexes rising into the 80's with a high of 86 on the 15th. The month ended 88 plus, a practically 3 degrees a day above normal.

### Scant Rain

The month was scanty in rain the total being 2.35 with normal 3.60. This point would not have been achieved except for violent thunderstorms on the 29th and again on the 30th which brought a total of 1.10 inches of rain. There

was mostly light rain on 8 days with traces on two others.

## NEW JERSEY

### August - Hot, Humid

August's weather in the cranberry belt of New Jersey was oppressively hot and humid. Toward the end of the month temperatures near the hundred mark on bogs began to cause scald on many properties and it was feared that losses would be excessive on many bogs.

There were 14 days in which the temperature went to above 90 degrees. Only once in the 30-year weather history, in 1943, were there more 90-degree days in August.

### Rainy

There were eleven rainy days with a total accumulation of 5.55 inches of rain. This is almost an inch above normal. Many growers fear the combination of daytime showers and intermittent hot sun. This condition prevailed on many days in the latter half of August.

Color of Early Blacks as of Sept. 1st leave a lot to be desired yet. Several cool nights are needed before color will be satisfactory for harvesting.

## WISCONSIN

### August, Hot, Wet

The month of August continued very warm and wet. Very hot, sunny and humid conditions pre-

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vailed, especially the last ten days of the month. During that period temperatures averaged ten degrees above normal and heavy rains totalling as much as eight and one half inches fell during the heat wave. Monthly mean temperatures were almost four degrees above the normal of 63 degrees and precipitation in most areas exceeded ten inches as compared to an average of slightly more than three and one half inches. The outlook for September is for slightly or about normal for both temperature and precipitation. Normals for the reporting stations are 55.5 degrees 3.75 inches of rain. There were only a couple of frost warnings issued, but no freezing temperatures were reported. The season continues as one of the most frost free in modern times. Some light hail fell on a few marshes in the south on Aug. 30th, but damage was slight. The stones were reported small, round and with heavy vine growth most of the berries were protected.

#### **Berries Large**

Berries continued to grow rapidly during the month. Cup counts made following the hail found Searles averaging between 95 and 100, McFarlins 100 and 110 and Natives 120 and 130. These counts are all well below the average for this time of the season and reflect the good size berries are expected to get this year. With heavy vine upright growth resulting with fruit in deep, little coloring was evidenced by the end of the month. Some fruit exposed to the light had started to sun blush, but there was little evidence of seeds starting to color. Coloring is expected to be late this year unless Sept. turns cold.

#### **Fine Bud For 1960**

Buds for next year developed rapidly during August and for the most part were larger than normal. Some vegetative buds developed growth at months end, but fruit buds were showing signs of going dormant, as bud scales were turning red. Budding looks extremely good for next year and bud counts will be made following

harvest. This condition can be attributed to the good fertility of the vines and extra good upright growth. Considerable double and even triple budding has been observed.

#### **Fruitworm Losses Light**

At month's end fruitworm were finishing their work being in their seventh and eighth berry. The worms worked very rapidly due to the warm weather and were expected to pupate well before harvest. This is in direct contrast to last year, when they worked well into harvest. From observations it appears that losses will be light. Early control gave excellent results.

#### **Harvest About Sept. 21**

Even though the season is ten days to two weeks ahead of normal, most growers do not plan on starting harvest until September 21, in order to gain on size and to get better color. With the use of mechanical pickers most marshes are able to complete raking in two to three weeks. It is estimated that almost one hundred per cent of the crop will be mechanically harvested and over ninety per cent mechanically dried. Most marshes will be pressed for storage facilities and storage crates are expected to be in short supply. The Catschalk Cranberry Company is experimenting with bulk storage this year.

#### **May Over-Run**

The mid August crop estimate of 405,000 barrels for Wisconsin appears to the writer as too low. Last year Wis. produced 340,000 barrels on 4100 acres for about 83 barrels to the acre. This year 4200 acres are expected to be harvested and as all varieties set exceptionally well and with excellent berry size the average yield per acre is expected to exceed 100 barrels to the acre for the first time in the states history. Quality is only expected to be fair to average due to the warm, wet growing season and heavy vine growth.

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CRANBERRIES MAGAZINE**

## **To Select Miss Cranberry Highway Of 1960**

"Miss Cranberry Highway of 1960" will be selected at special exercises the weekend of Saturday, September 19 (after this issue has gone to press) and the weekend of Saturday, September 26 at Cranberry Harvest Festival, Edaville, South Carver, Mass.

On the days selected the contestants will appear between the hours of 3 and 4:30 p.m. On the first appearance they will be in sports costumes and on the latter date in costumes of their own selection. On the 26th they will display any special talents. On the 27th judges will make their decision.

Girls must be between the ages of 16 and 20, inclusive and be summer or winter residents of Carver or, of the communities through which Cranberry Highway passes. The winner will succeed Miss Eleanor Stahura of Buzzards Bay who will assist in the exercise at Edaville. The crowning ceremony of the new queen is tentatively set for a Buzzards Bay ball New Years eve.

#### **ESTIMATE UNCHANGED**

There was no change in the current harvest estimate in U.S.D.A. releases of September 10 from that of the preliminary in August. It still stood at Massachusetts, 610,000, New Jersey, 110,000, Wisconsin, 405,000, Oregon, 94,500 and Washington, 44,000 for a U. S. total of 1,263,500 barrels.

#### **"STAN" NORTON NAMED TO STEERING COMMITTEE**

John "Stan" Norton, engineering researcher at Massachusetts Cranberry Experiment Station was recently appointed to the steering committee, power and machinery division of the American Society of Agricultural Engineers. He also recently presented a paper on cranberry irrigation at the North Atlantic Section Meeting of the Society at the University of Maryland, College Park, Md.

## Believes Shrinkage Of Acreage In Massachusetts Is About At Lowest

"Tony" Briggs, Third Generation Grower, feels he is fortunate in being in both growing and selling ends of industry in Massachusetts.

By Clarence Hall

A young man of Massachusetts, "Tony" Briggs of Plymouth, likes the cranberry business and is in it to stay. He is a grower in his own right, and with others to the extent of approximately 147 acres. He is also associated with the important J. J. Beaton Cranberry Company and the equally important Beaton's Distributing Agency, both of Wareham. He is a third generation grower.

"I feel I am very fortunate in being in both the growing and the selling end," he says. And, he believes that the present acreage in Massachusetts 13,200 (1956) is at about the lowest point it will shrink to. Average was 11,300 in 1900 and climbed to its highest point, 15,000 in 1948.

In his opinion the marginal property has gone out mostly, or is going out. "We will have to concentrate on keeping the better bogs up, improving them, as they have to carry the poorer pieces until these less productive but often potentially good bogs can be improved."

Incidentally, it is interesting in this topsy-turvey world that Briggs studied Russian while in the U. S. Marine Corps and later majored in that subject at Harvard. He is one of probably few cranberry growers who know the Russian language.

Anthony was born April 16, 1925 (by happenstance in New York City) but was brought up in historic Plymouth. He is the son of George R. and Caroline Briggs. Miss Rose Briggs, his aunt, is an authority on Plymouth and Pilgrim history. His father, George Briggs is a well known grower in Massachusetts, and was formerly very active in the affairs of the late New England Cranberry Sales Company, and of former American Cranberry Exchange, later Eatmor Cranberries, Inc. He operates large holdings in Manomet and Plymouth. He was formerly in the automobile business.

His grandfather, George R. Briggs, Sr., brother of Dean Briggs of Harvard was the pioneer Briggs grower, building at Manomet 30 - 100 acres in about 1880 - 1890. The family came to Plymouth from Cambridge, where he had been

teaching mathematics at Harvard.

Tony attended Plymouth Junior High School, after that was graduated from Milton Academy in Milton. He then entered Harvard University, attending for his freshman year; then the war came along. He entered the U. S. Marine Air Corps, being assigned to duties in Texas among other locations. He was a pilot with the rating of 2nd lieutenant. He is now a captain in the Marine Reserves.

While in Texas, located at Corpus Christi Air Station he was offered study courses. Some select-

ed to study German, French or Russian. He choose Russian. The basic training he had rung up credits upon his return to Harvard.

By majoring in Russian he could also take, English, French and history in which he was much interested, also business economics. He would have been graduated with the class of 1947, but because of war service he left Harvard in 1949 with a B. A. degree.

Then came the University of Massachusetts, studying entomology and farm management with an M. S. degree.

Trained for bog work he entered bog management. Among his clients were the Pemberton and Carter Whitcomb properties at Santuit.

In the spring of 1957 he became associated with the J. J. Beaton Cranberry Company as manager and superintendent. This includes the active bog management, as well as of the Beaton greenhouse at South Wareham, one of the largest in the industry, where approximately 125 are employed. On the bogs at peak of season in harvest time there are about 250 engaged. He has the

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supervision of 22 foremen. It is his job to keep production up, to look ahead and lay out plans: to see that things get done and get done at the right time. During frost nights he remains at the Beaton office and directs operations from the reports of temperatures that come in from the various holdings.

In his work for Beaton's Distributing Company, one of the larger independent agencies, he helps supervise the screening and packing for shipments. There are truck loads and car loadings to get out and route the best way to likely markets. He assists M. C. Beaton in the selling, mostly by telephone, but he has not been out "on the road" in selling yet. "There's a lot more to it than just making a few telephone calls," he says.

"You have to know the markets, where a lot can be sold, and where it cannot, you should know weather conditions the country over. Selling and moving the fresh fruit crop is a hectic period."

As to his own holdings or those in which he is in partnership they consist of three. The first he owns with his father, property known as the Briggs Cranberry Company. Another one is with Allen Russell as well as his father, and this is known as Russell Associates. Properties are on Thompson street in Middleboro and South Meadow road in Carver. These bogs are about 50 years old and are planted to Early Blacks and Howes. The bogs have gravity flow. The bog in Middleboro of 5 acres is rather an exceptional bearer, getting from 70 to 100 barrels per acre.

The second property he was interested in was at Mashpee on the Cape. This is a typical Cape bog of 10 acres all set to Early Blacks. It was a part of the former Pemberton & Whitcomb bogs. There has been a weed problem here, with average production being 35 to 40 barrels per acre. This is a dry bog with no frost protection, but winter flowage.

Since this article was written this bog has been sold to Raymond Morse and his son, Paul.

Biggest holding in which Briggs was interested was owned by himself, Melville C. Beaton and William Stearns of Forges Place, Plymouth. This consists of 104 acres. Seventy-four are in Carver on the Shoestring. This is the former Atwood Company property, with Paul Thompson operator. The other property is in Plympton on the Wenatuxet river.

This has also just been sold to Eino Harju and Wilho Harju of Carver.

Known as the B. B. S. Cranberry Company, Inc., a good deal of weed work has been done on them by the company, particularly on the Carver bog cutting down on grasses and rushes. Also a canal was dug last winter to improve drainage and there had been a lot of ditch cleaning.

The Plympton property has for the past five years averaged more than 50 barrels per acre. "Bill" Stearns, who Tony considers one of the most able growers in the industry was the manager of these properties. Several years ago Stearns bought Southards Marsh, also on the shoestring and doubled production there. His holdings in ventures with others include the Waterhouse bog in Plymouth.

Tony and Mel, in a joint venture, own 22 acres under the name of

Beaton & Briggs.

(Tony does not say anything about this himself, but he is credited with getting increasing production from the bogs he operates for Beaton and the others he is interested in as the properties are being built up and well managed.)

In growing cranberries, Tony says, "The importance of proper timing is invaluable. A lot of little details may seem unimportant at the moment, but at the end of the season you will find they were very important—important in the results which you get, which is what we are all working for—good results."

He believes this is especially important in insect control—proper timing with the right materials and right amounts. He thinks that more of the crop is lost through insects than many growers realize.

He re-emphasized (and practices) the importance of, "keeping up to what seems like small details, but which really aren't. "In the aggregate they all count up."

He is a little saddened by the advantages in freight rates that effect Massachusetts and New Jersey adversely in relation to Wisconsin. But he doesn't believe that Massachusetts is going out

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of business because of this.

"The bogs which are now in good shape", are supporting the marginal ones. The good ones should be kept in good shape and in time I think some of the marginal ones may be improved and brought back to bearing, if business conditions warrant it" he reiterated.

"The die-hards are still in the cranberry business, and I think these will hang on and we have about reached the limit of shrinkage here in Massachusetts."

He feels that, while the growing of large crops per acre is important in keeping unit costs down, but that this can reach a point diminishing returns. By this he means, that too much money may be spent to gain top production. "It is the net return which is the real objective."

He touched on the Cranberry Institute. "This should be an organization solely and completely run by interested growers. Some growers are too apathetic to their own interests. The Institute at present is too much controlled by the distributing or marketing end. It is an unfortunate fact, that this lack of the sense of responsibility to the industry on the part of many growers does exist."

Briggs would even propose a growers' union, that is, a getting together of growers themselves to help control their own destiny.

Beaton's Distributing Agency is of course, one of the largest independents and has been so for many years. Naturally, Briggs believes in the existence of the independent.

"A one-point view is developed in any business when everything gets into one hand," he asserts. "Healthy competition is valuable. People tend to get lackadaisical when things are going too well. The market must be kept on its toes."

"Healthy competition in selling is good for the grower. A distributor must have a keen sense of responsibility toward the grower. It is the grower who is the ultimate foundation of the cranberry business.

"If supply and demand could be

once gotten in balance, a point, which must be obvious, there would be no need for price cutting by any distributor."

Tony, although a busy man has a lot of other interests. He is fond of sports, played football and hockey both in school and college. He likes tennis and swimming and is a member of the popular sport of skin diving with aqua-lung. He has gone for vacations in the winter to the Virgin Islands. He also goes skiing. Another diversion he likes when he finds time is refinishing old furniture and making new.

He is on the Board of directors of the Jordon Hospital in Plymouth, Cape Cod Cranberry Growers' Association, and Beaton Distributing Agency.

He is the father of two children, Russell and Barbara Briggs ages 7 and 8½ respectively. He makes his home on Front St. in Marion.

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## *Ocean Spray Pays Tribute To Long Time Employes*

At the 29th Annual Meeting of Ocean Spray Cranberries, Inc., last month in Hanson, Massachusetts, Ambrose E. Stevens, General Manager and Executive Vice President of the national cranberry growers' cooperative, paid tribute to 21 employees who have served the organization well for 25 years or more. A large scroll, bearing the names, now adorns the Hanson plant.

In commending the "faithful and loyal employees, dedicated to the success of this enterprise," Mr. Stevens stated, "They have devoted to Ocean Spray and to cranberry growers the best years of their lives."

Lauded were: From Massachusetts, Hanson processing plant and office - Mrs. Mary Atwood, Machine Operator, Hanson; Alton Belknap, Machine Operator, Bryantville; Lyman Douglas, Maintenance, Hanson; James A. MacLellan, Plant Manager - Fresh, Hanson; H. Gordon Mann, Processed Sales Manager, Hanson; Mrs. Lucy Morse, Shipping

Clerk, Hanson; Miss Sue Pitman, Office Manager and Director of Personnel, Middleboro; Wareham plant and office - John Cecchi, Shipping Clerk, Sagamore; Dante L. Cremonini, Machine Operator, Sagamore; Mario Lince, Plant Manager, Sagamore; Ellis Morey, General Utility, West Wareham.

From Bordentown, New Jersey, plant and office - Enoch F. Bills, Plant Manager, Bordentown; Oswald Carter, Mechanic, New Egypt - Miss Lavinia Hockenbury, Chief Clerk, Trenton; Harold King, Cook, New Egypt; Miss Mae King, Shipping Clerk, New Egypt; Miss Rose McDevitt, Labeler, New Egypt; and Daniel Tronco, Receiver and Shipper, New Egypt.

From North Chicago, Illinois, plant and office - Lester Haines, Fresh Cranberry Sales Manager, Hinsdale; Miss Edna McKillup, Chief Clerk, Chicago, and from Markham, Washington, plant and office, Mrs. Maud O'Brien, Chief Clerk, Grayland.

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## **FOREIGN VISITORS MASS. STATION**

Dr. Inge Groven, a horticulturist from the State Experiment Station, Hornum, Denmark, visited the Cranberry Station in East Wareham September 8. He was interested in blueberries and cranberries and the possibility of their culture in Denmark. During the past year, Dr. Groven has been doing advanced study at Cornell University.

Dr. Otto Bunemann, a horticulturist from the Institute of Pomology, Hannover, Germany, was interested in cranberries, their nutrition and soils. Dr. Bunemann visited the Cranberry Station September 9 before sailing home September 12. He had been at Michigan State University for post doctorate study during the past year.

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## **FIRST MASS. FROST**

First Massachusetts frost occurred on nights of Sept. 16, when 27 was reached and on the 17th when 22 and many mid-twenties were reported. All flowable bogs were under and little if any serious damage was expected.

## Manager Stevens' Annual Report

(Editor's Note: As there was only a brief summary of the report of General Manager and Executive Vice President Ambrose E. Steven's annual report at meeting of Ocean Spray Cranberries, Inc., in the last issue a more complete report follows. We believe this report important and interesting to all growers. Ocean Spray now handles about 75 percent of the total crop.)

We met here last year against a background of three successive pools closed at what was considered at best, an unsatisfactory level. That meeting was marked by pronounced patience on your part to see what the business would do under new management. There was a feeling of . . . "Hold your fire" . . . "Give him a chance" . . . "We have suffered long, we can take it a little longer."

Your courage and your fortitude, your forbearance and character have been helpful and encouraging. They begin to show signs of paying off.

As we meet here again, one year later and one year older, it is against a background of one pool, the 1957 pool, having come in better than any of us, including your Manager, expected. It is possible we have turned a corner. It is possible that a long-term trend has been started in the right direction of consistent earnings for our patrons. I do not know this for sure. With you, I can only hope that it is true, and work hard to make it so. Only time will tell.

First, we established a uniform price at all shipping points. Second, we established a uniform price for all varieties, except Howes. Third, we had a consistent price throughout the season! These tactics permitted our buyers and dealers to make their purchases with confidence and enabled them to devote more attention to selling and merchandising.

To help our customers to sell more Ocean Spray fresh cranberries, we stepped up our sales promotion program, intensified our publicity campaign, and offered our buyers for the first time, a merchandising service contract to defray the cost of Ocean Spray mentions in their advertisements.

The result was encouraging to us and to our trade. Our Fresh Fruit Sales volume of 235,000 barrels, equivalent to 2,800,000 cases of canned goods, was the largest in our history. Our average sales price for the season was over



\$16 per barrel, and our net return on fresh berries was over \$10 per barrel.

Merchandising plans for selling Fresh Fruit from the forthcoming harvest have been prepared. Except for the price, they have been announced. They have been well received by the trade.

Much credit for the improvement just noted goes to Lester Haines, our fresh fruit sales Manager, and to Gilbert Beaton, assistant sales manager.

The annual report for the fiscal year ending May 31, 1959, shows dollar sales for the 12-month period 12½% up over the year before. But most of us are more interested in total disposition of the 1958 pool.

Processed goods sales have been moving forward and making gains. Starting with the month of November, processed goods sales in each of 8 out of the last 9 months have been ahead of the previous year. Only the month of April fell a little behind the previous year. We would get much pleasure from the fact, that in 5 of these last 9 months, we have had the biggest sales in our history, except for the further fact that, as good as the record was, the relatively and traditionally low level for those months, as you know, does not have too great bearing on total pool disposition.

The 1958 pool of 843,000 barrels, the largest in NCA, despite our successful Fresh Fruit Sales, provided us with 1,000,000 more cases of processed to sell than the year before. Perhaps you wondered

how we were going to sell them and how long it would take. May I assure you, that those of us at headquarters wondered and worried too. Increases in the so-called off season whittled away month by month at the excess. As of the first of August, the excess over the previous year was down to more manageable proportions.

On that date, we announced to our canned goods customers a carefully prepared early shipment plan. Essentially the program provides that, in consideration of the customer having his order in our hands by August 25th and accepting our shipping plan of ⅓ delivery in August, ⅓ in September and ⅓ in October, we will ship him 8 cases billed as 7. What this amounts to is a temporary price reduction applying only to our No. 1 size of Ocean Spray Jellied and whole berry sauce. It should have the effect of providing a consumer price of 2 cans for 39c immediately, in those markets accounting for about 60% of our canned sauce volume.

Of course, we cannot actually close the pool until every barrel in it is shipped and billed. We anticipate a pool closing of about the same date as a year ago, and a cash return for the pool somewhat comparable to the 1957 pool.

Last but not least of improvement in our sales picture, is Ocean Spray Cranberry Juice Cocktail. Our New England advertising campaign starting last July, at the time of the introduction of the quart size has really paid off. Our New England business has more than doubled in the past 12 months, and continues to climb. We must also give due credit to the improvement in the formula and the addition of Vitamin C.

While not as yet having the benefit of advertising support, cocktail outside of New England shows steady gains. Total cocktail sales for the fiscal year as indicated in the annual report show a gain of 36%. This is on top of a gain of 23% for the previous year. Thus cocktail sales over the last 2 years have improved close to 60%. To qualify these statements and put cocktail in its true perspective however, it needs to be noted that cocktail sales account for only 45,000 barrels out of a pool of 843,000 barrels, merely a 5% contribution to a total pool disposition.

Starting last October, we released our new advertising theme "Eat Ocean Spray Every Day - The Natural Mate for Every Meat." This selling message was carried in women's magazines throughout the year, and on television spots in 20 selected cities

last Fall and this Spring.

We are impelled to believe that this new selling message for Ocean Spray has had a great deal to do with increasing, in some degree, more frequent consumer use of our products, thereby bringing about our increased sales. Something did it beside the wit and charm of our brokers and our salesmen.

Supporting our advertising is a steady flow of material sent from our Cranberry Kitchen by Mrs. Janet Taylor and her Assistant, Miss Jean Griffin, to newspaper and magazine Food Editors, to radio and television stations, as well as to Home Economics Teachers across the land. Much of this material is used, and is just as valuable in stimulating usage of Ocean Spray as our paid advertisements. In addition, from Miss Betty Buchan's office emanates a continuous flow of publicity and sales helps.

Supporting our sales, besides our advertising, we have put a steady stream of sales promotions into effect since our annual meeting last year. At that time, we had just released our Early Shipment Plan for 1958. This was immediately followed by our "Buy 2 Sale."

Right after the holidays, we introduced our handsome and useful "How to Save Money on Meat" book, which was well received, and is still pulling approximately 1,000 requests per week!

In March, we offered our trade a special Easter sales promotion.

This was immediately followed in early Spring by our barbecue knife sales promotion. On top of that, in June we organized and released our "Clickin' With Chicken" sales promotion that has proven most effective in an otherwise dull sales season.

Ocean Spray distribution in grocery stores remains at a high level, comparable with Campbell Soup and Jell-O. It is still true, at this meeting as it was last year, that what we need most is for more people to use Ocean Spray products more often. To accomplish this, unrelenting drive and push are a must. "Keeping everlastingly at it" is the watchword of our advertising, sales and sales promotion.

In America, statistics show that 23% of food is consumed away from home premises. We do about 3% of our Ocean Spray Sauce business in hotels, restaurants, schools, hospitals, called institutions in trade terminology. We are doing 3% when we should do 20%. And when you are served cranberry sauce in a restaurant, what do you usually get? A

paper thimble-full you can eat in one bite.

To take advantage of what seems like a great sales opportunity, and to fill a long-felt need, we have organized an Institutional Sales Department.

As noted in the annual report, our processing plants handled a larger volume than ever before, packing 135,000,000 cans and bottles in the fiscal year. Economy and quality maintenance characterize our production.

Despite the fact that the past fiscal year was one of generally rising prices, we actually purchased most of our supplies at figures lower than the year before. This may be attributed to improvement in our purchasing methods. Most of our supplies are now bought on a sealed bid basis. In addition, we have implemented our policy of purchasing the same item from at least two suppliers.

As stated in the annual report, our cost of manufactured goods including supplies was 49% of sales in 1958. In 1959, it was 44%. This improvement of 5% translates into a saving of 54c per barrel, a fine accomplishment for which our operating department deserves much credit.

Working hand-in-hand with Production and Marketing, our Research and technical development department has been involved in a great multiplicity of things. Top priority has been assigned this department for two important projects . . .

1. The development of a method for making better whole sauce.
2. The development of a method of making cocktail to permit us to use berries from all areas, and to reduce the cost of processing.

In the areas of Finance and Accounting, progress has been steady, if not spectacular. It is seldom spectacular in the average run of corporate enterprises. Our insurance program has been reviewed by a firm of outside competent authorities and found to be adequate and economical in the main.

The Springfield Bank has declared its willingness to again give us an unsecured line of credit of \$6,000,000 for working capital for the coming season. About this time last year, we started borrowing seasonal money from the Bank. Our seasonal loans reached a peak of \$3,500,000 in mid-November. On December 16th, we repaid the Bank in full.

Our term loan at the Springfield Bank, once over \$4,000,000 is down to \$709,000. It is expected that we will discharge half this amount from retains from the

1958 pool, and make final settlement at the close of the 1959 pool.

Figures from our Accounting Department are now current, accurate and reliable. Our system of controls, including budgetary control and inventory costs and controls, furnish Management routinely with unassailable facts pertinent and necessary to important decision-making.

Our organization is working well together in a spirit of team plan. Much of the progress we have made is due to this, and to the managers of the respective departments . . . For Finance - Assistant Treasurer Jack Harriott; For Accounting - Controller Ed Gaughan; For Operations - Ken Garside; For Research and Technical Development - Bill Hampton; For Marketing - Larry Proesch; For Advertising and Public Relations - Drew Flegal; For Personnel - Miss Sue Pitman.

During the past year, our Board of Directors has played an integral part in our progress. Their understanding of our problems and their support of your manager has been exceedingly helpful. They have been untiring in their efforts to direct the affairs of this business into better channels, and to better returns for our patrons.

As a wholly-owned farmers' co-operative, Ocean Spray seems to be proving a good home for an increasing number of cranberry growers. Ocean Spray handled from the 1958 harvest, as we know, 75% of all cranberries grown.

As has been said before, the only excuse for the existence of a growers' cooperative, and the staff who manage it, consistent with the discharge of the cooperative's responsibility to the public, is to make as much money as possible for its patrons. Your manager and his staff are dedicated to you and to this purpose. Our progress to date, if not spectacular, has been steady. With your help, we have only one goal . . . the production of consistent earnings for you, year after year at a satisfactory level.

**WILL PURCHASE**  
**100 Shares**  
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## ***Norman I. Brateng, Ocean Spray Director Averages Better Than 150 Barrels To Acre***

"What's your hobby?" was the question asked Norman I. Brateng, Long Beach, Washington, new Ocean Spray Cranberries, Inc. director at the end of a brief interview.

His reply was, "I guess it is just growing cranberries. This takes up all my time. I do like to take an interest in photography, also." Mr. Brateng made his first visit to the Massachusetts cranberry area last month, attending not only the annual meeting of Ocean Spray, but that of Cape Cod Cranberry Growers' Association.

Born in Western Minnesota,

Brateng was raised and attended schools in Washington. Before entering cranberries he was in the contracting business. He has had an interest in cranberries for about nine years but did not become a full-time grower until 1954 at which time he bought his father's bog at Long Beach.

The bog consisted of six acres, planted to the McFarlin variety. To this he has added two acres and plans more. He has a sprinkler system to control frost and for irrigation. He uses the water reel method of harvesting.

"I have been fortunate," he says, modestly, "in receiving a

yield in excess of 150 barrels per acre."

He served in the U.S. Navy during World War II, in the far western Pacific and took part in the invasion of Okinawa and saw action off Japan. He was gunners mate, 3rd class.

Forty years of age he is married, his wife's name being Mary and the couple has two sons, Carl, 17, and Eric, 2½.

He says he is "not a joiner", his affiliations being few. He is secretary of the Long Beach Lions club and president of the Ilwaco (Washington) Parents-Teachers' Association. He is also a member of the Long Beach Cranberry Club.

He succeeds Leonard G. Morris of Long Beach, who resigned his directorship when he sold his cranberry property.

## **New Jersey Summer Meeting**

The ninetieth summer meeting of the American Cranberry Growers' Association, the nation's oldest cranberry organization, was held at Clayton's Cabin, Cedar Bridge, August 25. President Hobart Gardner presided.

Highlight of the program was the presentation of a cash gift to Charles A. Doehlert, the retiring Secretary of the group. In recognition of his 32 years of service to the cranberry industry in the capacity of editor, research horticulturist and secretary-treasurer of this Association for 15 years, Mr. Doehlert was also presented with a resolution of appreciation for his devoted work in behalf of the growers.

### **Statistics**

E. R. Nordberg, Agricultural Statistician of the U.S.D.A., gave the summer estimate for the nation and the various states. New Jersey's estimate was given at 110,000 barrels, 29% above the 10-year average and only 2% less than the record crop of 1953. An interesting statistic reported by Nordberg was the fact that of the growers in N. J. producing 1,000 or less barrels, twice as much acreage as last year was reported, while those growing over 1,000 barrels reported about the same acreage. Mr. Nordberg also pointed out that in nine of the past ten years the August estimate has been

low, so that N. J. may still have a record crop.

### Water Project

George Moorhead, N. J. Dept. of Conservation and Development, spoke on the Lebanon Forest Water Project. This is a cooperative project enlisting scientists from Rutgers University, the Geodetic Survey and the Forest Service, in which studies are being conducted to determine ecological changes and the effect on ground water resources of various agricultural practices. This is a long term project of vital concern to cranberry growers and concrete results have not yet been obtained.

Carl B. Cranmer, N. J. Dept. of Conservation and Development, described prescribed burning as an effective tool in controlling the pine dominance of South Jersey forests and in making effective barriers in prevention of spread of forest fires to cranberry bogs. In recent years large fires, which consumed thousands of acres of forest and jumped highways and streams, were effectively stopped when they reached areas which had received prescribed burning treatments for several years.

### Tipworm

Philip E. Marucci, entomologist at the N. J. Cranberry and Blueberry Research Laboratory, emphasized the importance of tipworm control in New Jersey cranberry production. Late held and sanded bogs, previously thought to be relatively immune to tipworm attack, were being severely damaged by this insect in 1959 with destruction of upright tips running as high as 82%. Data was presented to show that the *Sparganothis* fruitworm is becoming increasingly more difficult to control with DDT alone, while parathion plus DDT continued to be effective.

Richard Marston, Soil Conservation Service, described the type of services technicians of this agency could perform for the cranberry grower. These include determination of water sources, and helping to plan in construction of reservoirs, ditches, dams, sluices, leveling and erosion control.

Earl Propst described types of soil conservation work eligible for payments and procedures involved.

Fred Watts discussed the role of the N. J. State Dept. of Labor in assisting cranberry growers at harvest time. Application for seasonal labor needs must be made 30 days in advance of the need. Qualified available local labor must be used before recruitment outside the area is undertaken. The large apple crop in N. J. may cause a competition for agricultural labor this fall.

### New Water Bill

Joseph Palmer, reporting for the Water Policy Committee, urged growers to continue their representations to legislators regarding their opposition to the rationing provision of the proposed new water bill. The change in philosophy of water use in New Jersey from the "Prior Use" to the "Equitable Apportionment" concept could have a very grave consequence to the cranberry industry in this State. John Cutts strongly supported Palmer's views and urged growers to exercise their democratic prerogative by letting their Senators and Representatives know how they feel. He also spoke against a proposed bill which purports to license all well drillers, making it illegal for growers to drive their own wells.

### Tax Situation

Edward Lipman, speaking for the Tax Committee, stated that the 100% tax assessment of all N. J. property which has been ordered by a recent decision of the N. J. Supreme Court can be highly detrimental to the cranberry industry. Tax cost under this system may rise to as high as \$2 a barrel unless a more realistic outlook is adopted in the new tax bill in consideration.

William S. Haines proposed a motion that a State Bog Committee be formed for the purpose of petitioning the Experiment Station to build a State bog in the Wharton Tract in the heart of the N. J. cranberry area. This motion was unanimously carried.

Philip Marucci was elected as secretary of the Association to succeed the retiring Doehlert, who will continue as treasurer.

## *Institution Sales Campaign Launched By Ocean Spray*

Ocean Spray will launch a broadened Institutional sales program this fall to be headed by William G. Hutchinson, formerly with the Cling Peach Advisory Board, according to an announcement from Ambrose E. Stevens, Ocean Spray's general manager and executive vice president.

Mr. Stevens stated that Ocean Spray has long been aware of the importance of the volume feeding business in the United States and plans for the broadening of Ocean Spray's service to the hotel and restaurant trade will begin immediately under Mr. Hutchinson's direction. First step will be the

development of a new series of quality cranberry recipes and selling aids for the trade.

Mr. Hutchinson has been with the Cling Peach Advisory Board in San Francisco for the past ten years, the last four years as Institutional merchandising manager. His experience includes the developing and execution of advertising and promotional programs, public relations and organizational work with restaurant and allied associations.

Previously, he was with Derby Foods, Inc., in Chicago, first as a retail salesman and later as wholesale salesman, and for several years he conducted his own food brokerage business in Philadelphia.

He attended the University of Pennsylvania and served with the U. S. Navy during World War II. He is a member of the Industry Relations Committee of Institutional Food Manufacturers' Association.

In his new position as sales manager, institutional, at Ocean Spray headquarters in Hanson, Massachusetts, he will work directly with Larry E. Proesch, Marketing Director. He and Mrs. Hutchinson will make their home in Duxbury, Massachusetts.

### MASS. STATE TO ERECT CRANBERRY HIGHWAY SIGNS

Official Massachusetts State signs to mark the new Cranberry Highway between Middleboro and Orleans, a distance of 63 miles, are being made and will be erected for the guidance of those who use this highway to Cape Cod.

"This welcome news has come to us from the State Public Works Department," said Robert S. Fugere, president of the Cranberry Highway Association. He also added that many members of the association now have private signs set up on their business properties.

People are always willing to get together—the hitch comes when they try to work together.

It's a waste of time to explain your actions — people prefer to draw their own conclusions.

# Washington Station Report 1959

(Editor's Note: the following is a summary of the work carried on at the Cranberry-Blueberry Experiment Station at Long Beach, and also Grayland area. It is signed by Dr. Charles C. Doughty, station director and Dr. Folke Johnson and Dr. Maksis Eglitis of the Western Washington Experiment Station.)

## II FERTILIZER TREATMENTS

During the 1958 season, a nutrition experiment on cranberries was started in the greenhouse. Two gallon stone jars were filled with pea gravel and cranberries were planted in the gravel. Nutrient solutions were formulated and pumped up through the gravel to provide nutrients for the cranberries. Complete solutions containing all necessary nutrients, nitrogen, phosphate, potash, iron, zinc, manganese, magnesium, sulfur, copper, calcium, and molybdenum were used in part of the jars, while solutions which were lacking one or more of these elements were used in others.

The only definite symptoms which were produced were what appeared to be from drought conditions. Pea gravel appears to be too coarse for the fine roots which cranberries have. Some zinc and iron symptoms appeared but were not definite enough. This experiment will have to be repeated during the 1959 and 1960 seasons and a finer grade of gravel or coarse sand will be used.

The field plots on nitrogen and phosphate-potash tests show about the same results for 1957 and 1958 as previously reported for 1956.

In the nitrogen trials, which consisted of four types of nitrogen fertilizers -nitrate of soda, ammonium sulphate, ammonium nitrate, and urea - the 1957 data showed no difference in total yield between ammonium sulphate ammonium nitrate and urea. All three produced considerably higher yields than sodium nitrate. In 1958 the data indicates a difference in total yield between all

four fertilizers. Ammonium sulfate was highest, then urea, ammonium nitrate, and nitrate of soda followed in that order. All plots were fertilized at the rate of 20 lbs. or actual nitrogen per acre. Four times of application - 20 lbs. fall, 10 lbs. fall plus 10 lbs. spring, 20 lbs. spring, and 10 lbs. spring plus 10 lbs. after bloom were used.

In 1957 the spring application of ammonium sulfate was the highest, with urea in the fall or in the spring a close second, and a split application of urea in the spring plus urea after bloom, third. The 1958 data is somewhat limited because of the severe frost on May 12, 1958. However, there is some indication that the split application of urea at 10 lbs. actual nitrogen after bloom was the highest yield.

This data indicates that urea could be used whenever the vines appear to need it. Ammonium sulfate (20-0-0) is best used in the spring before growth starts. Ammonium phosphate (16-20-0) or 11-48-0) could be used with effectiveness equal to ammonium sulphate.

Phosphate and potash appear to have had in 1958, from an application of 20-160-0, a significant increase over the control application of 20-0-0. In 1957, a small increase was obtained from an application of 20-80-200, however, it was not large enough to pay for the expense of applying the fertilizer. Similar phosphate-potash trials were applied in field plots in Grayland with very little response while trials in North Beach produced very good results. This indicates that the response to phosphate or potash would depend on the condition of the bog itself.

Several points to be considered in fertilizer applications are as follows:

1. Good drainage and irrigation are essential for the best response from fertilizer.
2. Off-color foliage similar to nitrogen deficiency may be caused by insect and disease injury.
3. Apply dry fertilizer on dry

vines only.

4. Urea and liquid fertilizer may be applied with regular spray mixtures.

The Massachusetts Experiment Station states that under the conditions, they obtain the best quality fruit from a fertilizer with a 1-2-1 nitrogen-phosphate-potash ratio. Where vine growth is desired they use a 1-1-1 ratio fertilizer. One thing to keep in mind is that on heavy vines that annually make a vigorous growth less nitrogen fertilizer needs to be applied.

## III GROWTH REGULATORS

In the series of tests conducted in 1957, fourteen different chemicals were tested for their ability to increase yield on cranberries. Of this group NAA (naphthalene acetic acid), 2,4,5-TP (2,4,5-trichlorophenoxypropionic acid), NOA (naphthoxyacetic acid), Dureaset (N-meta-tolylphthalamic acid), and IPC (O-isopropyl-phenyl carbonate) produced slight increases in fruit set. CLPA (para-chlorophenoxyacetic acid) when applied at the close of the blossoming season in 1955, caused an increase in the number of blossoms set per square foot hence an increase in yield in 1956. No effect was found in 1957 when similar tests were made. Fall applications of 2,4,5-T, 2,4,5-TP, and 2,4-D (2,4-dichlorophenoxyacetic acid) were made in 1958 at very low concentrations 2.5 to 10 parts per million. Further tests of several of these chemicals will be made in 1959 to determine their effect on increasing the number of blossoms per square foot.

## IV BREEDING CRANBERRIES AND BLUEBERRIES

A variety block of cranberries was established in 1957. In this block are planted approximately 65 varieties and seedlings. Thirteen seedlings developed by this experiment station are included. Named varieties are Wilcox, Stevens, Beckwith, Voe's Pride, Searls, Howes, Holeiston and a Wisconsin strain of McFarlin. The remainder are seedlings from Massachusetts and New Jersey. The following var-

(CONTINUED ON PAGE 16)

## WE BELIEVE THE CROP WILL SELL

Once again the battle of the harvest and of the selling of the crop is on. There appears no doubt but that the crop will be a big one even though harvest is not much more than beginning as we write this.

The season has been late in most areas with intense heat and humidity delaying ripening in the East and also in Wisconsin. It is noteworthy in that state that several who are usually accurate in their estimates, now figure there will be an over-run of the preliminary forecast of 405,000 barrels. Noteworthy also is the estimate that the crop will be about 90 percent mechanically dried and approximately 100 percent mechanically picked. But even more important that, for the first time, the state average may be more than 100 barrels to the acre. Last year it was about 83.

As an industry it would seem we have learned to grow cranberries, and there is the ever-increasing problem of how to sell so many cranberries. There is certainly good news in the announcement of Ambrose E. Stevens, on August 31 that there were sufficient orders to sell out the entire Ocean Spray 1958 crop.

Today the newly-named Ocean Spray Cranberries, Inc. controls about 75 percent of total production. It was most encouraging that there was a spirit of more than mild optimism as to the future of the industry at the annual meeting at Hanson.

We, of course, have no part in the selling of cranberries and it is easy to say—but we believe even this big crop can be moved at prices which will give growers a net again this year.

We base this a good deal, plus Ocean Spray's aggressive selling campaign on such a large percentage of the crop, (and equal aggression on the part of Independents) on the fact there was orderly marketing of the crop last year. For the first time in several years buyers felt more sure of themselves. This left a good taste

CLARENCE J. HALL

Editor and Publisher

EDITH S. HALL—Associate Editor

Wareham, Massachusetts

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Barnstable, Mass.

### New Jersey

P. E. MARUCCI

New Jersey Cranberry and Blueberry Station

Pemberton, New Jersey

in the mouth of the trade. We believe this good will will carry-over into this year's dealing.

There seems to be always something new coming up to contend with. New Jersey growers, as reported in the story of the summer meeting of American Cranberry Growers' Association is faced with a real threat to the industry. The new 100 percent taxation plan in that state and the fact growers may have to pay for use of water could work additional hardships on the growers. It is fortunate that several have taken these matters to heart and are voluntarily representing the growers in fighting these proposed increases in cost in doing business.



# SERVING THE WISCONSIN GROWERS

## WASHINGTON REPORT

(CONTINUED FROM PAGE 14)

eties have been planted for trial on other bogs in Washington and Oregon: Wilcox, Stevens, Mass. 28 and 17, and W.S.C. No.s 108, 93, 72, 118 and 96. Small plots of cranberries will be planted in the greenhouse for further development and breeding of new varieties.

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from a cross of the high bush blueberry and a wild deciduous mountain blueberry were rooted and set in nursery plots for further trials. Cross pollinations were made with seventeen blueberry varieties and a wild evergreen blueberry from Colombia, South America, (*Vaccinium meridionale*). Several characteristics valuable to commercial blueberry growing are a part of the Colombian blueberry's growth habit, i.e., evenness of ripening, holding to the bush till all are ripe, and bearing in bunches.

## V CRANBERRY DISEASE CONTROL

This phase of the cranberry work was conducted in cooperation with Drs. Folke Johnson and Maksis Eglitis of the Western Washington Experiment Station. In 1957, the fungicide test plots were maintained on the Bernhardt bog, the Experiment Station bog, and the Siljander bog to determine the effectiveness of several fungicides in controlling twig blight. Eight chemicals were used. Wettable sulfur, captan, maneb and ferbam provided good control. Test plots on Siljander's bog with wettable sulfur as the fungicide, received different numbers of sprays. The three sprays were ap-

plied on July 22, August 5, and August 22. Plot No. 1 received only the 1st spray, plot No. 2 only the 2nd, and plot No. 3 only the 3rd spray, plot No. 4 the 1st and 2nd sprays, plot No. 5 the 1st, 2nd, and 3rd sprays, plot No. 6 the 1st and 3rd sprays, plot No. 7 the 2nd and 3rd sprays and plot No. 8 was left unsprayed. Yields from these plots indicate that two spray applications (2nd and 3rd) are as good as all three in controlling twig blight. In 1957, fungicide test plots were established on the Experiment Station bog to determine if any of the fungicides suppressed yield. Wettable sulfur, fermate, Zineb, and phaltan suppressed yield while maneb and captan increased yield. This is contrary to results obtained in 1956 from twig blight control plots where fermate plots had the highest yield. However, the main reason for higher yield in 1956 was the control of the twig blight and not the increasing or suppressing effect of the fungicides as in 1957. No difference in yield could be detected between the treatments in 1958, mainly because of the freeze on May 12, 1958.

After harvest four, one-pound healthy fruit samples were taken from each plot from Bernhardt's bog and stored for three months at each plot from Bernhardt's bog and stored for three months at room temperature. After this period the berries were sorted into healthy (eatable), and diseased or soft.

In storage under favorable conditions for fruit decay, the fruit from the sprayed plots keep much better than the unsprayed ones. Maneb, ferbam, and captan had a long residual effect in reducing the growth of decay organisms. These materials were applied June 4, July 12, August 5 and August 25. This data indicates that fruit rot can be greatly reduced by proper application of fungicide sprays.

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JUDY KEENE, "Miss Cranberry Highway of 1960" poses amid fresh-harvested berries. (Cranberry Highway Photo)



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**CRANBERRIES** The National Cranberry Magazine published monthly at Wareham, Massachusetts, for October, 1959.

1. 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.

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None.

CLARENCE J. HALL

Sworn to and Subscribed before me this 17th day of September, 1959.

(Seal) BARTLETT E. CUSHING, Notary Public

(My commission expires April 5, 1961)

## CRANBERRIES GROWING HERE

This was the second year that visitors from all over the United States, at the rate of 750 a day, have been conducted on tours of the National Cranberry Association's Ocean Spray processing plant in Wareham, Mass., on the Cranberry Highway (Routes 28 and 6) and have seen how the 26 million pounds of cranberries which are not packaged for the fresh market find their way into 28 million cans of sauce, jelly and cranberry juice. They will probably be disappointed. This may be a candid observation, but we often have wondered, travelling up and

down that same Cranberry Highway why a big, attractive sign that can be read in an instant is not placed on one of those cranberry bogs along the route, reading, simply, "Cranberries Growing Here." Tens of thousands of motorists pass by in the summer and among them are many thousands who don't know a cranberry bog from a hayfield. Just to register with these tourists that they have seen cranberries growing might be a smart piece of publicity, worth many times the cost of the sign. (Food Marketing in New England).

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## POST-HARVEST USE OF AMINO IS HALTED

Dated September 18 a letter was sent to grower members by Ocean Spray Cranberries, Inc., asserting that from that date on they should not use amino triazole in any manner, at any time. This was followed by a flash card from Massachusetts Cranberry Experiment, Station prepared by Dr. C. E. Cross. It read:

"Some question has arisen that small residues of amino triazole may occur on cranberries after treatment with amino triazole in the approved, after harvest application. For this reason, and while accurate tests are being made to prove or disprove the presence of amino triazole under these conditions, the Cranberry Experiment Station urges all growers to refrain from further use of this material until the necessary tests have been made. The Station will notify the growers promptly of the results and will at that time make further recommendations."

Notices in other areas went out urging no use of this hormone-type spray as the Pure Food and Drug Administration had established zero tolerance. A great many growers had planned extensive post-harvest use of this weed killer as such had been cleared by Pure Food and Drug Administration. The Washington State notice to growers stated that about the only time it is safe to use amino triazole on cranberry bogs is on new plantings, up to two years before the first harvest.

Again under date of October 15th the Mass. Cranberry Station put out a second flash card, referring to the first, saying, "Since then, a great deal of work has been done, but much more still needs doing. The situation is not clear, and for this reason the Cranberry Experiment Station strongly urges growers to refrain from any further use of amino triazole until the situation is fully understood.

"As possible alternative treatments refer to the weed chart, Stoddard Solvent is effective as spot treatments in the fall on

asters, rushes, wool grass, panic sene is helpful after late water grass and poverty grass. Kero- cut grass in the spring.

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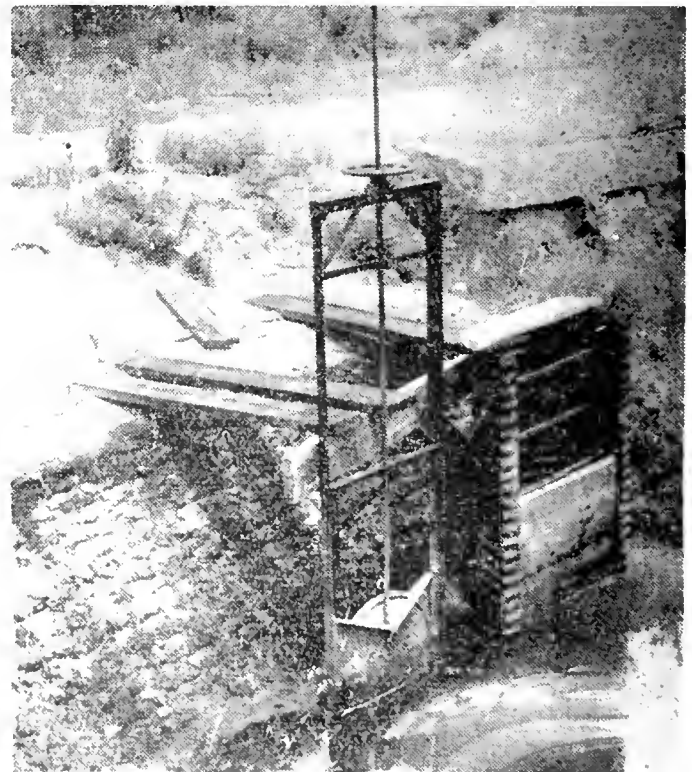
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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



## Later Harvest Rapid

After a late start due to lack of color, the Massachusetts cranberry harvest swung into high gear about mid-September and has progressed at a rapid rate to date (October 20). In fact, it has been an excellent harvest season with a minimum of delays caused by rain or killing frost. This was most fortunate because water supplies have been critically low all fall and it wasn't until about mid-October that many growers had their unprotected bogs harvested.

Eleven general warnings were released from the Cranberry Experiment Station as of October 20, compared to 12 during the same period in 1958, 17 in 1957, and 16 in 1956. These figures include both the afternoon and evening warnings.

## Frosts

The lowest temperatures experienced this fall occurred on October 18 and 19 when temperatures dropped to the middle teens in the colder locations. The frost damage at this time is estimated to be between 9,000-10,000 barrels. Unfortunately, damage occurred on Sunday night, October 18, when no warning was released from our station because there was every indication that gale winds would continue all that night, but these winds "dropped out" in some areas.

## Disturbed

We were greatly disturbed to say the least, but this situation points to a weakness in our frost warning service which depends so heavily on wind and cloud information from Boston. Possibly a daily radio weather report during the frost season, which would in-

clude minimum bog temperatures plus wind and cloud information, would help remedy the situation if proper arrangements could be made.

Growers who subscribe to the frost warning service, sponsored by the Cape Cod Cranberry Growers Association, were asked for their views on this point in a questionnaire that they filled out last spring. Only about a third of the growers felt that a daily radio forecast of this type could serve as a suitable alternative to the present system. Further study will be given to this matter.

The major topic of conversation this fall whenever growers meet or visit our station centers around amino triazole. Considerable confusion has arisen as to why we were unable to recommend its use as a post-harvest treatment

this fall. Two flash cards have been prepared at our station and mailed to growers through the county agents offices, urging them not to use amino triazole until the situation could be clarified. The writer believes that a statement from Dr. C. E. Cross would be most helpful in bringing the growers up to date on recent developments. His statement is as follows:

## Amino Statement

"The after-harvest registration for amino triazole was granted last year by the U.S.D.A. only after three years of experimental work, in which analyses showed no residue remained in the following crop. This year, following the first fall in which amino triazole was widely used commercially, many analyses were made to make sure that no residue contaminated the berries to be shipped to market. Using a modern and delicate analytical method, some very small residues were apparently found. Larger residues were also found on berries that were treated during the growing season of 1959—pre-bloom use of amino triazole was easily detected since it showed a residue of a large fraction of one part per million. But because of the tiny amount found in

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some analyses of berries that had been treated only in the approved manner, it was thought best to warn growers against using amino triazole this fall. With one exception, analytical work done by the American Cyanamid Company and the University of Massachusetts this fall shows that berries from bogs that were treated only in the approved manner last fall carry no residue. Many analyses remain to be done, but we hope to have the whole situation clarified before another year."

#### Market Report

The first cranberry market report for fresh fruit was released September 29 from the Agricultural Marketing News Service in Boston, under the direction of John O'Neil. Growers will note that there has been a major change in its format. In fact, it has been completely revised in hope of making the report more understandable and useful to both growers and shippers. We understand from Mr. O'Neil that our Massachusetts shippers are cooperating very nicely by supplying the necessary information on weekly movements, prices, and conditions of the Massachusetts crop. If growers who are now receiving this information wish to continue to do so, they should notify Mr. O'Neil as suggested in his third report dated October 13. Anyone else interested in this report may receive it by writing to the Agricultural Marketing News Service, 408 Atlantic Avenue, Room 703, Boston, Mass., requesting that their name be added to the cranberry mailing list.

Lawrence Dana of Wisconsin visited our station in mid-October

to observe and assist with some picking machine experiments, using the Dana machine under both dry and flooded conditions. Dr. Chandler and Professor Norton worked with him on these studies. Professor Norton has built a water reel machine from plans secured from Oregon and has experimented on

the State Bog with this type water picking. He has also conducted some studies on various picking speeds and their effect on bruising of the berries. Some interesting information will be available at a later date on the results of these studies.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of October 1959 - Vol. 24 No. 6

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FRESH FROM THE FIELDS

Compiled by C. J. H.

## MASSACHUSETTS

### Sept. Dry, Hot

September ended as one of the driest on record, there having been only .86 of an inch of rain as compared to a normal of 3.65. There were only two rains of any real consequence and none heavy. The month was also warmer than normal.

### Continues Into October

This warmth and dryness continued into October, true "Indian Summer" came in Sept. 16 following a couple of nights of relatively light frosts, these possibly taking a total of 1,000 barrels, as estimated at Cranberry Station, or practically no loss to the crop as a whole.

### Ideal Picking Weather

With a week or ten days late in starting harvest, this long dry spell provided ideal weather for harvest, except that it was often too hot. Ripening, due to the heat and lack of rain had been very slow to end of first week in October.

Berries were turning out to be of medium size rather than larger than usual as had been expected at start of season. This, too, was attributed to the hot, dry weather. There was much fruit of good color, however. There were some growers who had low cup counts and this included Barnstable County. There was considerable scald, resulting from the heat of August and September.

### Rain Oct. 6-7-8-9

This ideal picking weather was broken October 6, with rain and a sudden turning to more seasonable weather. Up to that date

temperatures for October had been a plus of 30 or approximately 5 degrees a day warmer than normal.

That storm lasting to the 9th brought a total of 1.07 inches, bringing the total for the month of October up to 1.79 inches as there had been a light fall Oct. 1 due to the tail-end lash of Hurricane Gracie.

Reservoirs were at an extremely low level as were all ponds. Growers were much concerned as to how they could put on the after-harvest flood, and many of those who had finished harvest by that date could not.

### Crop Falling off?

Crop was between 66 and 75 percent harvested by end of first

week in October. By that time general opinion was that it would fall off from the preliminary and the September estimate of 610,000 barrels.

## NEW JERSEY

### September Average Temperature

Extremely warm and extremely cool weather have cancelled each other out to make the average temperature for September equal to about normal for this month, which is 67.5°F. The first 11 days of the month were abnormally warm, with temperatures above 85°F. on 9 days and with a record high of 93°F. being set for September 9. Then there was an unusually cool spell from the 11th

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to the 21st, with record lows of 39° and 34° on the 17th and 18th. During this period there were frosts on cranberry bogs on four nights, with temperatures recorded in the low twenties. Then true to the fluctuating pattern of New Jersey weather, the last ten days of the month was generally above normal in temperature.

#### Driest Month of Year

The driest period of the year occurred in September. There were 24 consecutive days without appreciable rain, from the 5th to the 28th. Total rainfall through September 29 was 2.32 inches as compared to the norm of 3.62 inches for this month.

#### Little Frost Damage

There was little serious frost damage into October to cranberries reported and harvest was proceeding quite well with the swing to mechanical harvesters, especially the Darlington picker, being even more in evidence this year.

## WASHINGTON

#### September Wet

The month of September was cool and wet. Up to the 25th there had been 6.83 inches of rainfall as compared to 2.87 in 1958. There were only six days without some rain from a trace to an inch or more. Maximum temperatures was 77 on the second and third. There was a low bog temperature of 36 on the 32, and the monthly minimum humidity (to 25th) was 53 percent.

#### Harvest

By first of October growers were ready to start and were harvesting. There had been no harvesting in Long Beach area until approximately that time.

#### Fireworm Injury

Charles C. Doughty, superintendent of the Long Beach Cranberry-Blueberry lab found that a few bogs had serious fireworm injury, but it will not reduce the crop to any serious extent. Harvest started on the Experimental Bog, the end of September and first of October.

#### Cool Growing Season

The entire growing season this

year was on the cool side. Because of this there was a long blooming period. Berries which set early had a very nice color and size as the harvest began, but those set later are rather smaller. The amount of these small berries varies considerably from one bog to another, some having quite a lot, others a small amount.

## WISCONSIN

#### Heavy Rains

September was slightly above normal in temperature and well above normal in precipitation in the cranberry growing areas. The first half of the month was warm and humid, with scattered light showers. The middle brought killing frosts, with the coldest being in the north. Moderate rain fell during this period over the entire state with the north receiving the heaviest amounts.

The latter part of the month brought temperatures above normal, along with cloudy weather and prolonged shower activity. Very heavy rainfall amounts fell on the 25th and 26th. Some northern areas reported 5 to 6 inches during this storm period.

Lake levels in this area which had been dropping since 1956 were brought back to normal. Ground water levels were also expected to raise, as a result of recharging the sub soil. Highest temperatures were in the nineties the week of Sept. 7th and coldest were in the low twenties in the middle of the week of Sept. 14th. The outlook for October is below normal temperatures and normal precipitation. Normals for the month are 48.3 degrees, 2.12 inches of precipitation.

#### Too Much Water

In contrast to last year at this time water supplies were more than adequate and growers in the west central area were having trouble getting rid of water the latter part of September. Several marshes were reported to have lost main reservoir dams as a result of the heavy rains. Rain and runoff flooded a number of marshes, but berries were reported under water only a day or two.

About two thirds of the marshes started harvesting the week of the 21st and the balance were under way the week of the 28th.

(Continued on Page 16)

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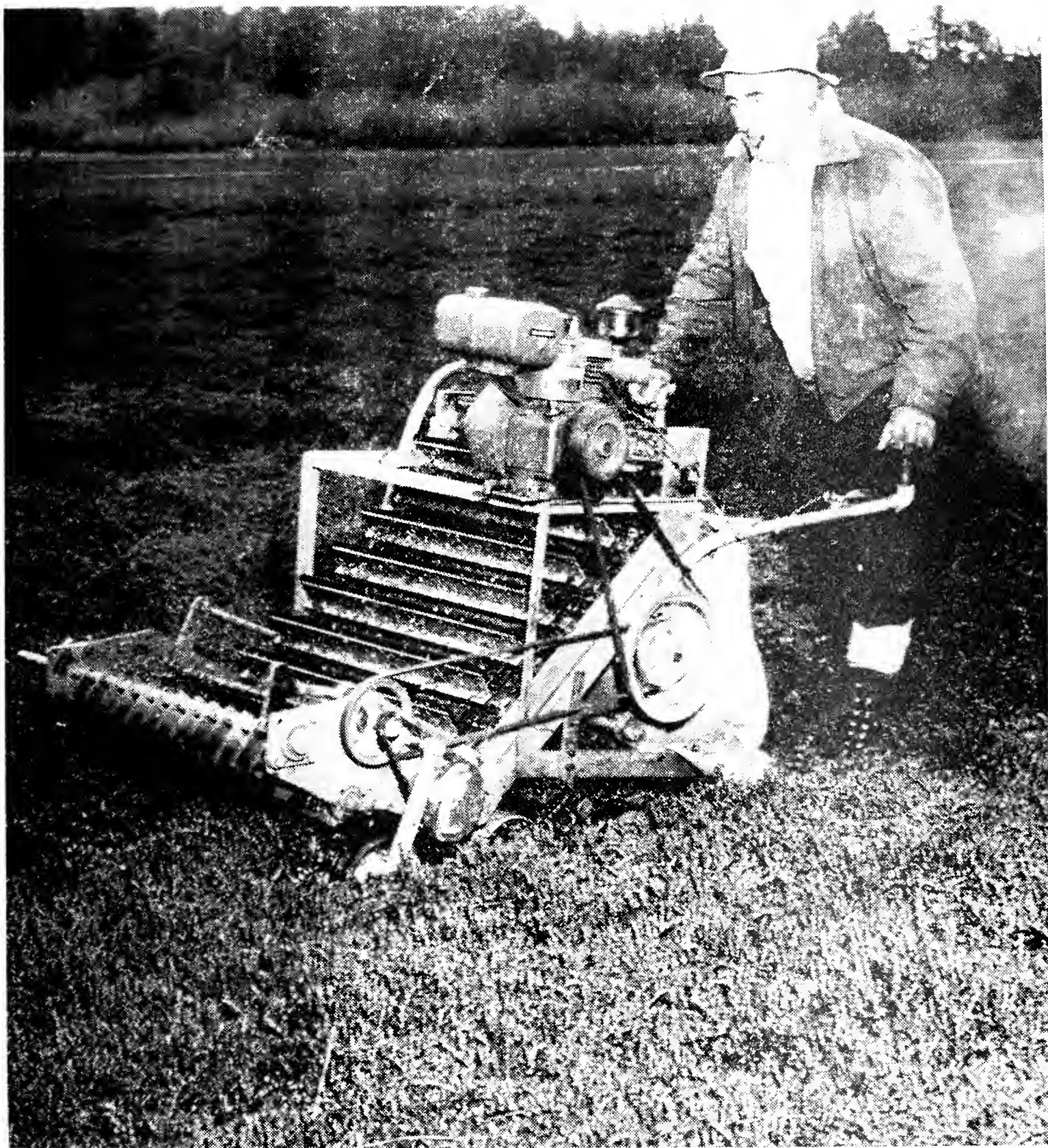
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T. E. Stearns of Grayland, Washington operates the new Furford picker.

(Photo Seattle Times)

## The Furford Picker Of Grayland, Wash.

To find a faster, easier way to prune is what Julius Furford of Grayland was seeking, when in 1950, he began working on a pruning machine. As he progressed he thought "Why not build a machine that will pick as well as prune?" The result is that he built a successful machine that will do both.

Last season he built his fourth machine.

The picker - 25 inches in width - rests on two 12 inch tires and a 7 inch aluminum vine roller. A small 3 hp gas engine propels and operates it. A feature of the machine is an automatic clutch that is thrown in by the throttle.

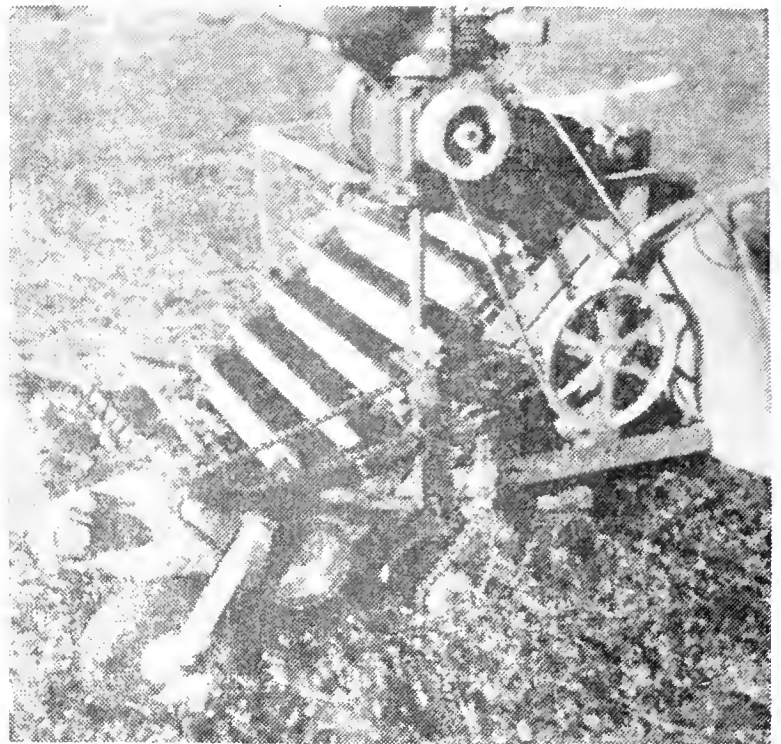
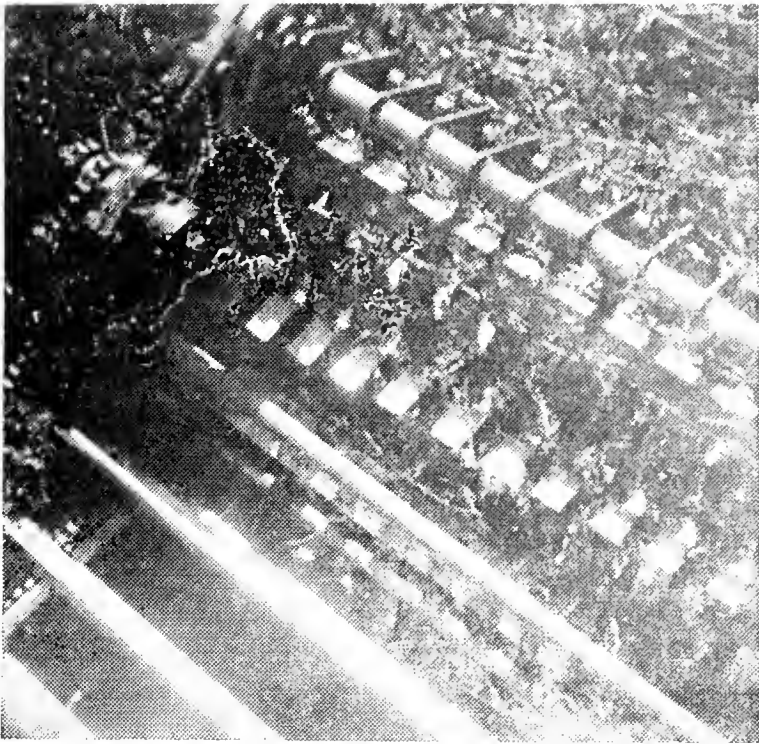
There are fourteen teeth flat on the bottom to allow for picking close to the ground. The teeth, which are curved upwards at the end, lift the runners, bringing

them back to fourteen knives set at a 45 degree angle to the teeth. The knives cut the vines on both up and down motion.

A feed bar over the knives helps bring the runners back to contact the knives. Berries and the cut runners are elevated by rubber lugs on a conveyor belt to a sack on the rear of the machine.

The Furford picker does a good job of picking in average vines. It does not tear up the vines and when the bog is picked it is also





Left, showing feed bar and cutter. Right, vines of cranberry vines have been pruned by the machine.

pruned.

Furford says that the machine will pick between half an acre and an acre of berries a day depending on conditions.

Two of the machines are now being used by Canadian companies. Furford says he has been requested to supply several others but is not ready to produce the machine on a quantity basis although he expects to in the future.

Patents are now pending in the United States and Canada.

### CRANBERRIES SET SAIL FOR FOREIGN PORTS

Reminiscent of the days when barrels of cranberries took leave of Massachusetts shores on Clipper Ships to travel the world, cranberries were again being prepared for a sea voyage, the last week of September, Ocean Spray Cranberries, Inc. announced. At that time 60,000 pounds, fresh from Cape Cod vines were being placed aboard steamers in New York Harbor, bound for England, Ireland, Belgium and Saudi Arabia.

Ocean Spray reported they were assured of an enthusiastic welcome, as American cranberries are considered a treat abroad by many gourmets, and they do not have the fruit as a native berry.

A letter received by the Co-operative from a Belgium store-

keeper states, "Our clients are waiting impatiently because the hunting season has begun and game is abundant. The Belgians, the inference is, find that cranberry sauce enhances the flavor of wild birds and hares."

### READ

### CRANBERRIES

### OPPOSITE PAGE

Showing the "Alice Princesses," visiting the new 8,000 foot addition to plant of Cranberry Products, Inc., at Eagle River, Wisconsin. Vernon Goldsworthy, president of the Company points to the structure in process of building, while Prof. Kenneth Weckel, developer of a process used there looks on.

Since photo was taken addition has been completed and in operation this fall, doubling capacity of Cranberry Products.

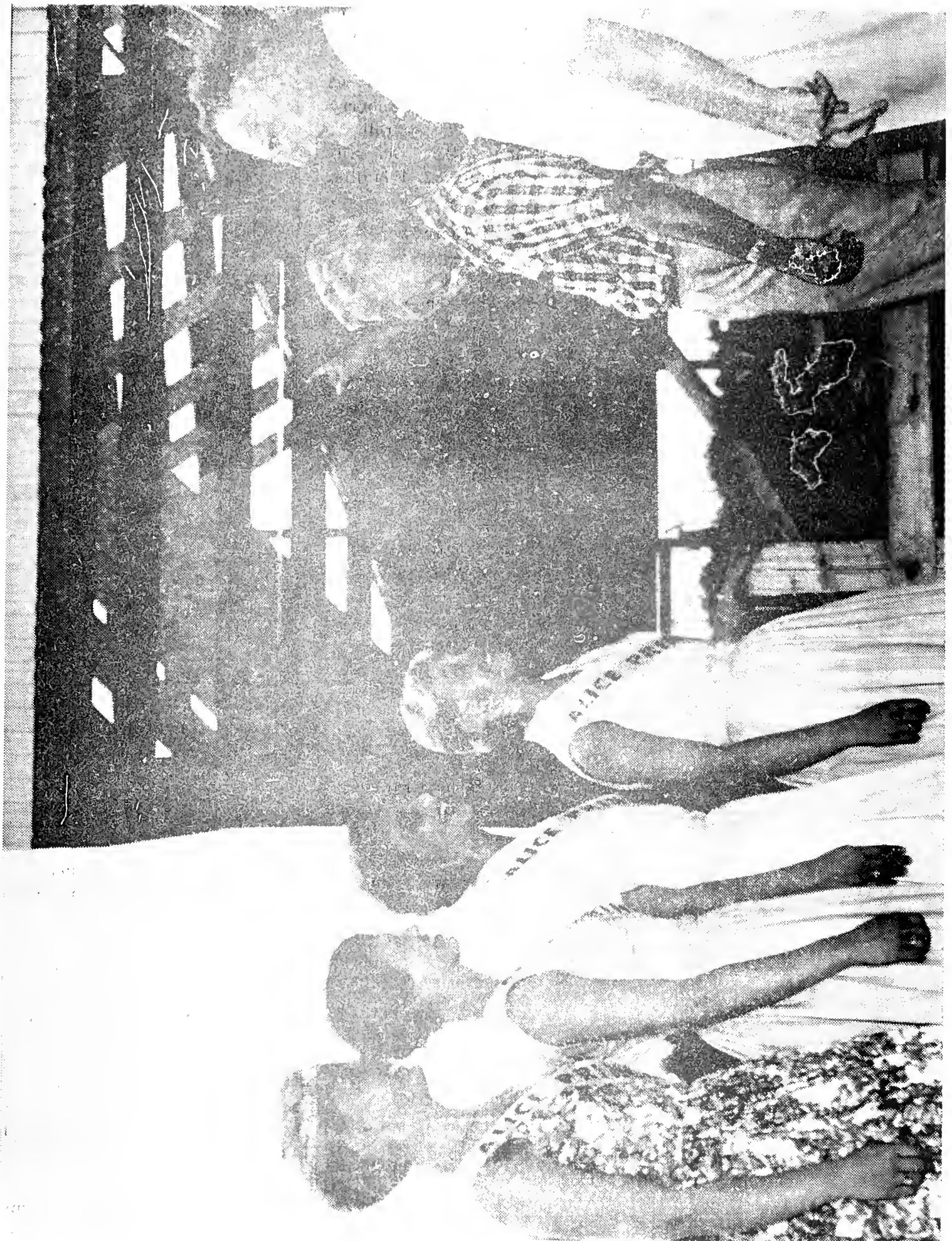
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## Massachusetts Picks "Miss Cranberry Highway of 1960" — Also Princess

Contests at Edaville Annual Harvest Festival, Judy Ann Keene, is Winner of Title, while Jo Johnson is First Princess—Estimated 5,000 attend.

Miss Judith Ann Keene, 19, of Onset, daughter of Master Sergeant LeRoy T. and Mrs. Keene who live in the Point Independence section was unanimously chosen 1960 "Miss Massachusetts Cranberry Highway." She was selected from a panel of five finalists, including girls who came from Middleboro at the beginning of the Highway to Harwich not far from its end at Orleans.

Miss Eleanor Stahura, 18, of Buzzards Bay will continue her "reign" through the balance of 1959. Judy is expected to receive her crown at a ball at Buzzards Bay on New Years Eve.

Selection was made at annual Cranberry Harvest at Edaville, co-sponsored by that unique cranberry and railroad spot and the Cranberry Highway Association, which includes members from all the 63-mile stretch of routes 28, 6 and 3-A the "old" main road to Cape Cod. Selection was made on Sunday, September 27 after the girls had made four appearances before the judges. Girls were judged on their looks, plus their talents in some accomplishment such as singing or dancing, also poise.

Miss Keene is a graduate of Wareham High School, class of 1958. The Keene family home is in Seattle, Washington, where Judy was born. She has attended school in the Evergreen State, Oregon, California, Bavaria and Germany. She made her talent appearance wearing a Bavarian Alps costume and singing in both English and German.

Judy is employed as a cosmetician at a Wareham drug store. With prize money from the contest she plans to enter IBM school at nearby New Bedford for training as a business secretary.

Presiding at the contest was Hal Peterson, a New Bedford radio announcer. An estimated

5,000 saw the contests. Judges were State Representative Alton H. Worrall of Wareham, President Robert S. Fugere of Cranberry Highway Association, Carroll S. Miller, Wareham CPA, and Rupert Wunschel, publicity, Edaville.

Judy is a blond.

At the Festival there were the now-famous narrow-guage rides through the five miles of cranberry bog and the chicken and cranberry barbeques.

Chosen also for the first time was a Cranberry Highway princess Miss Jo Johnson, 7, of Buzzards Bay. New also was a "Prince of Pizza" with ten contestants taking part in an eating contest at a Wareham pizza drive-in where square dancing was featured. Square-dancing was also a feature at Edaville and a big bonfire staged by the Carver fire department.

Winner of the title "Prince of Pizza" was Charles Maxim, 30, of Wareham, a town employee.

An Edaville song was introduced, this being played by Mrs. Peg Shaw of Hanson.

An exhibit put on by Cranberry Experiment Station drew much interest. This included specimens of varieties, of weeds, of insects, with a slide viewer of cranberry scenes and also a model bog, with reservoir, pumphouse and uplands.

### First Cranberry Highway Princess Is Chosen

Lively and blond Miss Jo Johnson, 7, of Alderberry road Buzzards Bay Massachusetts is the first "Cranberry Highway Princess." Selected at Cranberry Harvest Festival at Edaville September 19th she will be "princess" for the rest of this year and for all of 1960 show.

She is the daughter of Mr. and



Mrs. Edgar Johnson, her father being employed at the Buzzards Bay post office.

This is not Jo's first honor. After birth at Tobey Hospital, Wareham, when a month old, she was selected as the prettiest baby among the 68 who were there at the time.

### BANDON FESTIVAL

Cranberry Festival of Bandon, Oregon, September 25, 26, 27 has been characterized as most successful. For 13 years this city of 1,750 population has put on a pre-harvest event.

Brown-haired Miss Jane Chappell was chosen queen, being sponsored by the American Legion and Auxiliary. She is a native of Bandon and the daughter of Mr. and Mrs. George Chappell. She was crowned by Miss Linda Sutherland, queen of 1958. She was presented with the Key to the City by Mayor C. W. Waldrop.

There were various events, square dancing, parade, and a Cranberry Fair, musicals and speaking. Also a football game in the Cranberry Bowl.



# SURVEY OF THE CRANBERRY INDUSTRY OF CANADA

By

F. B. Chandler

Canadian research workers have written a number of bulletins on cranberry culture. In 1916, Davis published a 30-page bulletin with 20 pictures. In 1923 and 1938, his bulletin was revised and published in French as well as in English. The English bulletin was revised and published in 1948 with Eaton, Harrison, Maxwell and Pickett as the authors, and again revised in 1957. The last revision of the French publication by the above authors was in 1949. Cranberries Magazine had had at least nine articles on the industry in Canada. From this literature, we learn that the culture of cranberries started in Canada about 1870, but many of the acres have been built since 1935. The cranberry industry is fifth or sixth in monetary value in Nova Scotia in the fruit enterprises (apple, blueberries, strawberries, pears and cranberries or plums).

The latitude of Nova Scotia is about the same as that of Wisconsin and its climate is about the same as that of Massachusetts. Nova Scotia has two canning factories processing cranberries.

In 1956, when the author was on a sabbatical leave from the University of Massachusetts, he made surveys of the cranberry industry in Oregon, Washington and British Columbia. Upon return to Massachusetts, he obtained a list of cranberry growers in Canada and their acreage from E. L. Eaton, Senior Horticulturist, Canada Dept. of Agriculture, Kentville, N. S. In 1955, Canada had 46 cranberry growers who had 331½ bearing acres. In British Columbia, nearly all of the acreage was on Lulu Island where the first bog was set in 1932. The remaining bogs were set in 1947 or later, and some British Columbia growers planned considerable expansion after 1956. The largest acreage in any Province in 1955 was in Nova

Scotia which had 220 acres, 80 percent of this in King County. The earliest setting of the present bogs in Nova Scotia was in 1892. Based on the acreage in 1950, Nova Scotia increased only 12.5 acres in the five years 1950 to 1955. In 1955, the Province of Quebec had 51 acres, Ontario 21½ acres, and New Brunswick and Prince Edward Island only 7¾ acres. British Columbia had 23½ acres and had plans for future building. Nova Scotia has the most growers of the Canadian Provinces—29, British Columbia has the next—10, and the remainder of the 46 growers are distributed in four provinces.

In general, the size of cranberry holdings in Canada is small, over 50 percent of the growers have 5 acres or less. In 1955, only three growers, or six percent, had 20 acres or more. Six growers, or 13

percent of the growers, had nearly half of the acreage in bogs. These were the larger bogs in 1955, having in each holding 10 or more acres (see table).

The variety of cranberries grown is definitely related to the growing region in Canada. In 1955, on the Atlantic Coast, Early Blacks were in 14¾ acres of producing bogs, while on the Pacific Coast there were only five acres. Natives were set in over ten times as many acres as Early Blacks in the Province of Nova Scotia. McFarlins are only used on the West Coast, while Howes have been used in nearly all sections and Searles have been set in the west (see table). This distribution of varieties is similar to that in the United States. Many new varieties are being tested in British Columbia where the growers are trying to get a high yielding variety which may be harvested earlier than McFarlin, the leading variety there. Canadian research workers have selected and named two varieties of cranberries, Beaver River and Cumberland Point.

Cranberry Acreage in Canada by Provinces and Varieties, 1955

Province	Acres of Cranberries by Varieties							Total
	No. Growers	Early Black	Natives	McFarlin	Howes	Searles	Other	
Nova Scotia	29	14	192¼	0	8½	0	13	227¾
New Brunswick & Prince Edward Is.	3	¾	6	0	1	0	0	7¾
Quebec	2	21	0	0	20	10	0	51
Ontario	2	0	½	0	0	21	0	21½
British Columbia	10	5	0	18	½	0	0	23½
Total	46	40¾	198¾	18	30	31	13	331½

Number of Cranberry Growers in Canada by Provinces and by Size of Bearing Acreage, 1955

Size of Bearing Acreage	Province*				Total
	Nova Scotia	New Brunswick and Prince Ed. Is.	Quebec and Ontario	British Columbia	
0-1.0	1	1	1	6	9
1.1-2.0	6			1	7
2.1-3.0	4	1		2	7
3.1-4.0	2	1			3
4.1-5.0	2				2
5.1-10.0	10		1	1	12
10.0-20.0	2		1		3
20.1-50.0	2		1		3
Total	29	3	4	10	46

\* There are some wild bogs which are harvested quite regularly and receive some care; these are not included in this table.



Beaver River is early and this has been used in crosses with Early Blacks, which has produced a promising early selection now being propagated for further test.

Later, another chapter will be published to bring the Canadian survey up to date. Some information has already been received.

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## **Nation's Crop Up—Shipments Ahead of 1958**

As this issue goes to press Ocean Spray Cranberries, Inc. reports sale of fresh fruit is 28 percent ahead of last years corresponding dates and demand continues strong. Color and quality, the co-op notes in a notice to the trade is excellent from all areas. Other distributors report good shipments and there is no break in the price.

Early Blacks continue at \$4.00 a quarter from Massachusetts and New Jersey; Wisconsin were opened by Ocean Spray at the same figure and also fresh fruit from Oregon and Washington. All \$4.00 a case.

The deal was slow in late September and early October. Weather was hot over much of the country and fruit was slow in taking on color.

October report of U. S. D. A. agricultural statistics places the Massachusetts crop as down from preliminary estimate of 610,000 barrels to 595,000, but for the nation up from 1,263,500 to 1,273,000 or 10,000 barrels more. New Jersey remains the same at 110,000, Wisconsin is up to 440,000 as against 405,000 original, giving that state a state average of slightly more than 100 barrels per acre, highest production yet achieved in any area; Washington down 10,000 from the original 94,600 to 84,000 and Oregon remains the same at 44,000.

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## **Subscribe To Cranberries**

## **280 Barrels On Single Acre of Washington Bog**

A record or near-record for cranberry production was achieved this fall at Long Beach Peninsula, Washington. Ruutteli Brothers of Ilwaco from a single acre harvested 280 barrels, or 14 tons. Don Tilden, also of Ilwaco wound up picking on his one-acre bog a yield of 212 barrels.

Other Peninsula growers are reporting good or excellent crops. Quality is reported as exceptionally good and while some berries are small many others are large, to give the area a bumper production.

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### **LATE MASSACHUSETTS —**

Frosts, with water very much on the scarce side, fortunately were few in number this fall. There was a conditional warning out on September 16th, a warning on the 17, 18, and 19 and again on October 12. These took an estimated 1,000 to 2,000 barrels.

First real killing freeze came on the night of October 15th. Next morning temperatures were reported at 16, Makepeace Wankinko Bog, 17 at Beaton Marsh bog and a number of low 20's. Loss was estimated at none.

On the night of October 18th the Weather Bureau reported to Cranberry Experiment Station the wind was expected to blow all night and in gusts up to gale force. Low point was figured at 20 and no warning sent out. Instead the wind died and heavy frost occurred. There were 40,000 to 50,000 barrels out and there was an estimated loss of 15 percent, or maybe 7500 barrels by Cranberry Station. There were unconfirmed reports of 80 percent loss in the Hanson area and confirmed at 35 percent. Total loss to date (Oct. 21) is now figured at approximately 10,000.

Heavy frost came again on the night of Oct. 21, from the cold Canadian air hanging around from a high pressure area. For this bogs, were under water. An

estimated 30,000 barrels were out. All the frost losses were in Plymouth and Bristol counties, none on the Cape.

October estimate brought Massachusetts figure down to 595,000 barrels, the area from Manomet to the whole Cape falling off rather badly. Some were ready to believe there would not be much more than 550,000 barrels, or only an average crop.

Picking, on a few bogs, is expected to continue into November this year. State Bog picked only about 350 barrels, as it was largely, deliberately left dry last winter, to determine what this would do. It cut the crop.

Toward end of October sales were reported as not only holding, but brisk, and with possibility of an increase in price of present \$4.00 a quarter. Ocean Spray had sold 38,000 gallons of cocktail as compared to 16,000 for last year and anticipation was that a million cases of pints would be hit this season.

Reservoirs remained extremely low for after harvest flood and for winter protection, although this will likely be made up by the time this is necessary. Rainfall to Oct. 21 was only 2.53 inches with normal 3.74. October, which had started out unduly warm was only 7 degrees plus by the 22nd.

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## **Late Wisconsin**

There was much rain and high humidity the first part of October and as a consequence harvest moved slowly. Major share of the crop was out of the marshes by about the 17, although a few growers will be picking into November.

Color and size are reported as better than average, and little rot was developing. It seems as if more Wisconsin berries were being sold on the mid-west markets, and not many eastern Blacks were seen in local markets.

By October 10th some were doubting that current estimate of 440,000 barrels would be reached.

# Frost Protection Of Cranberries By Sprinkler Irrigation

(Editor's Note: The following are portions of an address delivered by Prof. John S. Norton, Massachusetts Cranberry Experiment Station, delivered before the North Atlantic Section of American Society of Agricultural Engineers. While some of it is an "old story" to cranberry growers these portions may serve as refreshers to fact.)

## History

Cultivation of cranberries as a commercial crop started about 1816. It is believed that these early growers took advantage of whatever frost or winter protection nature provided without providing any special facilities on their own. However, by 1850, some growers were flooding their bogs as part of their cultural practices. By 1925, about 50 percent of the 14,000 acres of Massachusetts bogs had frost flowing facilities. And by 1956, 80 percent was at least partially protected from frost. At the present time, about one-third of the flowage is done by pump while the other two-thirds is done by gravity.

The late Henry J. Franklin had not been in charge of the Cranberry Experiment Station long, after its beginning in 1906, when he realized that there was a need for a frost warning service to the growers to reduce their losses to frost. And, as a result, seven weather observing stations were set up on bogs throughout the cranberry belt between 1912 and 1919.

From temperature data collected at these stations, correlations were made with other meteorological information gathered from more distant weather stations, and formulas were derived for accurately forecasting minimum temperatures to be expected on cranberry bogs. In 1920, the State Cranberry Frost Warning Service was established with grow-

ers paying the telephone charges.

Modifications and refinements of the forecasting formulas were made from time to time between 1926 and 1946. Locations of distant weather stations were also changed some in order to get the most consistent and reliable information on approaching weather conditions that would influence the occurrence of frost. The present stations are at Worcester, Rockport, Logan Airport and East Wareham.

The factors used in determining the minimum bog temperatures are: wet-bulb and dry-bulb temperatures, dew points, wind direction and velocity, and barometric pressure.

The frost season extends from about April 20 to June 15 and from August 15 to November 1. During these seasons, two determinations of minimum temperature are made daily. The first is made at 1 p.m. and is not as reliable as the evening one which is made at 8 p.m. However, when an extremely low temperature or an early evening low temperature is imminent, the 1 o'clock determination usually indicates it; thus, permitting growers with bogs that require 4 to 6 hours for flooding to get their water on in time.

Cranberry vines and fruit have different cold tolerance levels at different times of the year. These tolerances are a function of the stage of growth of the vines or the maturity of the berries. The dates at which the different tolerance levels become effective naturally vary some from year to year, depending on early spring temperatures and growing conditions. However, the minimum safe temperatures and the approximate dates on which they become effective are as follows: April 20 to May 15, 18°F; May 15 to May 20, 25°F; May 20 to August 25, 29½°F; August 25 to September 15, 28°F; and September 15 through harvest 23°F.

There are noted exceptions to these figures. This is emphasized by the fact that the true freezing point of cranberries is 24.6°F. to

29.5°F. but 23° bog temperatures are considered safe for ripe berries. The Howes variety has withstood rather severe bog temperatures with relatively small losses. Some examples are 16°F., 10% loss; 14°F., 20% loss; and 9°F., 55% loss. This is attributed to the fact that the very still conditions associated with these low temperatures permit super-cooling or under-cooling of the berries. A slight shock or disturbance would cause the berries to freeze almost instantly.

## Some Factors Affecting the Occurrence of Frost

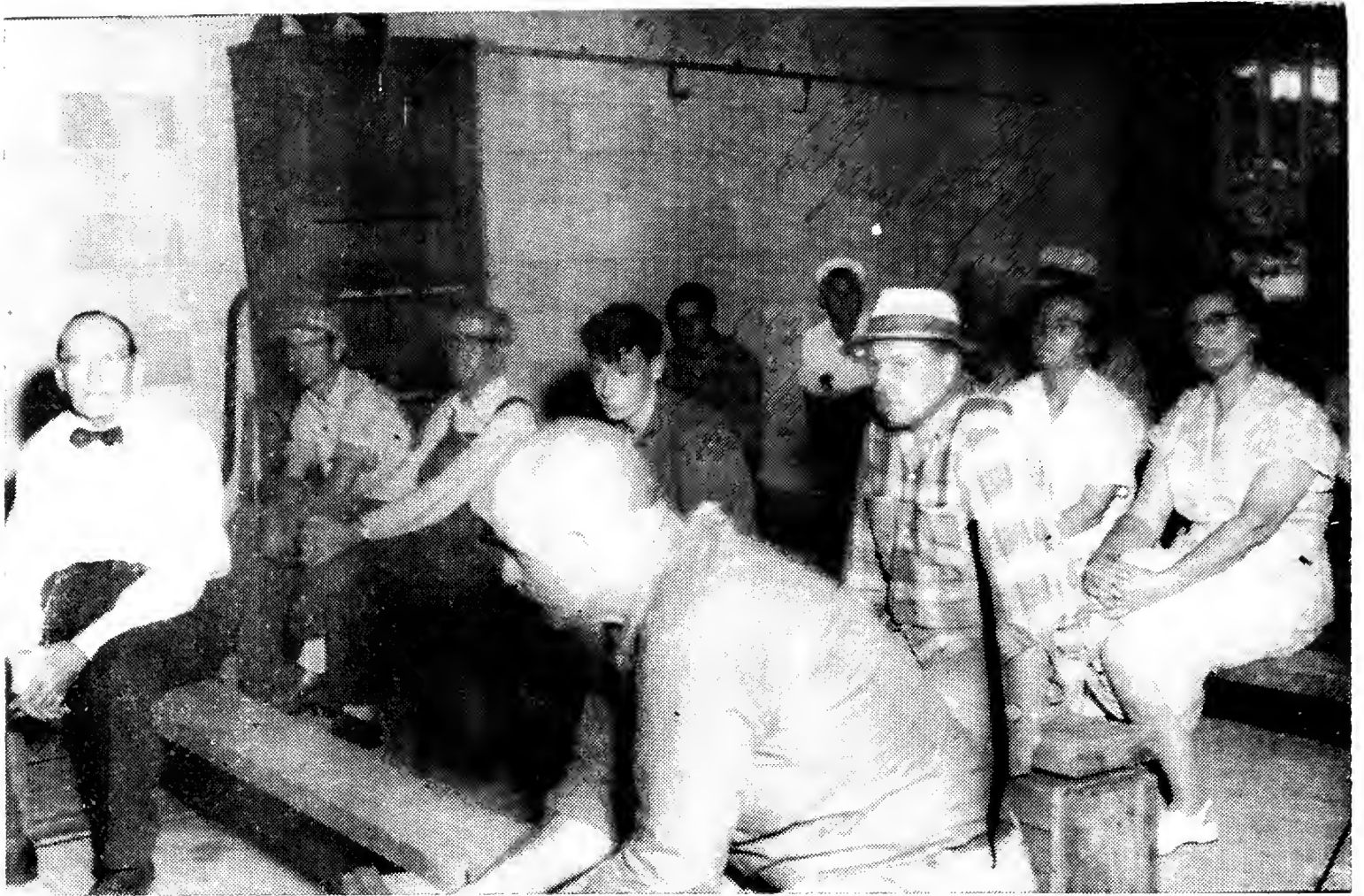
A rule of thumb estimate of the minimum bog temperature to be expected on average bogs is to subtract 20° from the forecast Boston minimum. This figure is usually accurate enough to give the growers an idea of what to expect before the calculations are made locally. This rather large deviation from the Boston figure is easily understood when you learn that the temperature inversion on the State Bog, which is a warmer than average bog, is often 10°F. and sometimes 15°F. in the first 18' of elevation.

Temperature differences of 6° to 7°F. may occur between the ground and the tops of the vines, a distance of 6" to 8". Usually the warmer air is nearer the ground. However, a 5° difference has been recorded in a 2" difference of elevation with the colder air being nearer the ground. This was probably due to light intermittent breezes during the night which tended to sweep off the cold air at the tops of the vines but leaving that which was trapped near the ground.

## Present Frost Protection Facilities

There are now 1250 bogs in Massachusetts with a total acreage of 13,500. Of this total, 8350 acres have full frost protection facilities while 2800 acres have no frost protection and 2350 acres have only partial frost protection.

(To Be Continued)



The Massachusetts picking machine schools held last August paid off in rapid harvest this fall. Above, shows a group listening attentively to instructions. Below Louis Sherman is instructor in class at State Bog, East Wareham. (Cranberries Photo)





## ANOTHER GOOD YEAR

It looks like another season as good as last year, and probably even better. As this goes to press fresh fruit sales of Ocean Spray Cranberries, Inc. are up 28 percent over last year for corresponding date. Other distributors report demand good.

Perhaps most important is that orderly marketing—those hackneyed but important words—continues in effect. This is what the trade likes—it knows where it is at in the cranberry deal.

Crop estimates are up over the preliminary estimate to 1,273,000 barrels and yet berries continue to sell. We can both grow and sell cranberries. It appears incidentally, Wisconsin this year will achieve a state average of slightly more than 100 barrels to the acre, if present estimate of 440,000 barrels is reached.

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## LESS "PICTURESQUE," BUT MORE EFFICIENT

We have read one or two articles that the now almost universal use of picking machines and other modern equipment is destroying the "picturesqueness" of the cranberry harvest season. It is not as much fun to take a ride through cranberryland in the Fall as it used to be. We may lose a little Autumn publicity.

It is claimed the swallow houses are vanishing, because of increased use of chemicals also the shacks which used to house workers are being taken down or falling down. We may miss the birds, but not the shacks.

However, this is progress. Who'd go back to the picturesqueness of a square-rigger as against the chance to ride in an atomic liner, as soon as they are completed? A horse, to many, is more of a thing of beauty than an automobile, with all its chrome. But who would go back to the slow pace of a horse when going someplace important?

"Picturesqueness" is giving way to

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Editor and Publisher

EDITH S. HALL—Associate Editor

Wareham, Massachusetts

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Cranberry Consultant

Wisconsin Rapids

Wisconsin

---

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Dr. CHARLES C. DOUGHTY

Cranberry Specialist

Long Beach, Wash.

---

### Oregon

GRANT SCOTT

Coquille, Ore.

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### Massachusetts

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Director Mass. Cranberry Experiment Station

East Wareham, Mass.

EDWARD K. KNAPP

Barnstable County Agricultural Agent

OSCAR S. JOHNSON

Barnstable, Mass.

---

### New Jersey

P. E. MARUCCI

New Jersey Cranberry and Blueberry Station

Pemberton, New Jersey

---

modern practicability everywhere and in everything. So with the cranberry industry. But, we make progress.

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We think it was a good suggestion made in "Food Marketing In New England," publication of First National Stores, that bogs along "Cranberry Highway"—or anywhere—be designated by a sign such as "Cranberries Growing Here." Lots of strangers can whizz by a bog and not know they are seeing one. We have gone by rice fields in the past and not known it; yet we were interested in seeing rice being grown. Somebody had to point it out to us. Some growers do have signs, but not enough.



# SERVING THE WISCONSIN GROWERS

## MEMORY OF LATE GROWER HONORED

Memory of the late J. Arthur Baker, Judge of Massachusetts Superior Court and cranberry grower was honored by the placing of his portrait in Barnstable Superior Court House this month. Judge Baker, who lived at Buzzards Bay and had bogs on Burttermilk Bay was much interested in the promotion of cranberries.

## FRESH FROM FIELDS

(Continued from Page 6)

The inclement weather cut operations the first of the harvesting period. The mechanical dryers worked very well during the rainy, cloudy last half of the month. What few growers who did not have drying facilities were forced

to stop harvesting.

### Estimate Holding Up

Berries started coloring rapidly the last of the month and volume shipments were expected to move out the end of the first week of October. The berries continued to grow during the month and crop counts showed a twenty to twenty-five per cent increase over the beginning of the month. Frost damage appeared to be minimal, though a couple of weeks of drying was needed in some of the stony and fields. Some water-soaked berries were observed on some bogs at night.

### Scattered Blossoms

A few scattered blossoms were reported on some bogs. Growth and bud development advanced. These blossoms are

heavily fertilized and had very poor drainage conditions. Some patches of wild blueberries were also observed blooming. As mentioned last month some bud development was noted but mainly confined to vegetative buds. It is expected that this over development will have little effect on next years crop.

## OREGON

Cranberry harvest for fresh berries started October 1 but slowed down due to heavy rainfall during the first week of the month. Another observation was that the fruit being brought in from sheds lacks the color-tinged in more mature fruit. This may result in a delay of the harvest for awhile. Hopes are strong for good harvest weather during the extremely high temperature that usually causes a disappointing situation.

Growers here are holding to optimism predicting one of the better crops this year.

The season is a round about one assisting with cranberry logging. Some of the logging outfits have shut down to accommodate employees who wish to go back, and this makes available some workers for help in harvesting.



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# DIRECTORY FOR CRANBERRY GROWERS

## Station Staff Fetes Retiring Joseph Kelley

Joseph L. Kelley, technical assistant at the Massachusetts Cranberry Experiment Station in East Wareham, was tendered an "au revoir" dinner November 3 at Ben and Mildred's Chicken House, Middleboro.

All the members of the staff, with their wives, attended with the exception of Mrs. Audrey Paine, secretary at the Station, who was visiting her daughter and new grandchild. Honored guests were Dr. Herbert F. Bergman and Mrs. Henry J. Franklin, widow of Dr. Franklin who was the first director of the station. There were 24 persons present.

Dr. Chester Cross, director of the Station, was master of ceremonies, making the after-dinner speech. Kelley was presented with a gift of money from the staff. At the suggestion of Dr. Cross, Mrs. Kelley made the acceptance

and thank you speech. Mrs. Kelley, incidentally, was the first secretary at the Station working under Dr. Franklin. Kelley seconded his wife's remarks with several anecdotes about his years at the Station.

At the August 18 meeting of the Cape Cod Cranberry Growers Association, Kelley was honored by the growers and guests at the Station and presented with a TV set, a gift from the association. Ferris C. Waite, president of the association, presented Joe a bound album of testimonial letters from the many growers and others connected with the cranberry industry who have been helped by him in the 46 years he has been at the station. As Dr. Cross said, he will be missed greatly and has been extended an invitation to come in and visit any time he so desires.

Kelley intends to enjoy life, starting with a hunting trip to Nova Scotia.

## OCEAN SPRAY 1958 POOL CLOSED OCT. 31

Ocean Spray Cranberries, Inc. on November 2 sent out notices to its members that shipments were complete for the 1958 pool which closed October 31. Notices stated that subject to financial audit, preliminary figures show that after finance charges and retain, totaling 67 cents, the pool will pay cash of \$11.53 a barrel. Last year the 1957 pool paid \$11.38. Checks were expected to be mailed out by Thanksgiving. To date \$10.60 has been paid in advances.

## November Estimate Shows Slight Drop

National cranberry crop is down to 1,249,000 barrels in November 10th estimate of U.S.D.A. Preliminary August forecast was for 1,263,500 barrels. This is more than production for 1958 which was 1,165,600 and well above the last ten-year average of 929,030 barrels.

Massachusetts is now placed at 575,000 barrels which is 35,000 less than the preliminary estimate and less than the 1958 production of 598,000 but above the average which is 558,100.

Wisconsin is still figured at 44,000 barrels the record for that state, more than the 389,000 barrels of last year and compares with an average of 256,100. This gives a state average of more than 100 barrels to the acre.

New Jersey, like Massachusetts is down from preliminary to 95,000, preliminary having been 110,000. It is above last year's figure of 89,000 barrels and slightly above the average of 85,900.

Washington State is up to 95,000 which is above the preliminary estimate by 500 barrels, nearly double that of 1958 which was 57,500 and much higher than average of 53,460. Oregon is now given 44,000 barrels, the same as preliminary estimate, up from 32,300 last year and nearly double it's ten-year average of 25,470.

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## Howes Open At \$4.25 A Quarter

Ocean Spray Cranberries, Inc. on October 30th opened its price on Howes at \$4.25 and other lates at \$4.00 a quarter. McFarlins from Wisconsin and the West Coast are at \$4.00. Massachusetts Early Blacks remain at \$4.00. These prices were listed as holding until November 24.

The Howes price is five cents more than last year, with an earlier opening.

### FRUIT FOR THE YOUNG

Public schools below the college level in the United States used more than \$36 million worth of fresh and processed fruits and fruit juices during the year ended June, 1958, according to a recent survey by Agricultural Marketing Service, USDA. The items included fresh, frozen, canned and dried fruits, and fruit juices.

The survey showed that deliveries to the schools, which have a total enrollment of somewhat over 21 million pupils, averaged \$1.70 per child.

Canned items comprised nearly four-fifths of the value of the fruits and juices consumed in the schools. Fresh fruits made up nearly all of the remainder, with dried and frozen fruits amounting to about 3%.

Fruits and juices purchased locally by the schools accounted for about 85% of the total value, the remainder being donated directly by USDA.

Recent 1959 purchases by the USDA, with funds appropriated under the National School Lunch Act, were 403,875 cases of No. 10 size cans of red tart pitted cherries and 638,700 of U.S. choice grade canned clingstone and freestone peaches. (American Fruit Growers)

### CHARLES E. WHITLOCK

Charles E. Whitlock, 86, of Glen Charlie Road, East Wareham, Massachusetts passed away November 7th at Tobey Hospital, Wareham after a long illness. Mr.

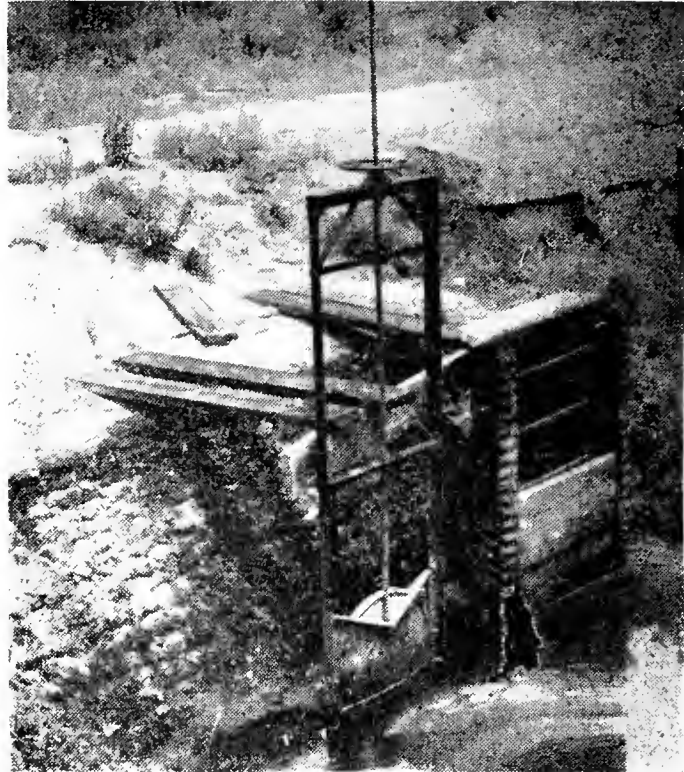
Whitlock was 86, and for many years was a cranberry grower with considerable acreage on Glen Charlie Road. A few years ago he sold his properties.

### CARLETON RE-ELECTED

J. Foxcraft Carleton, East Sandwich, Mass. well-known cranberry and blueberry grower has been re-elected as chairman of the Barn-

stable County Agricultural and Conservation Committee. Main function of the committee is to act on application of farmers which involve Government cost-sharing in various conservation practices.

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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



Kelley in early November. It was also attended by Mrs. H. J. Franklin and Dr. H. F. Bergman. Our guest of honor was presented a gift by Dr. Cross on behalf of the station staff. It was a wonderful evening with both serious and hilarious moments. We all wish Joe and Mrs. Kelley the very best in the years ahead.

## Quality Studies

Our quality control studies are progressing satisfactorily, or were before the recent crisis. We hope to obtain useful information on the effect of zineb phaltan on the shelf life of fresh cranberries handled under various conditions. Polyethylene is being compared with cellophane as a film for fresh cranberries as a part of the study.

The writer visited markets in Boston, Cincinnati and Detroit during early November in order to check the condition, movement and price of cranberries at the terminal market and retail levels. By coincidence, he arrived in Cincinnati November 9th, just as the newspapers and radio were headlining the cranberry crisis. Plans had to be changed a bit to meet that situation and every effort

## Devastating Blow

Hurricanes, floods, drought, frost, and—yes, even surplus problems, are rather insignificant compared to the blow dealt our industry by the ill-advised and irresponsible statement issued by the head of the Health, Education and Welfare Department, Washington, regarding the possible contamination of a few cranberries.

It is too early to appraise the damage caused by this bad publicity in terms of its ultimate effect on the consumption of cranberries, but it is apparent that our holiday markets have suffered a crushing blow. However, our industry is rallying from this blow as it has from other setbacks and is developing a strong, aggressive program to counteract this bad "press" and demonstrating clearly and conclusively to our consumers that our cranberry products are completely free from any contamination as they have always been, and are perfectly safe to use in any form.

## Late Harvest

The cranberry harvest was not completed in Massachusetts until well into November because of numerous frosts and frequent rains that occurred in late October and early November. According to our records 20 general frost warnings were released this fall, compared to 15 in 1958, 20 in 1957, 20 in 1956, and 3 in 1955. We have seen no reason to change our estimate of frost damage this fall from the 9,000 - 10,000 barrels mentioned in this column last month. George Rounsville should again be commended for his splendid work as our frost consultant during the 1959 season,

which presented its share of difficulties for those engaged in such work. We are also indebted to the U. S. Weather Bureau, our cooperative weather observers, the telephone distributors, and the radio stations that have cooperated in making the frost warning service effective.

## "Joe" Kelley Again Honored

Joseph Kelley concluded his duties at our station on November 1st, after long and distinctive service to our cranberry industry. Growers will recall the fine tribute paid to Joe at the Annual Meeting of the Cape Cod Cranberry Growers' Association in August, and the gift presented to him by the association on that day. The station staff arranged a dinner party for Joe and Mrs.

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was made to inform those concerned, which included representatives of the press, radio and TV, with facts as we knew them.

It was apparent that the terminal market people and representatives of the trade were shocked and stunned by this unprecedented situation and were concerned that it might happen to other fruits and vegetables. However, I was able to collect the information that I was seeking and to purchase samples of cranberries from approximately ten representative stores in each of the above cities.

These were carefully examined as to condition. These detail results are not available at this time but it can be stated that the condition of fresh fruit, based on this quick sampling method, was better than expected. Our improved relations with the trade still exist in spite of the present situation.

#### **BANDON CHAMBER PASSES RESOLUTION**

The Bandon, Oregon Chamber of Commerce at a meeting during the amino triazole uproar passed a strong resolution. It follows:

"Whereas, one of the principal industries of Coos county agricultural economy is based on the cranberry, and

"Whereas the Department of Agriculture had previously authorized the use of amino-triazole as a post-harvest spray of cranberry bogs, and

"Whereas to date there has been no absolute proof of harm through use of the cranberries sprayed and

"Whereas a major share of the crop has been unaffected by the application of the spray and is safe for human consumption,

"Now, therefore, the Bandon Chamber of Commerce hereby goes on record as condemning the sensational and inaccurate information given out by health authorities."

#### **LESLIE M. KRANICK**

Leslie M. Kranick, well known cranberry grower of Bandon, Oregon died November 8, after

being released from hospital following a heart attack. He was 67.

Mr. Kranick for a time was a member of the U. S. Life Saving Service, which later became the U. S. Coast Guard, serving at Winchester Bay, Bandon, the Presidio at San Francisco and Fort Berry, California. In 1925 he left this service and became a cranberry grower. He took over the I. Nordstrom bog at Two Mile, which was one of the first bogs in the Bandon area. He increased his acreage and added new bog until he had one of the largest cranberry-producing properties in Oregon.

Surviving are his widow, Ethei and a son Martin, besides two sisters, and four grandchildren. Mrs. Kranick for many years served as Oregon correspondent for this magazine, and was herself prominent in cranberry affairs.

#### **LATE MASSACHUSETTS**

New England Crop Reporting Services reported in its November release that the Massachusetts crop, as now estimated at 575,000 barrels, while 4 percent less than the 598,000 barrels of last year is still 3 percent more than the ten-

year average of 558,100 barrels. Report continues the berries were slow to color and mature, but harvest was completed under generally favorable weather conditions. In spite of generally inadequate water supplies frost damage was light. Berries were reported to tend to be small in size.

Weather conditions during November to the 15th were mild, with an excess in degrees of about 18. Boston had a record 70 degrees on the 14th. Leaves were still hanging to the trees and lawns continued to remain green. There had been no snow.

Then there began the first cold weather of the season. On the morning of the 18th minimum in the shelter at State Bog was 21. Ice formed during the night.

Rainfall was light, adding little to the winter buildup. To the 18th the fall had been only 1.52 inches with normal for November being 3.86.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of November 1959 - Vol. 24 No. 7

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Entered as second-class matter January 26, 1943, at the post-office at Wareham, Massachusetts, under the Act of March 3, 1878

## FRESH FROM THE FIELDS

Compiled by C. J. H.

### MASSACHUSETTS

#### October Turned Out Wet

Rainfall, except on the first day turned out to be generally light, at least for the first part of the month. The month as a whole, however, turned out to be well over normal which is 3.74 inches. Actually precipitation was 5.22 which speaks for itself, most of this falling in the last days of October.

#### Month Slightly Warmer Than Normal

Month was practically normal, after a very warm start. In fact the average was only 2 degrees a day above the norm.

#### Picking Ends First Week of Nov.

Picking was continuing later than usual, in fact to the 2nd or 3rd of November, or during that week.

Although there was no abundance of water for after-harvest reflow, in general, most growers had enough for this clean-up practice.

#### More Fall Work Done

With a good market for 1959 crop and the results of the 1958 pool known, there was more fall work going on than in a number of years. This included more raking than has been the case, and quite a lot of sanding, the sand being applied by a number of original devices in addition to wheelbarrow and plank.

Warmer than normal and mild weather during the first of November aided in this post-harvest work. In fact two or three days were practically balmy in temperature.

### NEW JERSEY

#### Estimate May Be High

Clear, mild days throughout most of the month of October were quite favorable for harvest of cranberries in New Jersey. At the end of the month the harvest was just about complete. It appears now that the estimate of 110,000 barrels may be a little high because of an unusually large amount of rot and scald induced by the very warm early autumn.

#### Frosts Cause Slight Damage

Frosty nights on October 15, 18 and 19 caused only slight damage.

The month on the whole averaged out at 59.6°F., about 3°F. warmer than normal. Precipitation amounted to only 2.37 inches, about 90 of an inch short of normal.

#### Ralph B. Clayberger

The cranberry industry of New Jersey lost a good friend when the veteran grower, Ralph B. Clayberger, suddenly passed away early in October.

### WISCONSIN

#### October Cold, Wet Month

October was cold, wet and cloudy. Temperatures were below normal with readings from three to nine degrees under the normal in the cranberry areas. Heavy rains fell the second and fourth weeks, with intermittent showers occurring almost daily during the balance of the month. Rainfall totalled almost three times the normal of slightly over two inches. This precipitation was the great-

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est for October since 1877. A number of reporting stations recorded some precipitation on 21 days of the month. Final temperatures for the month averaged the coldest since 1925. As for cloudy conditions, there were only four clear days during the entire month. There was sunshine only 33% of the daylight hours, which set a new record.

All in all it was a month that we could have done without as far as weather was concerned. Incidentally as a prelude to an early winter snow flurries were reported in the northern area the first part of the month followed by heavy snow in that area totaling eight or more inches occurring on Oct. 23 and 24th. The extended forecast for November is for below normal in temperature and from normal to below normal in precipitation. Normals for the month are 32.1 degrees and 1.99 inches.

#### More Than Ample Water

Water supplies were more than adequate at month's end. Most marshes had hardly lowered their reservoirs with harvest and frost flooding. In fact most marshes were wasting water. In checking records this was the fourth consecutive month that reservoirs were above normal. With the ground water tables raising and with the surface soil saturated, there should be more than ample water for winter flooding in all areas.

#### Fear Some Berries Frozen

Harvesting was prolonged due to the inclement weather. Most marshes lost from three to five days due to the rains. The biggest drawback to the harvest operations was the slowdown in drying, calling for more heat than usual. At the end of the month there was an estimated fifty to seventy five acres still to be harvested and some operators were afraid of having berries frozen in.

#### Berries Fully Colored

Due to the cold weather and frequent flooding the last of the month, the berries were fully colored. The late varieties, McFarlins and Howes put on little growth

during the month. Some water soaking was reported, especially in rank vine growth beds, with many immature berries being effected. The native variety seemed to have the most loss, followed by the McFarlins.

#### Shipments

Berries were moving rapidly to market and half of the state crop was reported shipped by the end of the month. It was estimated that about 60% of the total shipped was for processing and the balance fresh. Fresh shipments were reported well ahead of last year and the market reported good.

### WASHINGTON

#### Many High Yields

Harvest was excellent, some of the bogs having produced as high as 250 barrels to the acre. Small isolated areas have exceeded this quantity.

#### Much October Rain

Weather during the month of October was composed of alternate periods of good weather and rain. Total precipitation was 6.8 inches. Up to the 17th of November there were only three days of rain with a total of 1.35.

#### Temperatures

Maximum temperature for October was 80 degrees on the 18th and the minimum was 27 on the 30th. Relative humidity reached 37 on October 18th. To Nov. 17th maximum temperature was 70 on the 9th. As of the 17th the weather had turned colder and winter appeared to be setting in.

#### Much Concern

The current marketing situation has caused a great deal of concern in this area, and it will cause a great deal of damage to the growers. Charles G. Doughty, superintendent of the Cranberry-Blueberry Station has started on the Station bog post-harvest experimental treatments to determine how much amino-triazole, if any, is carried over.

## CRANBERRIES

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# ***“There is A Future In Cranberries Or I Wouldn’t Be Growing Them”***

**So Says the youthful David B. Mann, son of H. Gordon Mann, sales manager of Ocean Spray Cranberries, Inc.— He bought 57 acres in Buzzards Bay and lives at bogside.**

by  
**Clarence J. Hall**

“There is no other way to make a living, except in cranberries,” declares youthful, 6-foot David B. Mann. “I’ve been exposed to cranberries all my life. If I didn’t think there was a future in the business I wouldn’t be in it.”

Mann is the son of H. Gordon Mann, processed sales manager of Ocean Spray Cranberries Inc.

Young David is operating an established property of 57 bearing acres, with a total property of 300 acres. About a mile in from Head-of-Bay road at Buzzards Bay, Massachusetts, he has an isolated “kingdom.” The bog uplands are beautifully cleaned up, the bogs well-laid out and mostly free of weeds. The home of Mr. and Mrs. Mann (Mrs. Mann, the former Marjorie Tatlow of Onset, married last December) is on a little hill with bogs all around.

One of the reasons Mann went into cranberry growing he says, is because he likes the outdoor life and he likes “to be my own boss.”

The property bought by Mann in 1956 was owned by Eldred Mosher of Wareham and before that were the bogs of Hamilton Garland. Both owners had kept the bogs in shape and made heavy investments to own and operate good properties, and Mann is continuing to do the same.

Average production, Mann says is about 4200 barrels or about 74 barrels per acre per acre which is better than the Massachusetts average of 47.3.

David was born at Pittsfield, Massachusetts where his father was sales manager for Mohawk ginger ale. The family moved to Hanson, when H. Gordon Mann became associated with what is the present National Cranberry Association in 1935.

He attended the public schools of Hanson and was graduated from nearby Whitman High. His father became a small cranberry grower and David as a youngster helped to prepare this bog under the supervision of Archie McLellan (Cranberries Nov., 1959) and under his expert tutelage began to learn about cranberries. He decided to be a grower himself. He worked for his father summers and had also spent two or

three days a week at the Massachusetts Cranberry Experiment Station at East Wareham, going around to other bogs and learning from Cranberry Specialist “Dick” Beattie, Dr. F. B. Chandler, agronomist, “Joe” Kelley and others there.

He decided on the University of Massachusetts after high school, and as there is no course in cranberries he planned on the nearest subjects he could get to this. He majored in botany, took a marketing course, entomology and farm management. He was graduated in 1951 with a B. S. degree. He managed the school cafeteria, was manager of the baseball team, and played trombone in different college bands.

Then came his service days. He enlisted in the U.S. Navy, attending officer’s candidate school. From OCS he was assigned to a year-long course at naval aviation officers electronics school. After completion of this school he was assigned to Bermuda for a two-year tour of duty. As electronic’s officer he was responsible for 125 technicians and electricians and several million dollars’ worth of electronic equipment.

He is still active in the Naval Reserve, where he has the rank of lieutenant, taking training at Weymouth one weekend of each month and goes on an annual two-

week cruise.

Out of the navy in September 1956 he began to look around for a bog property that he could handle, both financially and culturally himself. The Mosher bog was available at that time.

The bogs needed some weeding, there was a lot of sanding needed and ditches had to be cleared out. There is an ample water supply from two ponds, Mare’s and Week’s. The water is pumped on and although while some of it can be returned to Mare’s by gravity five pumps are used, a Packard, Continental, International and 2 Ford industrials. A feature is that sluiceways are of cement, put in some years ago, so these canals are always clean. All the water used is returned to the ponds.

Flooding for frosts, which Mann does himself is not a quick process. It takes about 12 hours to get the entire property under for an adequate frost flow, so he is one of those growers forced to start in early when the weather doesn’t appear good frostwise.

In that memorable dry summer of 1957 he got himself a portable irrigation system, consisting of four sprinkler heads and a quantity of aluminum pipe. He pumped from ditches and from the two ponds.

There is a sizeable and very sturdy concrete block, two-story warehouse. Loadings of harvest boxes from the bogs may be made on both levels. He does not pack for himself, but his berries go to Ocean Spray Cranberries, Inc.

Incidentally, most of the vines are Early Blacks, with three acres of Howes. This is a fairly warm bog, not a “cold spot,” he says. This may be because it is only a short distance from the salt waters of Buttermilk Bay.

He harvests with 3 Westerns and 3 Darlington. He uses the Darlington for the rougher going, and finds the Western Picker hard work the first year, but likes them once the vines are trained.

He has a dump truck and flat bed for general work and four model A Fords which he converted into jalopys for sanding. He uses



planks for sanding as the steel does not break, and is easy to drive on and off. He has a Conant loader.

Of sand, and very good sand, there is almost an over-abundance as there are pits open all around the bogs.

For spraying and dusting he uses helicopters and has a concentrated spray rig which he had designed and built by "Bob" St. Jacques of Hayden Cranberry Separator Company, according to his ideas of what he wanted.

There is a bunkhouse on the property where he keeps one man, Mathius Lopes, who with his wife are year-round workers. It is Lopes, he says, who is chiefly responsible for the notable clean uplands with a few trees standing. "He is a landscape artist in this respect," says Mann.

During this past summer he had kept five women at work on hand weeding.

The Manns do not mind their isolated location up in the so-called "Plymouth Woods" area. "We have a lot of birds, deer and a fox."

Not too many Massachusetts growers live at bogside, but Mann is one who does and likes it.

For hobbies he says he thinks it must be "only cranberry growing," although he does like photography and goes in for color. He is a member of the South Shore Cranberry Club, which meets at Kingston and of Cape Cod Cranberry Growers' Association. He is also a Mason, member of Wampatuck Lodge of Hanson.

Asked again why he thought the lot of a cranberry grower might not lead to a dead end, he replied that even before prices began to improve last year he could see the signs of a rising industry. Otherwise he wouldn't have paid a good price for 57 acres of bog in 1956. He believes there is a tremendous future in particular for cranberry cocktail, and this should be promoted in the other parts of the country.

"The results we had last year in New England," he said, "should be enough to make a believer of

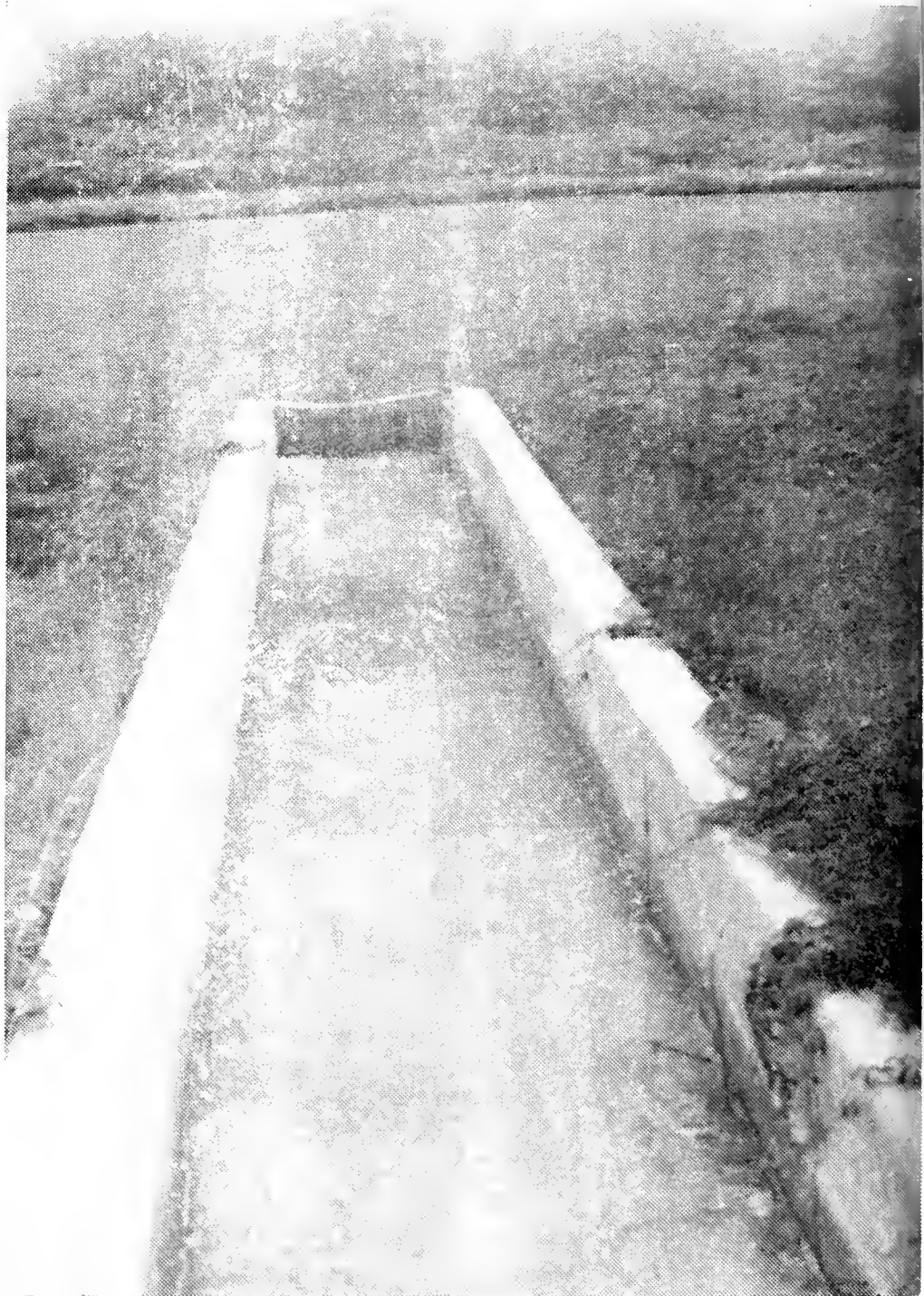
anyone. People are juice conscious now and it is a lot easier to get people to drink more cranberries than they can eat.

"That's not to say we should forget our mainstay, sauce. Ocean Spray has the best distribution of any food product in the country. In other words, it is available everywhere for everyone who wants it. It is up to us to get an effective advertising program to make people want to eat more cranberry sauce, possibly a radio spot, with a tricky jingle, similar to that which has worked such wonders for us with cocktail in New England.

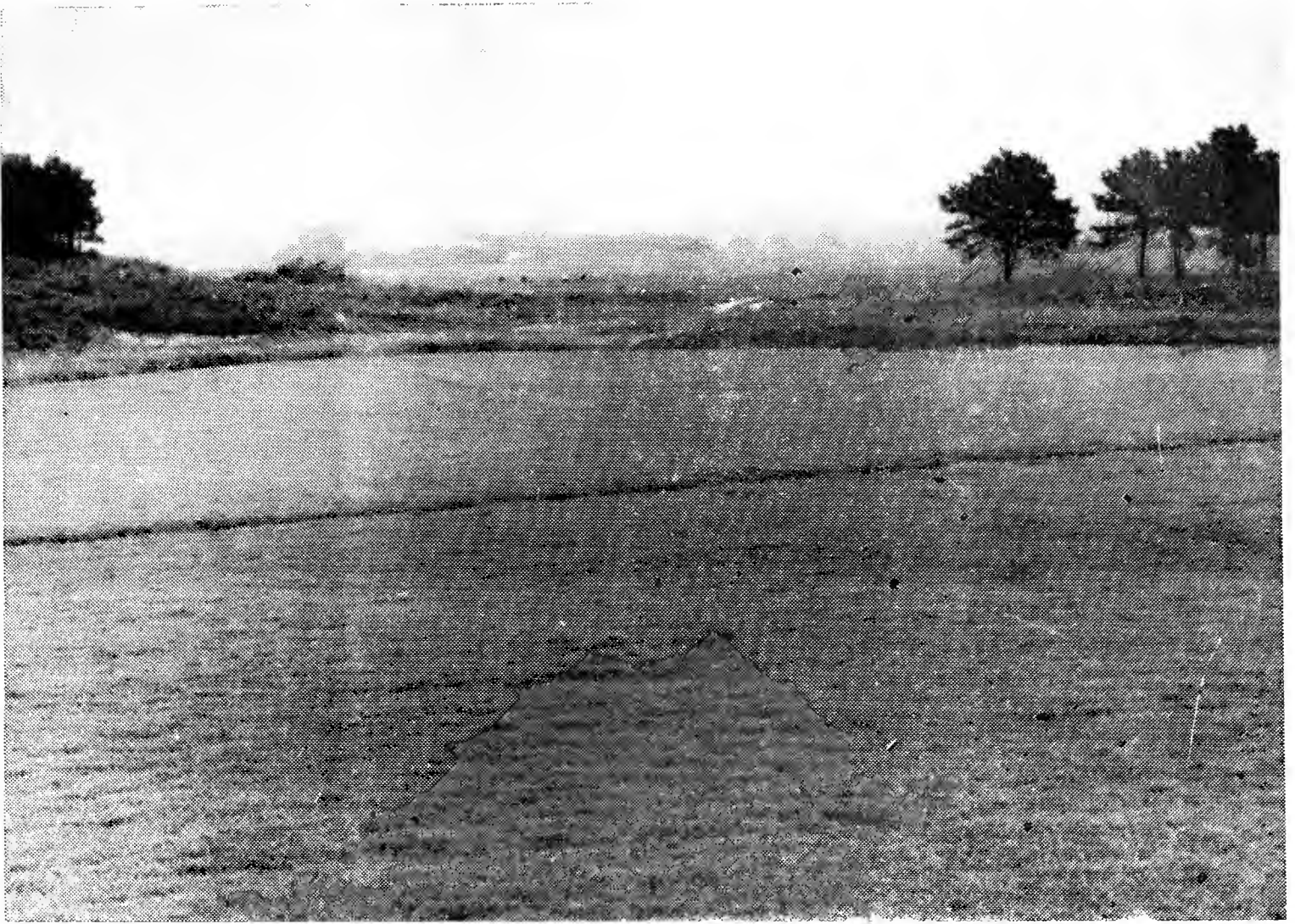
"I don't believe the results would be so dramatic as those we

had with cocktail, but if we could get people in other parts of the country to consume as much sauce per capita as they do here we could more than double our sales. In other words, we wouldn't have enough cranberries.

"Our other big outlet is fresh fruit. I think we should be able to extend our selling season here. The Exchange used to keep cranberries until almost spring and get a premium price for these berries without improved methods of refrigeration and the experience other fruit growers have had in controlled atmosphere storage. Today why can't we keep cranberries with a minimum of cost? (Continued On Page Sixteen)



Showing neat cement siltway leading from reservoir to the Mann bogs. (CRANBERRIES Photo)



Above: A portion of the clean Mann bogs, with the almost "landscaped" appearance of the clean shores. Below: The Mann residence is shown, all but surrounded by the bogs. (Cranberries Photo)





Engineering Professor "Stan" Norton experiments with the Oregon "Egg Beater," in flooded area of Massachusetts State Bog. (CRANBERRIES Photo)

## *Pacific Coast "Water Reel" Is Tested On Mass. State Bog*

A new type of cranberry picker, new to the East, was tested at Massachusetts Cranberry Station, East Wareham last month. This is the so-called "water-reel", a device at first known by the name of the "egg beater".

The picker has been in use for a number of years - and with success - for berries to be canned. It has been used in Oregon and Washington. A sizeable portion of the crop in those two states is now harvested with the "water reel."

First necessity for use of the picker is that the bog, or the section of it to be picked, should be flooded to a depth a little over the vines. Berries are knocked off the vines and then "boomed" ashore where they are gathered. The device was originated at Bandon in Southeastern Oregon.

The machine is simply a steel frame, mounted on two 20-inch bicycle wheels. There are four rods in front on metal circles, 36 inches wide and 20 inches in diameter. The reel and machine are driven by a 2½ h.p. Briggs & Stratton motor similar to that

used on all Massachusetts or New ton pickers. Power take-off is by chain.

Machine is fast in operation, meaning a saving in cost on picking, but then there is the process of "booming," collecting and getting rid of the bog "trash," meaning additional time spent. One of its advantages is that the machine stirs up about as much of the "trash", leaves, stems, as does a float boat. Another advantage is that picking can be done in any weather, and early or late in the day, as it is a water-harvest process. It also picks clean, leaving few berries.

Machine being tested at the State Bog was built by station engineering Professor John "Stan" Norton from a design sent east by Jack Dean of Bandon.

It is far less expensive than the other mechanical pickers and can easily be made where machine work is available. However, there is the added cost of the booming and other steps, although the machine does eliminate the cost of

a man to carry berries to the shore as with conventional pickers or with scooping.

The "water-reel" could not be used on the Western and Darling-Jersey bogs as they are now constructed, being too large in many instances. The division of the State Bog into four bays two years ago made the tests possible. If berries were to be shipped fresh they would have to be mechanically dried after harvest, bruising would be a factor in the cost of using the picker.

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### CHAIN OFFERS

#### CRANBERRY PRIZE

New A & P Supermarket, opening in Wareham Massachusetts this month offered as a prize to the first 1,000 customers a pound package of fresh cranberries. The fruit was the "Paradise Meadow" brand of Decas Bros., Wareham distributors and packers.

# Unexpected Marketing Crisis Rocks The Entire Industry

Marketing of the 1959 crop of fresh cranberries was going along at a brisk and orderly pace until on November 9, Arthur S. Flemming, secretary of the U. S. Department of Health, Education and Welfare announced at a press conference some shipments of cranberries from the West Coast were believed to be contaminated by treatment of bogs with Amino-triazole. This, picked up by newspapers, radio and Television threw the market and the cranberry industry into turmoil.

Cancellations of orders followed immediately on the news of Mr. Flemming's statement. As of November 6 Ocean Spray Cranberries, Inc. handling approximately 75 percent of the total production was about 30 percent ahead of 1958 in fresh sales and other distributors were also ahead in spite of a late start in shipment due to late ripening of the crop in Massachusetts and some other areas. Ocean Spray was also coming close to selling 6,000,000 cases of processed goods from Nov. 1, 1958 to Nov. 1 of this year. That was about 10 percent greater than any previous year in sales' history.

Various segments of the cranberry industry, and others outside the industry immediately went into action to preserve the market, most important of all at this season of the year just prior to Thanksgiving. Less than half the fresh crop was probably in hands of consumers. Television showed some super markets taking fresh cranberries off their shelves.

Ambrose E. Stevens, general manager and executive vice president of Ocean Spray immediately released the following statement:

"First, we can state that to the best of our knowledge all cranberries in groceries and super-markets today are pure and wholesome and untainted by any dangerous substance.

"Second, we are shocked that the United States Government has made public what we consider an inflammatory statement concerning possible contamination of cranberries by a weed killer approved by the Department of Agriculture. This comes surprisingly at a time when we had already taken precautionary measures to prevent any allegedly contaminated products from reaching the housewife.

"This had been a matter of a cooperative discussion between the food and drug administration and

ourselves since mid-summer. Any crop suspected of contamination has already been isolated from the market. Moreover, on Sept. 18 all Ocean Spray growers were instructed to discontinue any use whatsoever of the amino-triazole compound.

"The 'plan' referred to in the government statement to separate and destroy any contaminated crops has already been put into effect. We are just as much interested as the government in the welfare of the millions of people who eat cranberries.

"Finally, we are prepared to destroy any part or all of our 1959 crop should research indicate the presence of any amino-triazole.

"In view of our sincere actions in the public interest, we can only deplore this attempt to create headlines at the expense of the confidence of the American people."

At approximately 7:15 (E.S.T.) on the morning of the holiday, Armistice Day, Mr. Stevens appeared on the Dave Garroway show "Today," in defense of Ocean Spray berries as against contamination. Also appearing were Commissioner George P. Larricks of Food & Drug Administration, and Dr. Boyd Schaffer of American Cyanamid Company, one of two firms which produces amino-triazole.

At Wareham Mass. the Beaton Distributing Company and Decas Brothers both shut down their packing plants as on Nov. 10th orders were cancelled. Anthony Briggs, assistant to president Melville C. Beaton, declared there was nothing else to do without orders. "The situation really is disastrous," he stated. He said the Beaton firm had affidavits from its growers they had used no amino on their bogs.

Even President Eisenhower received at least two telegrams regarding the urgency of the cranberry crisis. One was from Congressman Hastings Keith, of West Bridgewater, Mass. in whose district the bulk of the Massachusetts cranberry crop is grown. This was dated November 12 and follows:

"Conflicting views regarding edibility of cranberries are held by high governmental officials. Resultant confusion on part of consumers is wrecking industry and economy of many towns of Southeastern Massachusetts. While protection of public is paramount, it closely follows that public should be equally protected from

concern which may be totally unnecessary. Secretary Flemming, whether rightly or wrongly, has seriously damaged confidence of the public in an important agricultural product. To resolve question in public mind I urgently request you name panel of medical authorities to study problem and report to American public as promptly as possible. Those named should have no direct connection with public health service or cranberry industry."

George C. P. Olsson, president of Ocean Spray also sent a wire to the President, and to Vice President Nixon, Secretary of Agriculture Ezra Taft Benson, plus governors, senators and congressmen of the five cranberry producing states. This urged them to ask authorities in Washington to grant a "fair hearing." The telegram said in part that Secretary Flemming's statement had "created panic among millions of American housewives" and is resulting "in loss of millions of dollars" to thousands of honest, hardworking Americans who make their livelihood from the cranberry business.

Tests of cranberries were run by various scientists in various parts of the country to determine if there was any residue on cranberries. There were glimpses of some of these tests on TV. Some reported that any traces of amino which might be found that a person would have to eat impossible quantities to cause any possible injurious effects.

The Wisconsin State Journal reported that Wisconsin-grown cranberries are entirely free of the residue of amino-triazole, according to tests run by two University of Wisconsin professors, these being Dr. Malcolm N. Dana and Dr. George Klingbeil, both known to the cranberry industry.

Secretary of Agriculture Benson was shown on TV saying he had eaten cranberries the Sunday before the Flemming statement and would eat them again on Thanksgiving.

The New Jersey Farm Bureau was quoted as saying it would seek Government payment to growers for sales lost as a result of the controversy. The "rash unnecessary scare statement," was criticized.

Secretary Flemming came into some bitter comment by members of Congress from states which produce cranberries. These were quoted from coast to coast, Washington State to Massachusetts.



Senator Neuberger (D. Ore.) was reported as drafting a bill to authorize Government purchase of non-contaminated cranberries of the current crop. He said this would cost Uncle Sam less than \$15,000,000 and he recalled the Government had bought cranberries before . . . Representative Thomas N. Pelley of Washington was reported as saying he would demand a full investigation of the "cranberry mess," when Congress convenes in January . . . Vice President Nixon was reported as eating four helpings of Wisconsin cranberry sauce in Wisconsin. A Massachusetts retailer of cranberries for more than 40 years continued to buy cranberries and gave them away to customers. There were reportedly no refusers. Grocery chains were reported making their own chemical checks of cranberries in stock.

Nexer had cranberries received so much publicity, millions of dollars worth — of the wrong kind. There were confusing and often conflicting page one headline stories and comments on TV. A break appeared to have come in news on the 14th when there were reports that Flemming had cleared New England and Wisconsin berries. But the following day there were fresh headlines that Wisconsin berries were a new target and there were reports of a tainted lot of frozen berries from Wisconsin Rapids. Bandon, Oregon growers were reported around and fighting back, this news appearing in Eastern newspapers.

Statements were issued by Dr. C. E. Cross, director of Massachusetts Cranberry Experiment Station, Dr. John Lilly, and Dr. William B. Esselen of the University of Massachusetts to the general affect that there was no reason why Massachusetts cranberries should not be consumed, as usual.

On the 14th a nine-hour meeting was held at Ocean Spray, Hanson, Mass. attended by some directors of Ocean Spray, independent distributors of Massachusetts, Representative Keith, who helped arrange a meeting with Flemming at Washington, November 18th, Carleton I. Picket, executive secretary of Massachusetts Farm Bureau Federation, Dr. Cross and others. This was to draw up plans for the Washington meeting of the 18th. Stevens said he had been in communication with independent distributors of other areas and had been assured the industry plan drawn up had the support of more than 95 percent of all distributors. Also taking part was Orrin G. Colley, Ply-

mouth, president of the Cranberry Institute.

In Wisconsin Governor Nelson immediately appointed a committee "to determine all the available facts as to the purity and healthfulness of Wisconsin cranberries." Members named included Dr. John Lindsall, Wisconsin Alumni Research Foundation, Dr. Carl Newport, state health officer, Dr. Dana, and Dr. Klingbeil, Ernest L. Chambers, chief of plant industry, state department of agriculture, John Potter, Richard Brazeau Indian Trail Inc., Wisconsin Rapids, Vernon Goldsworthy, Cranberry Products, Eagle River.

To the 15th only three contaminated shipments had been reported uncovered by Federal researchers: one from North Bend, Oregon, one from Coquille, Oregon and the one from Wisconsin Rapids.

Senator John Kennedy, Massachusetts, who drank cranberry juice in Wisconsin during the opening of the controversy, called for "quick action to help prevent ruin of the cranberry industry."

Sunday, the 15th President Olson of Ocean Spray wired President Eisenhower requesting the chief executive declare Massachusetts, Wisconsin, New Jersey, Oregon and Washington disaster areas. He said "initial losses had already run into millions and eventually will run over \$100,000,000."

He estimated the cranberry industry used only 25 percent of the chemical involved, while the other 75 percent is used by others in the field of agriculture.

On that same day a thousand gallons of cranberry juice was consumed during a party at Plymouth, Massachusetts at a party sponsored by Radio Station WP-LM. Police estimated the throng at from 7,000 to 10,000.

The Grand Union Company, with 451 stores on the East Coast was reported Nov. 16 as restoring 60,000 cans to its shelves after chemical tests.

On the 16th it was reported from Washington that the head of Food and Drug Administration, Dr. George P. Larrick said the incidence of contamination in cranberries was "quite low." Tests on 202 lots of cranberries had found 199 safe. He said a pattern was beginning to emerge. He is reported as saying the public should have no cause for concern

in eating cranberries from batches declared safe.

On the 17th, announcement was made at Boston by the Massachusetts Department of Public Health that, after exhaustive tests, Massachusetts cranberry products are free of contamination. The announcement was made by Commissioner Frenchette, that inspector had obtained representative amounts of fresh cranberries from the 1959 crop, frozen cranberry cranberry juice cocktail, cranberry juice concentrates, and cranberry sauce. Processed products include fruit from both the current pack and that of 1958. "All samples were free from contamination," was the statement.

Up to November 18th, the date of the public hearing in Washington, the Food and Drug had tested 440 samples of cranberries and only two more contaminated lots had been found, making total of five. These were another unit from Wisconsin and one from Washington, none from Massachusetts or New Jersey.

The Atlantic & Pacific chain of food stores, one of those which had removed stocks, began the same day to restore these stocks to its shelves in cities and towns where the berries had been inspected and found safe.

Restaurants were reported as returning cranberries to their menus, and especially for Thanksgiving.

The Government, and in particular Welfare Secretary Arthur S. Flemming, was urged at the November 18th public hearing in Washington on the cranberry marketing crisis, to immediately issue a statement that cranberries now in groceries are completely wholesome and free of any contamination.

This would re-assure the now confused American consumer and restore the normal heavy buying of cranberries for Thanksgiving and later use, it was pointed out. There were but six buying days left before the holiday at the time of the hearing yesterday.

The cranberry industry, through leading representatives, also presented a five point plan for the government to act upon.

Even while the meeting was in progress, there were two points developing in adverse effect to the industry. One was that the Government made its first seizure of a Massachusetts-grown cranberry product, a shipment of sauce from the 1958 pack. The second

was that the U. S. Army ordered cranberries banned for the Thanksgiving dinner of the G. I.'s. Or at any other time.

#### The five-point plan:

Continuation of the ban on all use of amino-triazole until pertinent facts concerning the drug, including its effect on human beings, have been determined.

Segregation of all cranberries which there is any reason to believe may contain any of the weed-killer.

Testing of all berries of the 1959 crop now in possession of the primary distributors.

Destruction of all cranberries found by such tests to contain any residue of amino-triazole, or impounding of the berries under appropriate "safeguards" until their proper disposition has been determined.

Continued scientific research and cooperation with government agencies "to insure uninterrupted delivery of an adequate supply of pure and wholesome cranberries and cranberry products.

Those attending the hearing from the cranberry industry included, George C. P. Olsson, president of Ocean Spray; Ambrose E. Stevens, general manager and executive vice-president; H. Drew Flegal, director of advertising and publicity; and John E. Quarles, chief counsel for the cooperative; Orrin G. Colley, Plymouth, president of the Cranberry Institute, the over-all unit of the industry; Marcus M. Urann, president of United Cape Cod Cranberry Company of Hanson; Dr. Chester E. Cross, director of Massachusetts Cranberry Experiment Station; and Cranberry Specialist J. Richard Beattie of the Station; from Wisconsin, Lt. Governor Philleo Nash, who has large cranberry interests; and William Huffman of Wisconsin Rapids, grower and representative of Indian Trail, Inc. independent distributors, and John Potter, president of Wisconsin State Cranberry Growers' Association. In attendance also were Representative Hastings Keith of Massachusetts, who helped arrange the meeting, and Massachusetts Senator Leverett Saltonstall and members of the Senate and House from other cranberry-producing states.

Stevens was one of the speakers calling on Secretary Flemming for the immediate clarifying statement. He said there was no reason to believe the 1958 crop now in cans had been improperly treated. He also said that very careful restrictions imposed by the industry on the current fresh berry crop indicated the crop now on the market is also pure.

Olsson said that Flemming had acted on a "technical provision of the law which he had a right to invoke, but by doing so he had brought a great American industry to a halt, and thousands had suffered untold losses. Quarles declared that Ocean Spray berries were pure and wholesome. He emphasized that the plan presented by the industry should not be interpreted as indicating any admission on the part of the industry that any of the cranberries now in hand or in the market are tainted.

Representative Keith said he had checked with Dr. E. H. Atwood of Tufts University, whom he described as an outstanding authority in the field of the thyroid. He said he was told amino-triazole is often used in treatment of the thyroid and that the quantities in which it was used as a weed killer on cranberries could never cause cancer. He said he had checked with other physicians and experts and almost all planned to eat cranberries for Thanksgiving.

Senator Saltonstall was another urging immediate clarification in a statement by Flemming.

Secretary Flemming conducted the session, which was attended by a packed hearing room of spectators as well as those directly concerned with the cranberry industry.

Flemming the following day, November 19, announced approval of the industry plan, which would provide consumers with limited quantities of cranberries immediately. The plan worked out by officials of his department and the cranberry industry called for a system of labeling certain portions of the 1958 and 1959 crop which have been tested and proven free of taint.

President Olson of Ocean Spray immediately issued a statement approving "wholeheartedly" the Government action. The plan gave a clean bill to about four million pounds of 1958 processed berries which had been tested, and at the same time it approved lots of tested fresh cranberries from the 1959 crop, totaling more than three million pounds.

Plan also provided for approval labels which the buyer could look for. Flemming at the same time promised to continue to expedite testing.

From New Jersey came word that amino triazole was not used on the commercial crop there. So reportedly have stated the State Health Department and growers. Edward Lipman, Jersey manager for Ocean Spray said, while the material had been used experimentally by Rutgers Uni-

versity none was sold commercially.

Philip Marucci, associate research specialist at the Cranberry and Blueberry Laboratory said the material was tried out experimentally in 1956. He said it at first showed real promise, but later tests in 1957 and in 1958 were failures in effectiveness, and it was apparently not of value under New Jersey weather and growing conditions.

To November 20th, when this issue went to press, there had been U. S. seizure of eight lots, totalling 84,000 pounds. Four of the seizures were from Wisconsin-grown berries, two from Oregon, one from Washington, one from Massachusetts and none from New Jersey.

#### O. O. POTTER OF WISCONSIN SUCCOMBS

Oscar O. Potter, prominent Wisconsin cranberry grower succumbed at Tomah, October 19th. He was 77, and had been confined by a lingering illness.

For a time he served on the board of the then National Cranberry Association, now Ocean Spray and the Midwest Cranberry Association of Wisconsin.

Active in civic affairs, he was treasurer of the town of Cranmoor, Wood County, and also of the town of Scott, Monroe County. He was later chairman of Scott Township Board and a member of the Monroe County Board.

For the past 12 years he had been a director of the Farmers and Merchants Bank of Tomah. He was instrumental in establishment of a new Tomah Memorial Hospital. He was former president of Tomah Rotary Club. He was a 32nd degree Mason and had been a member of the masonic organization for the past 40 years.

He was born in the town of Randolph in 1882 and married the former Eva Bennett in 1907. Mrs. Bennett survives with four sons, Gerald, Russell, Bennett and Clinton and a daughter, Mrs. June Jensen, all residents of Warrens.

He also leaves two sisters, Mrs. Ada Woodell and Mrs. B. F. Winn, Tomah, and two brothers, Guy and Roy Potter of Wisconsin Rapids.

# ***Frost Protection Of Cranberries By Sprinkler Irrigation***

By

Prof. "Stan" Norton  
Massachusetts Cranberry  
Experiment Station

(An Address continued from  
Last Month)

## **Use of Sprinklers for Frost Protection**

The first sprinkler system installed for frost protection of cranberries in Massachusetts was a Skinner system on a 2-acre bog in 1951. It is reported to have done an excellent job. The second system was a rotating head system. By 1946, there were 10 bogs with 21 acres of permanent or portable systems. This protection increased by 1956 to 46 bogs with 250 acres of permanent irrigation system and 42 bogs with 108 acres of portable system that could be operated simultaneously.

## **Advantages and Disadvantages of Flooding Over Sprinkling**

Flooding has a few advantages over sprinkling. Probably the main one is that when a sure frost is forecast, the grower can flood his bog in the afternoon or evening and then go home for a good night's sleep. The man with the sprinkler will have to stay up all night to watch it. A second advantage of the flooding is that a minor breakdown in the pumping facilities is likely to be fixed in time to complete the flooding in time to get protection. Whereas, a breakdown of your sprinkling facilities at the coldest part of the night could well be disastrous.

Some advantages of sprinklers are outstanding. (1) They require less water, permitting complete protection of many partially protected or completely unprotected bogs. (2) Frequent flooding in the spring or holding over a flood in the spring for 2 or 3 successive nights retards vine growth and reduces the crop. Sprinkling would not have this effect. (3) Flooding in the fall delays harvest for one or more days after the

flood is drawn. Sprinkling has very little more delaying effect than a heavy dew.

## **The Experimental System**

An irrigation system was installed on one acre of the Experiment Station bog at East Wareham, to be used for a variety of tests, other than supplementing rainfall, including sprinkler frost protection. It is a low gallonage system with an application rate of 65 to 80 G.P.M. for the acre. It consists of 300' of 2" plastic main, 3/4" plastic laterals with 26 Rainbird No. 20 sprinklers on a 40' x 42' spacing. The laterals will handle up to 4 heads with a discharge rate of 3 G.P.M./head. At that rate the friction loss is 4 P.S.I. between the first and fourth heads, according to the manufacturers charts at 2 1/2 gpm loss in 2 1/2 psi. Operating pressure is 25 to 30 psi. The pump is 2 1/2" x 2" Myers Centrifugal, powered by a 6 hp Wisconsin engine. The system is underground with the risers extending 6" to 9" above the bog.

The installation was completed about the middle of May 1958. We had already decided to use it for frost protection for the acre of bog. It was operated successfully on two nights shortly after it was installed but no temperature information was obtained.

Although there are now 360 acres of bog under sprinkler irrigation for frost protection, there are still a substantial number of growers who doubt the dependability of this method for extremely low temperatures. There are also growers using sprinklers who follow the practice of intermittent operation or even shutting down entirely after they have "iced in" their vines early in the night.

Because of these doubts and practices, it was felt that a more complete investigation of the degree of protection provided by sprinklers, especially at the low rate of 65 gpm/acre, should be made. Some installations apply water at the rate of one inch an hour which is nearly 8 times the

rate we have used.

An irrigation system of such a low application rate, when designed for uniform distribution, can be used for applying insecticides and fungicides in addition to its irrigation and frost protection functions.

The primary reason for designing the system for this low application rate was to develop a system that could be used for both irrigation and frost protection at the lowest possible per acre cost. For frost protection 100 percent simultaneous coverage of the entire acreage is needed. Therefore, cost analyses on the basis of covering the acreage with a portable system, using a number of settings over a given period of time, are not valid. It was incidental that the low application also lends itself to the distribution of spray materials.

An irrigation system similar to the one I just described can be provided for a cost of about \$500 per acre, when the water source is surface water right at the bog. This does not include installation costs or the cost of a pump house.

Plastic pipe was selected because its low coefficient of friction would permit using smaller sizes at consequently lower costs. Aluminum pipe could be used in place of plastic in the 2" or larger sizes.

## **Experimental Procedure and Data**

A 12 point recording potentiometer was obtained from the University in time to take temperature readings on the last night in the spring season (June 4-5) when a dangerous minimum was expected on the State Bog. As it developed, light, intermittent breezes persisted during the night, preventing the expected low from occurring. This was not the general case throughout the area, however.

Several minimum indicating thermometers showed that temperatures at vine level fell to 32°F. sometime during the night. However, this is 2 1/2° above the vine tolerance. It was on this night that a five degree difference in

(Continued On Page Sixteen)

## THE MARKETING DISASTER

Like a bolt out of the blue came the press conference of Welfare Secretary Arthur S. Flemming in Washington November 9th, which started off the wild uproar about contamination of cranberries by use of amino-triazole. This began a truly amazing amount of publicity in the press, television and radio. We didn't know that cranberries were really that important in the American economy.

The marketing season for the second consecutive year had been going along nicely—not spectacular but orderly. The industry seemed to be well on the way of getting out of the economic doldrums which have plagued us for the past recent years.

Timing could not have been worse, just as the Thanksgiving trade was about to begin, and also buying for Christmas. The total crop, now is estimated at 1,249,000, less than preliminary forecast, but still 7 percent above last year and four percent above the previous record of 1953. The blow caught us square on the chin and had the industry reeling.

The industry and its friends and other fairminded people immediately began fighting back against the marketing disaster. This campaign has been successful to an extent against the blanket indictment which was cast upon the industry by that ill-fated press conference of Mr. Flemming. Mr. Flemming apparently had spoken inadvisably. Incalculable damage has been done the cranberry industry. It will linger longer than this year. But the cranberry industry will survive.

Mr. Flemming has the duty of safeguarding the public health. We were not at the press conference and do not know exactly what was said. However, certainly a wrong impression got out.

The cranberry industry does not want to harm human life. It was acting in good faith and under approved practices—unless there were a few unknown violations. It had begun to police itself against

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any possible infractions. It was indeed leaning over-backwards. Any residue of amino-triazole found has apparently been in extremely minute quantities. It has been expressed over and over again this was insufficient to harm a human being in any sort of normal consumption of cranberries.

The market may pick up, but the injury has been done.

Elsewhere in this issue we have attempted to give a chronological account of events as they took place, but so vast is the scope we know we must have left out many facets of the story.

This is not a thankful Thanksgiving for the cranberry industry.



# SERVING THE WISCONSIN GROWERS

## FROST PROTECTION

(Continued from Page Fourteen)  
2" elevation difference was experienced. The low temperature at 2" elevation was 32½°F., the temperature at 4" was 37½°F., and at 6", or vine level, 38¼°F.

One thermocouple, located 2" above the ground on the unsprinkled check area, recorded a

temperature of 31° or below for an accumulated time of 1 hour and 40 minutes. The lowest temperature under the sprinklers was 35° at the 6" level.

No further tests were run until November 1st. The system was used on several nights prior to that but no temperature records were obtained because the potentiometer was in use in Amherst on another project.

The minimum temperature recorded during the night of November 1-2 was 18½° at 2:40 a.m. and again at 6 a.m. This temperature occurred at the level of the vine tips on the dry area.

(To Be Continued)

I'll stay here as a cranberry grower."

After his turn with the navy, he was offered several good positions in the coming field of electronics.

"But I turned them all down. I wanted to be a cranberry grower even during this period of depressed returns. Most growers recalling the good old adays were so pessimistic they were discouraging younger people from even considering cranberry growing as an avocation. A good percentage of the growers are older men with insufficient 'replacements' coming along.

"Consumption of cranberries has not reached a fraction of its potential. Mechanization of the cranberry industry in Massachusetts has lagged far behind other agricultural endeavors with resulting high labor requirements — high costs.

"These things were enough to stimulate my interest. In just a few years, mechanization has moved us out of the stone age — mechanical pickers, mechanical sanders, ditch diggers, aerial application of insecticides, fungicides, herbicides and fertilizers and other chemicals for weed control.

"Marketing-wise last year's Ocean Spray's jingle for cocktail clearly demonstrated what a potential we have in cocktail. I don't look for many \$15.00 cranberries for a few years, for it takes money to promote a product today, but once we can get cocktail established then we will reap the reward in a fair return for our berries through expanding markets."

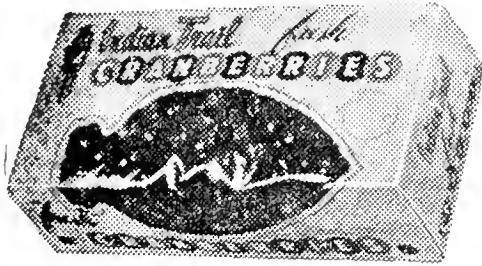
## DAVID MANN

(Continued From Page Eight)  
shring?

"I'm not at all discouraged with the cranberry business. If I was I wouldn't be here would I?

Neither has he felt a yearning to become a grower in any of the other cranberry areas. He travelled considerably while in the Navy. He doesn't believe there is anything wrong with the industry in Massachusetts which cannot be remedied.

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## Industry Continues Uphill Fight To Bring Back Marketing of Crop

There was no rest for weary leaders of our hard-pressed industry, and the old saying, "Busy as Cranberry Merchant," took on more vivid meaning than ever.

Ambrose E. Stevens, general manager and vice president of Ocean Spray Cranberries, Inc. called a conference for the press, growers and other interested persons to explain the proceedings of the new uncontaminated labeling program. This was on Nov. 10th.

One was:  
"Examined and passed by the Food and Drug Administration of the United States Department of Health, Education and Welfare."

The other:  
"Certified safe under the plan approved by the United States Government for cranberries."

Under the second label this had to be signed by the packer or

distributor as certified that the testing was done in compliance with U. S. procedures. Arthur S. Flemming, Secretary of Welfare, stressed that mis-use of the label would bring about immediate criminal prosecution.

On November 20th it was announced Ocean Spray Cranberries, Inc. had hired an independent laboratory to certify its products. This was Hazelton Laboratories, Inc. of Falls Church, Virginia and Palo Alton, California. The firm immediately began the huge job of testing the millions of pounds of cranberries.

In Washington Secretary of Agriculture Ezra Taft Benson on the 20th called on the nation's food industry to launch a massive merchandising effort to help cranberry growers re-establish their market. At a news conference, he urged consumers throughout the

United States to resume using cranberries as soon as cleared and supplies were available to them.

He urged all national, regional, local and educational groups and the food trade staffs to assist in a vigorous campaign to increase consumption through Thanksgiving and Christmas.

He sent telegrams to food processors, wholesalers, retailers and restaurants, urging maximum effort "toward restoring confidence in cranberries."

There was a very serious fall-off of consumer sales for the Thanksgiving table. Total industry consumer sales, including Ocean Spray, handling approximately 75 percent of production fell off 79 percent in cans and 63 for fresh during the week of Nov. 15 to 21. During the week of the 8th to the 14th, which was when the adverse cranberry publicity first broke, the fall-off for canned products was 83 and fresh 71.

However, during these two weeks preceding Thanksgiving when the furore was at its height, Ocean Spray had consumer sales of more than 5,000,000 pounds. This, a spokesman for the cooperative said, showed at least a measure of encouragement and the public had not lost all confidence in cranberries, and might be indicative of a returning to more nearly normal late-year sales. These figures are from Marketing Research Corporation of America.

Various notables were reported over the country as eating cranberries at the Thanksgiving dinner. These included Secretary

(Continued On Page Eleven)



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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



(Editors Note - The following material entitled **Analysis of the Field Situation** was prepared by the writer of this column as background information for his annual plan of work. In view of its timeliness and bearing on the present situation, it is presented below for the growers consideration.)

**The 1959 crop.** One of the severest winters in recent years resulted in winter killing damage and oxygen deficiency conditions on a number of Massachusetts bogs. An unusually wet July greatly hampered insect and disease control measures, and an active frost season this fall took its toll of fruit. In spite of these unfavorable conditions, Massachusetts growers have produced a substantial crop which is the fifth largest, according to the November report issued by the New England Crop Reporting Service. The present crop of 575,000 barrels is 4 percent less than the 598,000 barrels harvested last year, but 3 percent more than the 1948-57 average of 558,100 barrels. Weather conditions in late August and early September retarded coloring of the berries and delayed the start of the harvest and early fresh fruit shipments by at least two weeks. Berries were about average in size and the general keeping quality by mid-November was somewhat weaker than a year ago.

**Acreage.** The cranberry acreage in Massachusetts reached its peak in 1948 when approximately 15,000 acres of bog were being cultivated in the state. Since that time the commercial acreage has gradually decreased to about 12,900 acres, according to the latest U.S.D.A. figures. The downward trend is expected to continue at a slowly

declining rate as marginal bogs are gradually abandoned. However, in view of the present cranberry crisis caused by Secretary Flemming's unjustified press release of November 9, the decline in acreage could be rather rapid. The reasons are obvious.

**Size of Bog Holdings.** The number of bog holdings or ownerships has declined steadily from a peak of 2,148 in 1924 to 962 in 1956. The average size of holdings, on the other hand, has increased steadily from 6.5 acres in 1924 to 13.7 acres in 1956. The trend to larger ownerships is consistent with other agricultural enterprises within the state and country. It is too early to determine what effect the present crisis will have on size of holdings.

**Production.** Cranberry production has increased steadily in spite of a decrease in acreage. For

example, the revised figure for the 1958 crop was 598,000 barrels from 12,900 acres, or an average of 46.4 barrels per acre. Production in 1905 from 13,000 acres of bog was 165,000 barrels, or an average of 12.7 barrels per acre. The upward trend in production is expected to continue if returns to growers show a reasonable improvement, and if the present crisis can be resolved within a reasonable time.

**Labor.** Adequate supplies of seasonal as well as full-time workers continue to be a problem. Puerto Ricans are imported each season to help supplement the local harvest labor supplies. Industries with higher wage scales are attracting many key workers from the bogs. The major alternative is greater mechanization of the entire industry as a means of reducing the tremendous amount of hand labor in the production, screening, packaging and processing of cranberries. Notable progress has been realized in this field as evidenced by the increased use of low-gallonage, one-man operated spray rigs, aerial applications of fertilizers and pesticide concentrates, widespread use of picking machines and power-driven wheeling-off rigs, and installation of new automatic packing and

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**Marketing.** The key to the problem of improving the industry's economic position rests in the field of marketing. At the present time this involves the task of regaining the public's confidence after Secretary Flemming's ill-advised press release of November 9. The Thanksgiving market

was down 73%, with little prospect of regaining much of the Christmas and New Year's Market, because of the almost unsurmountable task of collecting cranberry samples, testing and labeling them indicating their freedom from any contamination. Every effort is being made in this tremendous undertaking forced on the

industry by Secretary Flemming. The prospects, however, for any appreciable recovery of our Markets for the remainder of 1959 are far from encouraging.

It is expected that aggressive marketing, merchandising, and promotional programs will be developed with the assistance of several branches of the U.S.D.A. to regain our markets in the months ahead. The cooperation of various agencies within the U.S.D.A. during this crisis has been most encouraging. Rigid quality control programs will be further developed and expanded. It is expected that greater emphasis will be devoted to the merchandising of the Vitamin C-enriched cranberry juice.

The development of a strong aggressive Cranberry Institute is in progress. Its functions will be to represent the industry in its fight for survival. Government assistance will definitely be needed in terms of credit and purchases of inventories that cannot be moved due to the current situation. Improved Market and shipping point reports, support of consumer educational programs, and the development of additional quality control programs could well be important functions of the institute. There is every indication that our industry is united in its fight to win back the public's confidence in our products.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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## FRESH FROM THE FIELDS

Compiled by C. J. H.

### MASSACHUSETTS

#### Normal in Temperature

The month of November was an unusual one in the fact it was practically a flat normal in Temperature. Months are seldom "exactly average" in that they are made up of averages. The month had been a plus ten until the final day, but a very cold morning about cancelled this out.

#### No Snow

The ground had remained unfrozen all month and there was practically no snow in any part of the cranberry area. There were a few slight flurries and the first spits of winter occurred at Wareham as late as the 29th. First really cold spell came on the 18th, and there was a skimming of ice, but at month's end ponds and reservoirs were free of ice.

#### Heavy Rainfall

Rainfall, was another story, however. The total for the month turned out to be 5.08 inches, building up water supplies for the winter. There was measurable precipitation on 18 days with a trace on one other. Normal rain is 3.89.

Before the blow to the industry fell with Secretary of Welfare Flemming's statement Nov. 9 there was more fall bog work in prospect than usual. This put a damper on much of this as growers were waiting to see how the market would turn out, being unwilling to sink more money. Some sanding operations were being carried on; some ditch work. A few growers were beginning to

fill up ditches the last of the month in anticipation of the winter flood. Some large growers were down to winter crews.

### NEW JERSEY

#### November Average

Despite the heat generated on "Black Monday", November 9, the weather for the month averaged out about normal. The mean temperature was 45.8°F. as compared with the normal of 46.2°. There were extremes of 17°F. on the 19th and 69° on the 27th.

#### Rainfall

Rainfall was about .60 of an inch in excess of normal as the precipitation occurring on 11 days amounted to 4.06 inches. All of

the rain which occurred during the month, including a storm which dumped 2.01 inches on Nov. 7, fell on unfrozen soil which readily accepted it with very little run-off.

### WISCONSIN

#### Amino Triazole

NEWS, the only news is two words, AMINO TRIAZOLE! Never has a reputable industry received such a devastating blow, as that leveled by Health, Welfare and Education Secretary Arthur S. Flemming at the cranberry industry, on November 9, 1959. With a few ill advised statements he plunged a fine American institution on the brink of economic (Continued on Page 16)

**NOËL**

As we celebrate the Day  
when He was born, may  
the hope and promise of  
His message live anew in  
our hearts.



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# The Harmful Effect Of Salt On Cranberry Bogs (1)

By

F. B. Chandler and I. E. Demoranville

Prior to Hurricane Carol in 1954, the authors had found evidence of salt in a number of cranberry bogs and water supplies. A pond in Bourne, used as a reservoir by two cranberry growers, was generally known to be contaminated by salt water brought in by the 1938 hurricane. Several other bogs had received salt from brackish water as a result of the flooding water being contaminated by tidewater coming through faulty tide gates. Two bogs had a saline soil, one originating from an unknown cause, the other caused by the proximity of a chemical dump.

The amount of salt was determined in water samples by the method for water soluble chlorine published in *Methods of Analysis of the Association of Official Agricultural Chemists* (1) 2. The

(1. Miscellaneous Contribution Number 1007 of the University of Massachusetts College of Agriculture Experiment Station, Amherst, Massachusetts. 2. Numbers in parentheses refer to literature

cited.)

chlorine in the soil was determined on a 50g dry sample which was mixed with 50 milliliters of water and after 15 minutes was placed in a Buchner funnel; it was then washed with distilled water to a volume of 200 ml. The filtrate was washed into a 250 milliliter flask and made up to volume after which 10 ml. were used for chlorine determinations, as in the water samples. Some of the water samples taken at random were analysed for sodium with a flame photometer by Dr. Joseph Steckel, of the University of Massachusetts, and in all these samples the chlorine and the sodium appeared to be combined as NaCl (sodium chloride or common salt).

Chlorine per 100 milliliters of water prior to Hurricane Carol varied from 0.6 to 2.0 mg. for all locations except for the pond in Bourne (21.7) and the bog (19.8) it drained through (Table 1). As the analysis method of the Association of Official Agricultural Chemists also measures the chlo-

rine from the most common source of potash (muriate of potash) and from the breakdown of some insecticides, the smaller figures are not surprising. Following Hurricane Carol, all of the locations sampled earlier, were sampled again and many new ones not reported here were studied. The determinations showed that the chlorine in one case was high enough to represent over 80 percent sea water (see Table 1). It appeared that the amount of chlorine in the water at all locations fluctuated for about a month due to local conditions, and had decreased continually since the hurricane. The reasons for the fluctuations vary, but in the Bourne pond the sea water apparently went to the bottom (see later paragraph) and the run-off from the surrounding hills gave a low reading in the surface water the day after Hurricane Carol. The second day after mixing of the top layers by wind, the reading for the surface water was the highest obtained. A bog using this pond for reservoir had the highest reading within 24 hours of Hurricane Carol, as the sea water which had to go over the bog to get into the pond had not all receded. The following day the chlorine content

Table 1  
Milligrams of Chlorine per 100 ml. of Surface Water  
by Locations and Dates\*

Location	**					1954					1955	1957	195
	Before Carol	9/1	9/2	9/8	9/17	9/27	10/15	10/25	12/14	1/7	3/14	1/15	4/1
Pond in Bourne	21.7	92	208	108	86	146	171	178	172	150	110	90	2
Bog in Bourne	19.8	820	98		193	314	174		184	22	28	7	1
Pond in Onset	0.85	184			312	324			86	44	14		
Same near Road	1.0	262		290	277	321	161	162	66	32			
Bog near above	1.2	218			304	322	242	101				8	
Bog in Onset	0.6	640			230	291			48		11	6	
Pond in Wareham	1.0	146		182	178			160	26	60	19		
Bog in Wareham	1.6	760			390						17	6	
Same near dike	1.0	770			390						28		
Blueberries			1620					250		78	42	28	12
Lake in Dennis			***					880		94		28	440

\* Sea water would have about 1950 mg. of Chlorine per 100 ml. (3).

\*\* Some of the figures are an average of four or more determinations over a year's time, while some represent only one sample.

\*\*\* On 9/3, blueberry patch was 810 and lake 930.

of the water in the bog had dropped considerably.

The Bourne pond with a maximum depth of 25 feet, has no streams entering it, and has only one outlet, which is through the bog. Water samples were taken from the surface to the bottom at two-foot intervals. These samples showed a stratification of the water with more chlorine in the bottom layer for the first three samplings. The first study, 10/25/54, showed the high chlorine layer was over 14 feet below the surface, and the difference between the top and the bottom layers was greater than in later years. This was before the big fall turnover of the pond. Another study made in the winter, 2/9/55, after the first turnover, showed the layer with abundant chlorine to be over 16 feet below the surface. The third study was made 8/10/55 after two turnovers, and this showed the salty layer to be over 18 feet below the surface. After three turnovers, 1/26/56, there was no significant difference from the top to the bottom of the pond, while the quantity of chlorine in the top had decreased only slightly or not at all from the previous year. (See Table 2). Two years later, February 1958, the chlorine content was about 72 mg. per 100 ml. of water, or about half the amount found in January 1956. In January 1959, the chlorine was about one-third of the amount of the previous January at all levels. In 1958, the rainfall was unusually high and may have caused a greater decrease in salt than other years.

The property damage from Hurricane Carol to cranberry bog owners ranged from nothing to \$162, averaging \$135 per acre. In addition to property damage, there was berry loss up to 40 barrels per acre (Table 3). The property damage and loss of berries came from the mechanical force of the water or the sand that it moved. Vines were also injured by the toxic property of the salt water, particularly in depressions where the water lingered. The amount

of injury from salt water seemed to be related to various factors: Vines that had been harvested or otherwise disturbed (weeding, sanding, etc.) before submergence were more seriously injured than those which were not. If drainage was good, less vine injury resulted; newly-set vines were injured more than old, and newly-set vines which had been disturbed were injured much more than undisturbed vines. Samples from several bogs seem to associate serious vine injury with a low organic-matter content and low percentage of fine sand in a soil (Table 4).

One blueberry plantation showing considerable damage was studied and found to have a high

salt content. The chlorine in this location has been slow to leach out. A vegetable grower whose farm was flooded had a six-foot deep water hole in which the water was stratified. When salty layer on the bottom was pumped out and discarded, the hole soon filled with fresh ground water.

Tidewater has penetrated a number of bogs in New Jersey, Massachusetts and Oregon (13). This contamination usually arose from faulty tide gates on the drainage end of the bog which permitted very high tides to push brackish water into the ditches and, sometimes, onto the bog surface. One bog in New Jersey had brackish

**Table 2**  
Milligrams of Chlorine per 100 Milliliters  
of Water in Pond in Bourne  
Sampled

Depth	10/25/54	2/9/55	8/10/55	1/26/56	2/4/58	1/2/59
0	181	70	139	138	68	25
2	181	144	142	146	70	26
4	-	136	140	140	70	24
6	178	156	143	152	72	25
8	-	158	141	146	70	26
10	-	152	148	140	74	25
12	173	148	142	140	74	24
14	199	160	152	148	72	24
16	330	178	148	146	76	23
18	368	256	152	144	76	25
20	436	308	252	144	80	26
22	-	310	232	152	76	26
24	466	314	302	140	-	25
25	-	-	-	148	-	-

**Table 3**  
Estimated Property Damage from Hurricane Carol

	Bog				
	A	B	C*	D	E
Dike repair	250	30		20	
Ditch cleaning	20	8		15	
Bog cleaning	100	200			
Vine setting	25	25			
Pump house repair				36	
Motor repair				170	
Boxes, etc.	90			12	
<b>Total</b>	<b>485</b>	<b>263</b>	<b>648</b>	<b>253</b>	
<b>Acres</b>	<b>4</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>1½</b>
<b>Value of berries lost</b>	<b>1500</b>	<b>750</b>	<b>300</b>	<b>0</b>	<b>250</b>

\*Expenses not itemized



water twice every day for a number of years with no ill effects. If the salt did damage, it was offset by the changing of the soil air twice a day. One bog in Massachusetts had a sump hole for sprinkler irrigation which was a widened and deepened part of the center drainage ditch. Noting that

the vines were dying near the joints of the sprinkler pipe and below the heads in the sprinkler line, it was found that tidewater had seeped into the sump hole and the bottom had 230 to 750 mg. of chlorine per 100 ml., or from about 1/9 to nearly 1/3 of the chlorine of sea water. This sea

water contamination occurred with two tide gates, which shows that they must be watched and kept clean. Generally there is little damage to bogs as most of the tidewater is in the ditch.

Saline soils generally develop under arid or semi-arid conditions (11). However, when bogs are put under water early in the fall and the water is drawn off late in the spring, the leaching of the soil is similar to that of an arid region. The average precipitation at East Wareham for the months of June through October, when the bogs would be drained, is 19.31 inches (ranging from 12 - 27 inches).

A dead area of a bog in Massachusetts on which about three square rods of vines had died, was called to the attention of the authors, but no clues to the trouble could be found for some months. One dry day, crystals were seen on the surface which showed high chlorine content when tested qualitatively. Rain showers removed the crystals from the surface and it was noted that there was a gelatinous scum over the soil which prevented the water from penetrating and washing the salt down. Examination of this soil by Putala (10) showed iron oxidizing bacteria, *Chlamydoacteriaceae*, which produced thick pectic cell walls. About this time, Dr. Erkki Kivinen of Finland visited the location and said similar saline soils had been found in other temperate regions. Analysis for chlorine showed the salt content to be very high on the surface, and much lower a foot below the surface. The salt then increased with depth to about 2½ to 4 feet and then decreased (See Table 5). When collecting samples at the various depths, shells were found and the soil had the appearance and odor of clam flats, although there is no known record of this section having been under water or having been flooded by a hurricane. Water samples collected in the reservoirs and surrounding ditches showed the presence of chlorine to be very local (See Table 6). Upon checking manage-

Table 4

Milligrams of Chlorine per 100 grams of soil, percent loss on ignition and percent passing a 60 mesh sieve by bog locations, and depth within the bog.

Bog	Vines	Depth Sample	mg. Cl/100 g.	% loss on ignition	% Passed 60 mesh
A-1	no damage evident	top 3"	7.64	3.20	11.9
		6-9"	9.95	1.24	12.2
A-2	all brown some dry, some not	top 3"	1.54	1.10	9.1
		6-9"	.41	.92	8.6
A-3	old vines brown	top 3"	2.15	2.22	8.8
		6-9"	.83	1.27	
B-1	green	top 2"	34.9	4.54	21.5
		4-6"	26.5	3.74	32.4
C-1	green	top	4.95	lost	30.6
		4-6"	9.58	1.80	19.7

Table 5

Milligrams of Chlorine per 100 grams of soil from different depths in a saline bog where vines had been killed.

Depth in feet	mg. of chlorine
1.0	52
1.5	72
2.7	160
2.9	130
3.2	72

Table 6

PH of Water Samples and milligrams of chlorine per 100 milliliters of water

Location	PH	mg. chlorine per 100 ml.
Pond (check	6.3	0.93
Reservoir above saline section	5.7	.93
Ditch above problem section	5.7	1.72
Ditch in problem section	5.8	3.7
Hole dug in problem section	3.3	73.2

ment practices, it was learned that this bog was kept very wet during the growing season and the water was put over the surface early in the fall. It was suggested that ditches be dug in the bog and/or tube drains installed, also that the surface be kept broken to permit percolation and, further, that the bog be exposed to as much rain and snow as possible. The bog has improved and now is vined in, about 20 acres which appeared to be on the verge of loss having recovered.

Another bog with a similar problem appears to be associated with a chemical dump, so that the problem is due to a sulfide or sulfate rather than a chloride. The latter appears to be similar to acid saline soils reported by Kivinen (8).

Harmer (6) has shown that cabbage, kale and kohlrabi are benefited by 100 to 200 pounds of salt per acre, celery may be benefited by applications up to 750 pounds per acre and (5 & 7) that applications up to 500 to 1000 lbs. of salt are beneficial for beet crops on muck soils. Purvis and Brill (9) reported a growth response with salt on beets and no injury up to 14,000 parts per million; bean leaves however, showed injury although the pods were not injured by 3500 ppm.

Similar figures for cranberries are not available, but for many years the weed chart (2) has been recommending the use of 150 to 200 pounds of salt per acre as a spray. The late Dr. Bezanson of Nova Scotia used 300 pounds of salt per acre, applied as a spray, to control weeds and felt encouraged at the end of the second year (4).

The best way to decrease the amount of salt in soils is to provide a good drainage and irrigate frequently over the surface (7, 11 and 12). For soil used for other than cranberry or blueberry production, Steckel (12) suggests using gypsum.

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#### MASS. STATION STAFF ASSISTING

All members of the Massachusetts Cranberry Experiment Station staff were authorized the first week in December to assist any grower or shipper in the current crisis. Authorization came from the Boston District Office of Food and Drug Administration.

While no analysis of samples of fruit could be done at or by the Station, staff members assisted growers in taking samples according to the approved method for analysis at any testing laboratory they selected. The program was one of "speed-up."

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# *Philip H. Gibbs Of South Carver Massachusetts, Third Generation Grower Is Now First Vice President of Cape Cod Cranberry Growers' Association*

by  
**Clarence J. Hall**

A third generation grower is Philip H. Gibbs of South Carver, Massachusetts, who last summer was elected first vice president of Cape Cod Cranberry Growers' Association. "I don't expect to make a million dollars growing cranberries," he says, "but I intend to stay in the business as long as I can make a living."

Philip is the son of Mr. and Mrs. Homer G. Gibbs, the former a well-known grower and one-time president of New England Cranberry Sales Company, now defunct. He operates about 84 acres in all, for himself and his father and uncle, Ruel S. Gibbs, also a former president of N. E. Sales and a widely-known grower. He is the grandson of the late Samuel Gibbs of South Carver, an important earlier grower.

Philip was born October 25, 1922 in Wareham, attending Wareham High School and being graduated in 1940. After that he attended Bowdoin College at Brunswick, Maine for two years, taking a general course, consisting mostly of science studies.

## **In Merchant Marine**

From 1942 to 1946 inclusive, during the Second World War he was in the U. S. Merchant Marine. His trips were mostly to England, but he was also on the West Coast and made a voyage to the Marianian Islands. The ships carried general cargo. He entered the Merchant Marine as ordinary Seaman. When discharged he was a third mate.

Brought up in a cranberry-growing family, it was natural he should turn to cranberry work—he had worked on the family bogs summers and at odd times since he was 14.

## **In Charge Since 1954**

The bogs he operates are in three sections, and he has been in charge since 1954. The largest unit is the Weweantit River bogs, consisting of 34 acres, in South Carver in part, but mostly in adjacent Wareham. He is one half owner, his father a quarter and his uncle a one-quarter owner.

Another unit is the so called "Home Bogs," near the residence of his father, these consisting of 20 acres and owned by his father.

The third is Old Tuck in Rochester, 30 acres, owned by Ruel Gibbs.

**Average Production 3,000**

which many growers do not have.

Phil, of course, is a member of Cape Cod Cranberry Growers' Association, and the Southeastern Massachusetts Cranberry club. He is a member of the Community Associates of Wareham and of the Mr. and Mrs. Club of Wareham Congregational Church.

With Mrs. Gibbs, the former Jean O'Brien of Portland, Maine, the couple live in the Sam Gibbs property at South Carver. They have four daughters, Deborah, 10, Hilarie, 9, Christy, 5, and Victoria Ann, 3.

For relaxation he practices carpentry, working at making or repairing chairs, cupboards, and so forth in a workshop at his home.

There is a big screenhouse at the Weweantit bogs, but packing is not done there any longer, but at Ocean Spray plant at Onset, the fruit of the properties now being marketed through that cooperative.

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## **MASS. EDUCATIONAL COMMITTEE MEETS**

A meeting of the State Cranberry Advisory and Planning Committee was held December 2 at Massachusetts Cranberry Experiment Station. There was an extremely large attendance in view of the current crisis, with cranberry club officers, growers and members of the University of Massachusetts staff present. J. Richard Beattie, Extension Cranberry Specialist conducted the session.

This is the annual session in December which lays out the education program of Extension for the year to come, topics to be discussed at club meetings and clinics. Much of the meeting was, naturally, taken up with current debacle and how best to meet the situation. How best to cut costs and economize, during the coming growing season, with presumably lowered income from this year's marketing was discussed at length. Emphasis will be placed on economy.

## UP HILL FIGHT

(Continued From Page One)

Flemming who "accepted" a "double helping" from his wife, according to the AP.

Western World of Bandon, Oregon reported the 26th that local harvesting was being continued as the harvesting season neared an end but no more fresh Ocean Spray berries were being put on the market; the late berries were being put into freezers. No further shipments were made after word came from Washington, D. C. that the cooperative had voluntarily impounded all Washington and Oregon berries.

The World also reported Frank McKennon, director of the Oregon department of agriculture as branding the labeling of cranberries as nonsense. He said his department would not require labels on berries sold on the Oregon market.

All Oregon berries which had been shipped prior to the Ocean Spray stop order had been cleared through official inspection, it was reported.

At Wareham, Massachusetts Decas Bros. distributors who had shut down on November 10 were making shipments for Thanksgiving and the later market, some small orders coming in. They had three women placing tested labels on individual fresh pound packages and the same number packing.

The cranberries which had been impounded by Ocean Spray in the Pacific Northwest would be tested. Any containing any amino-triazole residues would be destroyed and the good ones moved to market later it was reported.

The daily headlines and comments on television had simmered down to practically nothing after Thanksgiving. Cranberry growers and workers on the Long Beach Peninsula in Washington however "made" Life magazine. These included harvest scenes and among those pictured were Ed Nort, Albert Kary, Alvin Koski, Armis Patans, Art Kary.

Secretary of Agriculture Benson suggested that surplus berries might be purchased for Federal school lunches, as they were cleared. Confusion continued to be general as to the future of much of the 1959 crop. Would orders come in for the Christmas market and later, and how much shrinkage would there be in storage?

The case of cranberries brought out into the open the problem of the growing number of chemically-treated foods. This includes additives to many products.

Over the past year it was reported more than 16,000,000 pounds of unfit and contaminated foods have been seized by FDA over the country. Inspectors work out of 17 regional offices around the country, with some 450 analysts constantly making checks on food, drugs and cosmetic products.

On November 27 Ocean Spray in its weekly price list to the trade announced that "All individual one-pound packages of Ocean Spray cranberries now being shipped from Wisconsin and Massachusetts will have a tag stating 'Certified safe under plan approved by the U. S. Government, signed Ocean Spray Cranberries, Inc.'" Northwest berries had already been impounded for testing and apparently the chemical was not commercially used on any New Jersey fruit.

Ocean Spray plants across the country with the exception of the main plant at Hanson, Massachu-

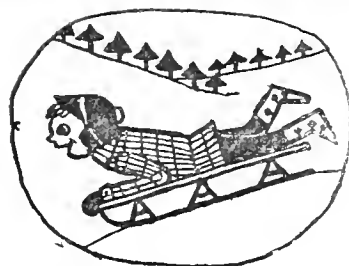
setts, were shut down the first week of December. These included Onset, Mass.; Markham, Washington, and North Chicago plants. Also that at Bordentown, New Jersey.

Reason given was that there were sufficient inventories in the market in view of the small orders, with the exception of some fresh fruit orders.

On December 2 food trade news release from Ocean Spray announced that its marketing division was pursuing the plan as released by Food and Drug Administration and was working with the trade closely in setting up a program for Christmas business.

It was putting together a special campaign of advertising for this purpose. H. Drew Flegal, director of advertising said the first period of the year promotion will continue as usual, starting in January "as part of our unchanged policy to maintain sales of Ocean Spray cranberries 12 months of the year." Meanwhile the full-color magazine campaign on "The Natural Mate for Every Meat," continues in Ladies Home Journal, McCalls, Good Housekeeping, Better Homes & Gardens, American Home and Sunset magazines.

In Wisconsin there was a little activity the first of December. Berries were reported as holding up well in storage, with but little end rot. Naturally there was shrinkage going on. Members of the Indian Trail group met



SEASON'S GREETINGS

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December first to discuss the general situation and to attempt plans for the future. Dr. George L. Peltier was appearing on television presenting the true story and attempting to allay the hysteria.

The cranberry industry will spend more than ever to promote Christmas sales this year the Wisconsin Governor's Cranberry Marketing Committee was told December 2 at Madison. This committee recommended that Wisconsin State agencies use more cranberries in state institutions, if possible. It also suggested State agricultural promotion programs for greater use of cranberries. Robert Lewis, Gov. Nelson's agricultural advisor said the Marketing Committee plans to look into the whole question of federal aid, purchase of surplus berries and the possibility of emergency credit. Richard Brazeau, part owner of Indian Trail and its counsel asked the committee to explore the possibility of having the State Agricultural Department certify the amount of berries the Wisconsin industry might have to dump.

In New Jersey, Congressmen, including Senator Clifford P. Case and Representatives Frank Thomas Jr. and Milton W. Glenn have been active in behalf of Jersey growers. This was sparked in part by letters from Philip E. Marucci, secretary of American Cranberry Growers' Association.

Cranberry Products, Inc. of Wisconsin is not closed down, nor intending to. It is working with a small crew with the inventory it has. It still anticipates paying its growers the agreed \$10.00 per barrel.

Cranberry Institute has set up an emergency office at South Duxbury, Massachusetts. This will be a clearing house for information and for promotion. Orrin G. Colley, president, is in charge with a full-time secretary and telephones installed. The number is Wellington 4-5666.

## Mass. Growers Suggest Action By Congress

### Large Attendance Hears Panel in Meeting Sponsored by Cape Cod Growers' Association — Seek Government Indemnity for Surplus.

That the cranberry industry will be forced to carry its fight for any indemnity through loss of sales due to the amino-triazole residue scare to Congress was a principal development at the mass meeting called by Cape Cod Cranberry Growers' Association at Wareham Memorial Town hall December 14. It also developed that the United States Department of Agriculture is putting on a strenuous campaign in behalf of the growers to restore consumer confidence in cranberries.

The matter of aid from Congress was first brought up by George C. P. Olsson, president of Ocean Spray Cranberries, Inc., which handles 75 percent of the total crop and who, on Nov. 14, was elected industry spokesman.

He said "We must have a bill in Congress to take up the slack between what cranberries we sell and what will become surplus." He called on the growers to indicate by show of hands their support of this and the show was all-but-unanimous.

Representative Hastings Keith

of West Bridgewater and Wareham, who has been very active in the cranberry controversy, said Olsson had asked him to file a bill.

"Of course you would like to get restitution," he said. "I am willing to do what the industry wants me to do. I don't guarantee anything, we are a small industry."

He then went on to explain how he was forming a Congressional cranberry committee. He said there were already 11 members of Congress who had told him they were willing to serve on such a committee.

The meeting was a packed one, with cranberry growers and others from all over the Southeastern Massachusetts cranberry-growing area, including one grower from Wisconsin, Bert Leisure of Manitowish Waters. The audience, estimated at about 600, almost filled the floor of the auditorium.

Session had been called, president Gilbert T. Beaton of Wareham explained, for the main purpose of bringing cranberry growers up-to-date on what was being done in their behalf. There was a panel of five speakers, Olsson, Keith Orrin G. Colley, president of Cranberry Institute, and Dr. Chester E. Cross, director of Massachusetts Cranberry Experiment Station, plus G. Chester Freeman chief, Food Distribution Division U. S. D. A., who came up especially from Washington for the meeting. Throughout the meeting, by all speakers, there was much criticism of Arthur S. Flemming, secretary of Health Welfare, and



### Yuletide Joy

Said the World's darkness, O God, we see a star which will give us hope and guide us on our way. Our days are troubled with the portents of despair, and the counsels of men have increased our anguish. Turn us from ourselves, lift our vision beyond our earthly empire, and let the day spring from on high on us. If the pilgrimage be long, sustain us by Thy strength until we are made strong in the innocence of Bethlehem's child.

Samuel H. Miller

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READ  
CRANBERRIES

Education, who "broke" the bad news concerning rats treated with amino, developing cancer, on Nov. 9, and also against Food and Drug Administration, and its chief George P. Larrick.

The date was referred to as "black Monday", "blue Monday", and "F" Day.

Freeman was the main speaker. He declared the United State Department of Agriculture was as distressed about the situation as were the cranberry growers.

"We will do what we can to help you," he said.

He said Secretary of Agriculture Ezra Taft Benson had directed his division to get together with all divisions of the U. S. D. A. and attempt to help the Thanksgiving and Christmas market for cranberries.

"It is a real challenge for the food industry to re-establish confidence in cranberries in the minds of the public," he said.

He told how the U. S. D. A. is now reaching the food industry, urging the promotion of cranberries and that the response has been excellent from all over the country. He told of response from big chains. He told of fact sheets going out to the press, particularly the food trade press, to editors and food writers. He said the U.S.D.A. has information centers in five of the principal cities of the country and these offices are busy attempting to restore confidence. The U.S.D.A. is working also through Extension Service and Home Information Service.

He added the U.S.D.A. was ready to meet with the industry again at any time after the first of the year when it was seen how the Christmas market had gone over.

In reply to a question in the question and answer period, Beaton declared fresh fruit sales were very poor, but canned sales were better. The only market which is good is the Canadian. He estimated there might be a surplus of 750,000 to 900,000 barrels left over out of an estimated crop of 1,249,000 barrels. Money value is estimated at \$30,000,000.

Colley, Olsson and Keith reviewed the trips made to Washington, mostly without positive results. Olsson told how, when the industry had learned the ill-fated announcement by Flemming was to be made, he had pleaded with Flemming to give the industry 48 or even 24 hours in which to present its side of the case before the press conference was held and the news of residue on some cranberries was released.

He said Flemming refused to do this, but would limit his remarks to fruit from Oregon and Wash-

ington. But at the conference when asked how consumers could tell these berries from those of Wisconsin, Massachusetts and Jersey, he was at a loss to answer and "Thus put under suspicion all cranberries."

He told how he had gotten in touch with medical authorities, particularly Dr. Charles Astwood, chief medical officer at Tufts University, and told how he gave the chemical amino-triazole to patients for treatment of thyroid gland trouble. He said the industry had an array of medical men ready to testify that no human could be injured by the amount of residue, and would have to eat impossible amounts of cranberries to be in any possible danger.

He paid high tribute to the efforts of Keith, Senators Leverett Saltonstall and John F. Kennedy in attempting to help the industry. He told how Flemming and Larrick had broken or delayed engagements with the cranberry delegations. "We were given the run-around, the brush-off," he said.

Colley told how Cranberry Institute had been re-activated, through its four directors, Marcus M. Urann, Gilbert T. Beaton, Vernon Goldsworthy of Wisconsin and himself. The Institute is now in a position to act as liaison and communications center to develop closer integration of activities of all segments of the industry. He told of establishing an office at South Duxbury.

He said the Institute recommended the investigation by Congress of testing procedures of the FDA seizures and destruction processes and manner of publishing findings and action, and that steps be taken immediately by

Food and Drug Administration and U.S.D.A. to reassure the consumer, whose confidence in cranberries as a food had been shaken, to restore this loss confidence in the cranberry industry.

He said he hoped the Cape Growers' Association would become more active and that additional meetings would be desirable.

He said that in Washington the delegates had come to know a good many dedicated men, but at the same time many who apparently feel they must carry out dubious theories with unreasoning zeal. "We have been told that the main motive was the expressed resolve to protect the American consumer from contaminated cranberries. Nevertheless we have also heard that behind the great cranberry scare is an interesting tale of politics."

At one point Olsson had said that Ocean Spray has engaged the services of the Arthur D. Little Company of Cambridge, testing laboratories and that hereafter all seizures by FDA will be challenged in the testing methods.

The office of Senator Saltonstall was represented by his legislative assistant, Jonathon Moore, who said the Senator had a prior engagement, but offered his continued support. He said the cranberry crisis would be carried to the White House itself. He said Food and Drug had been attempting to evolve a new analysis technique which is much faster and cheaper and this is going into effect immediately. A telegram was read from Senator Kennedy.

At one point in the meeting, it was brought out that the rats which developed cancer had not

May your Yuletide be gaily  
festooned with many hours  
of high happiness . . . . .  
bright with good cheer . . .  
rich in love and good fel-  
lowship.



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been fed cranberries, but straight amino-triazole in enormous quantities.

In questions and answers there was question as to what would become of the surplus. There was no definite answer, but it appeared evident the growers did not want this carried over into another year to create a permanent surplus such as the one the industry had just gotten rid of.

Dr. Cross told of early experiments with the weed killer and declared that in the 1959 edition of "Current Therapy" under amino triazole, it says, "These herbicides or germicides are relatively non-toxic."

He said he had positive proof in a letter that there had been agreement in the use of amino between Food and Drug and U.S.D.A. He said he told Flemming the cranberry growers have followed the rules. "Food and Drug's own analytical work proves, in my opinion, the basic honesty and integrity of our farmers. Who are they kidding that the farmer is the chief weakness?"

He took a look at the record — not one New Jersey grower has yet been listed by FDA, and in Massachusetts there were two seizures, both from shipments by the same grower. "In other words, one grower and only one of our 962 growers at present stands accused. This is a tribute to us."

Percentage-wise, the tainted berries are 730 barrels out of 575,000 barrels or 1/9 of 1 percent. (Nationwide the figure is reported as 1/3 of 1 percent.

He concluded: "But any U. S. Administration that can sacrifice and disinherit law-abiding citizens in the way current officials have condemned our cranberry growers, has departed a great distance from our traditional code of justice. To me this treatment at the hands of our own government is intolerable."

#### WEST COAST AMINO

From Washington State it is reported that almost 10 percent of fresh cranberries tested by the State Agricultural Department in November and early December was tainted with amino triazole. This was announced by Director Joseph Dwyer.

He said his department would continue its surveillance of berries offered for sale in the State of Washington to determine that the food distributing industry is discharging its responsibility to the public.

Work has resumed at the Markham plant of Ocean Spray. One

line worked on a sizeable Government order. Other employees were processing considerable quantities of fresh cranberries which had been cleared. This was early in December.

In Oregon, according to Western World of Bandon, J. D. Patterson, chemist for the Oregon Department of Agriculture said December 9th he had found no contamination of cranberries in that state. He said he had tested samples from all wholesale channels in Oregon. The Federal Food and Drug Administration had found some Oregon cranberries tainted. Patterson's statement was made at a meeting of employees of the State Division of Foods and Dairies.

### Miss Cranberry Highway Crowned

Miss Judy Keene of Onset, Massachusetts was to be crowned "Miss Cranberry Highway of 1960" December 19th at a Bourne, Massachusetts High School CODE Club pre-Christmas "Sparkle Spin" Ball. She was chosen at Edaville late last summer to represent this

group of businessmen and others who adopted the Cranberry Highway designation for a main route to Cape Cod.

She was to be crowned by Miss Eleanor Stahura of Buzzards Bay, high school senior who was the "Miss Highway" of 1959. Little 7-year-old Jo Johnson of Buzzards Bay, the first "Highway Princess", was attendant.

The Cranberry Highway Association through signs and other means has done considerable since its organization, to publicize cranberries.

#### BEATTIE BEFORE KIWANIS CLUB

J. Richard Beattie, extension specialist of Massachusetts Cranberry Experiment Station was a speaker before New Bedford, Mass. Kiwanis Club Nov. 15th noon. His topic was the current cranberry marketing crisis from the point of view of the grower. There was large attendance and much interest expressed in the topic.

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## FIGHTING OUR WAY BACK

What of the cranberry industry, is the main thought in the minds of cranberry growers now that they have time to ponder the debacle to the industry of the most unfortunate amino-triazole announcement by Secretary of Welfare Flemming early last month. Most were simply dazed by the incalculable amount of harm this did all cranberry growers, everywhere, in this year's market.

Would many cease to be cranberry growers? Is it possible for us to hang on? "We must have an income, if we are to remain in business." Would acreage have to be cut—abandoned or put possibly to other uses?

There was the question of consumer confidence in cranberries. How badly damaged was this, and in particular, how long would it take to be restored? It was not damaged completely as shown by the consumer sales for the week before Thanksgiving, even though it was bad enough. Total cranberry sales for this period fell off 78 percent for cans and for fresh fruit 63 percent. As it was, in the two week period preceding Thanksgiving when the cranberry fan-fare was at its peak, Ocean Spray, handling approximately 75 percent of all production, sold more than 5,000,000 pounds of cranberries both fresh and processed.

There was much talk of Government relief in some form, from an agricultural industry which has never sought subsidy. Every grower has been hurt, regardless of his merit. In Massachusetts there are 962 growers, according to the last census and of all these there were but two instances of taint from one grower, yet 961 outraged growers were suffering. That shipment was one of 800 barrels out of a crop of 575,000 100-pound barrels. The Government now is helping in restoring confidence in cranberries at consumer and other levels.

Best informed seem to feel, however,

CLARENCE J. HALL

Editor and Publisher

EDITH S. HALL—Associate Editor

Wareham, Massachusetts

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Barnstable County Agricultural Agent

OSCAR S. JOHNSON

Barnstable, Mass.

### New Jersey

P. E. MARUCCI

New Jersey Cranberry and Blueberry Station

Pemberton, New Jersey

there will not be any direct financial aid, at least, at this time. It is pointed out there are no such funds available and this is not a true "disaster," to be classified as such. Loans may be needed.

Answering some of the questions posed in the first part of this editorial. A rough and hasty check of areas seems to reveal that no, or at least few growers intend to go out of the cranberry business. Nor does there seem to be any intent to cut back or abandon acreage. Instead the industry is fighting back to slowly regain what has been taken from it—consumer confidence in cranberries. This is no time to give up and nobody is. The industry in time will fight its way back.



# SERVING THE WISCONSIN GROWERS

## FRESH FROM FIELDS

(Continued from Page Five)  
 chaos. This black day will never be forgotten by cranberry growers.  
**Half the Crop Left**

Now that the initial shock has worn off, the industry from all levels has rallied and is fighting back to regain its rightful place on the grocers shelves and in the market baskets of the American housewife. On the state level Governor Gaylord Nelson appointed a Cranberry Marketing Committee comprised of representatives from the University, Department of Agriculture and cranberry industry, to expedite the sale of the state crop. Initially he placed the facilities and services of the Dept. of Agriculture and the University to gather and make tests of berries in growers' warehouses and in

various retail outlets. The organizational committee meeting was held just prior to Thanksgiving and a second meeting was scheduled for early December. An estimated 150,000 barrels or roughly one third of the crop remained in the growers warehouses at the end of November.

### Record Cold Period

Although all other news is incidental, for the record November was below normal in temperature and about normal in precipitation. The fall season to date has been a cold one, starting in the last part of September and continuing clear through November. This has been one of Wisconsin's longest periods of below average temperatures on record and accounted for the year that didn't have the traditional Indian summer. For some-

thing like nine straight weeks temperatures in every section of the state were below long term averages. Readings ranged from seven degrees below average in the south to ten degrees below average in the north. Precipitation for November was near average for all sections except in the northwest where it was about half of the average. It was the first month since April without a severe damaging storm, although an Arctic outbreak of cold air swept into the state on the 17th, but quickly moderated. Most northern marshes flooded on this initial cold weather and southern marshes flooded new plantings. At the end of the month snow cover ranged from two to seven inches over the entire state. The outlook for December was for normal temperatures and precipitation.



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### CROP FIGURES

USDA Crop Reporting Service in release estimate of December 16, makes little change over November. Massachusetts still has 575,000 barrels, New Jersey 95,000, Wisconsin 440,000; Washington changes from 95,000 to 98,000, Oregon is the same at 44,000. Total U. S. crop stands at 1,252,000.

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# Institute To Ask For Government Indemnification

**Action Taken at Boston Meeting by unanimous vote to Ask for "upwards of 15 to 20 million"—Nearly 100 percent of Industry Represented.**

Cranberry growers and organizations representing practically all of the cranberry industry, meeting at the Hotel Statler Hilton in Boston Dec. 21, voted unanimously to join together and, through the Cranberry Institute, work for the common cause of the cranberry industry. It was also voted to request indemnity from the Government of upwards of 15 to 20 million dollars for the 1959 crop.

Independent and Institute audits were expected to come in within a month to finalize the figures. Concerning damage to the 1958 crop, and what the damage will be to the 1960 and future crops, the industry expects that additional damages will become evident as

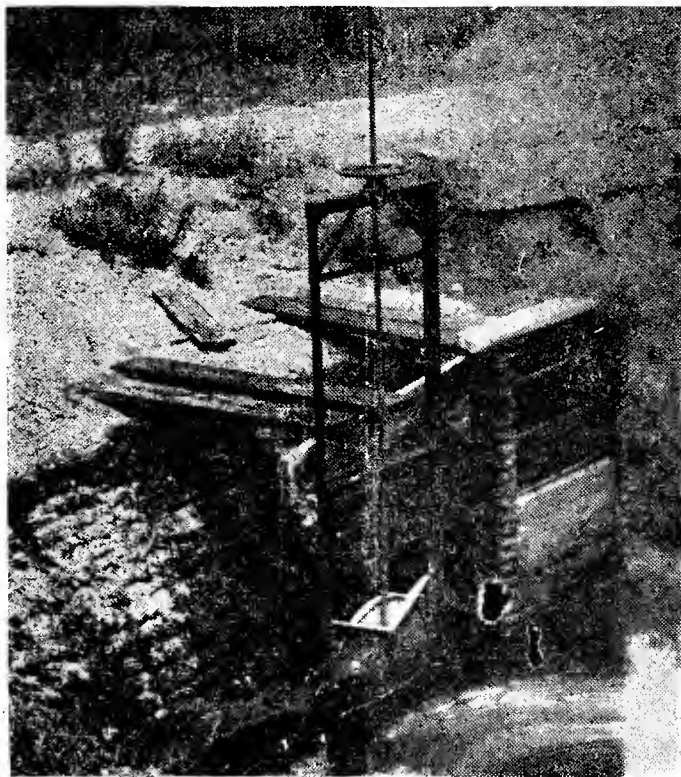
the marketing season develops and the growers will look to the government for indemnification for these crops as well, it was pointed out.

Orrin G. Colley, president of the Institute, called the session which lasted from 9:30 a.m. to 4 p.m. He asserted "Cranberry growers are asking for this indemnification because of the unprecedented action by Welfare Secretary Arthur S. Flemming, who deviated from accepted policies of his Food and Drug division and publicly singled out the cranberry industry at the peak of its marketing season without giving this industry opportunity to defend itself against the charges."

Details of any legislation are to be worked out by a newly-elected legislative committee, which as of Jan. 1 is expected to have definite figures as to all cranberries in inventory. The figures will be audited and certified and placed before the Government in a manner the committee decides upon.

Organizations present, these already having been members or who became members, included: Ocean Spray Cranberries, Inc., with about 75 percent of total crop represented by president

George C. P. Olsson, director Bert Leisure of Wisconsin and Edward V. Lipman, manager of the New Jersey division; Beaton Distributing Agency, Wareham, M. C. Beaton and Anthony Briggs; Decas Bros. Wareham, John Decas; Peter A. LeSage, South Yarmouth, "Pals" brand cranberries, LeSage; Jumbo Cranberry Sales Company, Carver, Eric H. Huikari; Morse Brothers, Attleboro, Howard Morse; Growers Cranberry Company, New Jersey, Walter Z. Fort; Morris April Bros. Bridgeport, New Jersey, Morris and Leon April; Pappas Bros. New Jersey, Thomas J. Pappas; C. & E. Canning Company, New Jersey, Joseph Cofliccuio; Ariston Canning Company, New Jersey, Joseph Pappas; Clement Pappas & Company, New Jersey, Clement Pappas; Indian Trail, Wisconsin Rapids, Wisconsin, Barnard Brazeau, president; Cranberry Products, Eagle River, Wisconsin, Vernon Goldsworthy, president; Minot Packing Company, Bridgeton, New Jersey, John B. Morelli and George Kay; Cape Cod Cranberry Cooperative, Inc., George Crowell, director.



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The Institute was represented by Colley, Marcus M. Urann, secretary and treasurer, and Mrs. Irene Jones, of the emergency office recently set up in South Duxbury. Also present were Dr. C. E. Cross, director Massachusetts Cranberry Experiment Station, and J. Richard Beattie, Massachusetts Cranberry Specialist.

There were no representatives from the Pacific Coast, but Ocean Spray handles more than 90 percent of the crop from that region. Felice & Perrilli of Richmond, California, a firm handling cranberries, will be asked to join the Institute, and also Stockely-Van Camp. This is the most nearly total organization the cranberry industry has ever attained. When completed, the institute will represent all out a "handful" of growers, and these will be offered membership as they become known, Coiley said.

The legislative committee named consists of Olsson, chairman; Philleo Nash, Wisconsin, lieutenant governor and cranberry grower; John Potter, president of Wisconsin State Cranberry Growers Association; John Decas; Thomas Pappas.

Finance committee named was Maurice Makepeace, Wareham, chairman, Brazeau, Clement Pappas and Morris April.

Membership committee chosen was Beaton, chairman, Lipman and Beattie.

In the meantime, William Decas of Decas Bros. Wareham, said the Christmas market had picked up greatly over that of Thanksgiving immediately following the Flemming statement. He said they had shipped 7,000 barrels since the labelling program for berries not tainted with amino-triazole went into effect. Decas had tested lots from 29 growers and not a single lot was found to be contaminated.

He said he expected to have several thousand barrels in surplus at the end of the season, due chiefly to the abrupt letdown in demand at Thanksgiving.

On the other hand, Beaton's Distributing Agency, Wareham, which had been packing some since the labelling plan went into operation, was shut down entirely. There were no firm orders, Anthony Briggs, general manager, said and the company was not shipping on consignment.

Ocean Spray was packing fresh fruit for the Christmas market and reported a gradual improvement in orders. Canning lines were shut down and operations were to stop after Christmas. But the last-minute demand for

Christmas was up somewhat. Marketing Research Corporation of America reported improvement.

For the week of Dec. 6 to 12, when Christmas market shipping was heavy, there was a total of 81,000 cases of processed fruit as compared to 162,000 in the corresponding week last year. Of this Ocean Spray disposed of 73,000 cases. The total market was reported down by 48 percent, while Ocean Spray was down by 43 percent.

December U.S.D.A. Crop Reporting Service indicated a slight increase in the total crop, bringing the U. S. figure to 1,252,000 barrels. This is the largest production on record and well above the previous record of 1953 of 1,203,300 barrels. Production was larger in every state with the exception of Massachusetts.

The gain in total crop was in Washington, which went up from 95,000 to 98,000, putting it in third place over New Jersey which has 95,000. Massachusetts is estimated at 575,000, Wisconsin at 440,000, Oregon at 44,000.

The cranberry industry continues to fight back against the damage done by the statement of Secretary Arthur S. Flemming of Welfare, Health and Education. This has consisted chiefly of putting out publicity that cranberries are healthful and may be eaten with complete safety and efforts to get legislation in Congress for Government relief for the growers, a sorely-needed measure. Developments continue.

As published last month, Congressman Hastings Keith, Massachusetts, told growers of that state at a mass meeting he was willing to enter a bill before Congress to aid cranberry growers financially. In New Jersey a delegation of 8 growers representing several organizations were in a two-hour conference with U. S. Senator Harrison Williams at Newark, December 15th.

During the conference it was agreed that the senator would sponsor and press a bill to prohibit the use of amino triazole on cranberries and work for additional legislation to obtain subsidy payments on the surplus crop that was not sold after the Flemming statement. He advised the growers to set up a subsidy price program

for fresh, frozen and canned berries to be incorporated into his bill. He was told by growers that Secretary Flemming had "pulled" \$350,000 worth of spinach off mid-west markets because of contamination of DDT without any publicity.

Attending this conference were Edward V. Lipman, New Jersey manager of Ocean Spray Cranberries, Inc.; Walter Z. Fort, Pemberton, manager Grower's Cranberry Company, Vinton N. Thompson, Vinrentown, Division of Marketing New Jersey Department of Agriculture, William S. Haines, Chatsworth; John Cutts Tabernacle; Enoch Bills, manager of Ocean Spray plant at Bordentown, Hobart Gardner, Indian Mills, president of American Cranberry Growers' Association and Anthony DeMarco, prominent Hammononton grower.

Indian Trail, Inc. of Wisconsin Rapids resumed canning operations the week of December 14th, turning out sauce, jelly and juice. Movement of fresh fruit in mid-December was in 100 and 200 case lots instead of by the usual truckload.

Wisconsin growers were advised to hold their berries instead of dumping them - to cut off the heat in warehouses. This was until a decision of some sort was made.

On December 14th Grant Scott, extension service agent of Coquille, Oregon, reported he completed supervision of burial of the amino triazole tainted crop of 1957 in Coquille. A total of 190,000 pounds was destroyed. From a local standpoint in southwestern Oregon, people in mid-December were eating cranberries as usual and there was plenty of fresh fruit available in most grocery stores.

Wisconsin governor Nelson A. Gaylord proclaimed December 13 to 20 as "Wisconsin Cranboree Week." The Governor said he hoped Wisconsin consumers would restore cranberries to their traditional place in menus over the holiday season, and "join wholeheartedly in giving a boost to this important

(Continued On Page Six)

# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE  
Extension Cranberry Specialist



## State Committee Meets

The State Cranberry Advisory Committee met at the Cranberry Experiment Station in early December to assist the Extension Service in the preparation and development of an educational program for 1960. There was an excellent representation present from the Cape Cod Cranberry Growers Association, the four cranberry clubs, Cranberry Institute, service organizations, county agricultural agents, University of Massachusetts, and the Cranberry Experiment Station.

It was understandable that a major portion of the discussion dealt with the present crisis. There was complete agreement that strict economy should be emphasized in our programs for the coming year. A number of the regular bog practices will have to be postponed, such as ditch cleaning, sanding, renovation of weak areas, and major weed control programs. On the other hand, frost protection and control of certain pests must be continued if growers are to remain in business. The management aspects of the problem and the decisions that will have to be made should furnish material for some lively discussions at the cranberry club meetings this winter. Many other subjects were discussed at the above planning session, but the thoughts expressed by Prof. B. D. Crossmon at the conclusion of the meeting were so pertinent that they are repeated as follows:

"The major problem is one of regaining our markets and every effort should be devoted to this end. We must economize in every possible way in view of the likeli-

hood of greatly reduced markets in 1960. Growers should not depend too heavily on substantial federal aid. It is everyone's responsibility to develop ideas and make themselves heard. Organizations cannot do the job alone".

The suggestions and advice of this committee were most helpful and are sincerely appreciated. The following members were present: Howard Hiller, Kenneth Beaton, Paul Morse, Robert Alberghini, F. Maynard Gifford, Francis Kendrick, Gilbert Beaton, Robert Hammond, Ralph Thacher, Chester Robbins, Maurice Makepeace, Robert St. Jacques, Darrell Shepherd, Anthony Briggs, Arnold Lane, Allan Leland, Robert W. Kleis, Fred E. Cole, Bradford D. Crossmon, Dominic Marini, Oscar Johnson, Harold Woodward, Chester E. Cross, John S. Norton, Joseph L.

Kelley, and J. Richard Beattie.

## Test Cranberries

The fifth and final test lot of fresh cranberries was screened, packaged, and displayed in December in a local store and on our own racks at our Station. All lots included fungicide-treated and untreated fruit, packaged both in cellophane and polyethylene film, and were displayed with and without refrigeration. As pointed out earlier in the season, we hope to obtain useful information on the effect of fungicides on the shelf life of fresh cranberries handled under various conditions. Incidentally, the local store cooperating with our project for the second season has sold more packages of fresh cranberries this fall than a year ago.

## Quality Control Studies

As a part of our quality control studies, a second and final trip was made to Cincinnati and Detroit early in December in order to check the condition and movement of cranberries at the terminal market and retail levels. The same representatives of the trade interviewed in November were again visited in December. Samples of cranberries were purchased at approximately 9 stores in each city and were carefully examined in

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terms of condition. Terminal market samples were also examined. There were some lots of cranberries that were at least a month old, due to Secretary Flemming's unjustified press release of November 9, and in spite of these "old inventories" the condition of our fruit was much better than expected. The range of unusable fruit in Cincinnati stores was 3-32%, with an average of 13% unusable for all samples collected. In Detroit stores, the range of unusable fruit was 8 - 18%, and again the average for all samples was 13% unusable. Approximately 50% of all fresh fruit at the retail level had the new approved labels indicating that they had been inspected, while 90% of fresh cranberries at the terminal markets had the approved labels. Movement of our products at Thanksgiving was down nearly 70% throughout the country, and Cincinnati and Detroit were no exception. A fair segment of the trade was anticipating some recovery of our markets during the Christmas and New Year holidays. It was interesting to learn that substitutes for cranberries on the Thanksgiving menu, such as apple sauce and cherry sauce, did not move in as large a volume as the

trade had expected. There was the definite feeling that a traditional holiday item such as cranberries would be hard to replace and that substitute food items would have a difficult time forcing cranberries off the holiday menus.

#### Institute Objectives

As most growers know, the Cranberry Institute has been selected as the official organization to represent all growers during this crisis. Orrin Colley as president, and Marcus M. Urann as secretary-treasurer, have been most active and should be commended for their vigorous leadership and endeavors on behalf of all growers. Dr. Cross and the writer have been invited to attend some of the planning sessions and have witnessed the sincere and honest effort of these men, plus other members of the Institute, as they applied to our common problems. The major objectives of the Institute are to regain the public's confidence in our products, secure governmental assistance by the purchasing of surplus inventories, and seek the necessary legislation to recover losses suffered by the industry. Our future depends on the degree of success that the Institute has in attaining these objectives. It is a job that

will require the combined efforts of all growers and their organizations under a carefully planned and adequately financed program.

## 40-Acre Mass. Bog Changes Hands

Henry L. Cerkovitz, Cromesett road, Wareham Massachusetts has purchased the Wareham and Marion bogs of Peter A. LeSage, veteran grower and distributor of "Pals" brands, of South Yarmouth. The property is one of 40 acres, and comprises bogs along Route 6 between Wareham and Marion, at one time known as the Dodge bogs, and at one time owned by Hills Brothers, of New York.

Mr. Cerkovitz, who is employed as a clerk at the Plymouth County Electric Company sub-station, had previously bought property adjoining the LeSage bogs and has been making this into a real estate development. There are already nine houses, in the development known as Cromesett Pines Development. He plans to develop to the Weweantit river.

In spite of the cranberry crisis Mr. Cerkovitz has already done considerable bog work and plans to put roads on dikes and to build new flumes. He has purchased two Darlington pickers from Hayden Cranberry Separator Company and plans to modernize and mechanize all operations as fast as financially possible.

He is a veteran of World War II, serving in the Pacific in Naval medical corps attached to the Marine Corps. He entered the Navy at 17. He was born in Elizabeth, New Jersey.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of January 1960 - Vol. 24 No. 9

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## FRESH FROM THE FIELDS

Compiled by C. J. H.

### MASSACHUSETTS

#### December Good for '60 crop

The month of December proved to be a mild one, and a good month for next year crop - if that is any encouragement. There was no severe cold or sharp freezing winds to bring about winterkill conditions, nor any conditions conducive to oxygen deficiency. There was no heavy ice, or snow on ice. Water was barely frozen, just enough to permit a little skating after Christmas, there was no opportunity for ice sanding.

Not even all bogs were flooded by the end of December. Many were waiting, including the State Bog, for weather really to turn cold. Ground was not even frozen solid as January came in. Water was ample to flood.

#### Precipitation Normal

Precipitation was practically normal, average for the month being 3.90 inches, while that attained at Cranberry Station was actually 3.82. Of this 6¼ inches was snow.

At month's end the accumulation of plus degrees was 111, or more than 3 a day.

#### Winter Came

Real winter did not start until appropriately the first day of winter, December 22. To that point there had been an excess of temperature to 119 degrees. But the first day of winter brought a minor blizzard, which was most severe on the Cape and deposited a blanket of from 4 to 6 inches of snow over all the cranberry area. This was the first fall of any consequence.

### WASHINGTON

#### Heavy Loss

Production figures for Washington are as follows; Grayland and North Beach, 69,356 barrels and Long Beach 31,021. This made up a total of 100,377 barrels for Washington, the largest, crop to date. These figures do not include the berries which were destroyed which would amount to 6 or 7 thousand barrels. This all adds up to a considerable apparent loss to the Washington growers as things looked at the end of December.

#### Meetings

As the semi-annual meeting of the Advisory Board for the Experiment Station discussion centered around the problem created by use of Amino triazole. Recommendation of the board was that the station concentrate attention on the weed problem in an effort to find the materials, or even perhaps find ways in which amino could possibly be used.

A meeting is scheduled at Long Beach for March 4th to discuss the weed situation in both Oregon and Washington. It is hoped to arrive at some possible control. It is expected Virgil Freed of Oregon State College will be a speaker as well as some of the staff members of Washington State University plus members of the agricultural chemical industries. All growers from both states have been invited to this public meeting.

### NEW JERSEY

#### December Mild

Excepting for one brief spell just before Christmas, December

was rather mild in the cranberry belt of New Jersey. There were thirteen days with a maximum in the fifties and only one day in which the maximum was below freezing. (This is in contrast to December, 1958, when there were only four days in the fifties and twelve days below freezing all day.) The mean temperature for the month was 37.5°F., which is about two degrees warmer than normal and nine degrees warmer than December of 1958.

#### Little More Snow

There were exactly four inches of precipitation during December, which is about an inch greater than normal. Two snowfalls, one of one-half inch on the 7th and another of four inches on the 22nd occurred. Unusually dense fogs persisted through most of the last week of the month.

#### Year Warmer

For the year of 1959 the temperature averaged 55°F., which is 0.6°F. above normal. It was the first year in the past five years in which the average temperature was not below normal. April, May, August, September, October and December were above normal in temperature, while the months of January, February, March, June, July and November were below normal. The most unusual feature of the year temperature-wise was the extension of summer through September and October and the unusually early summer weather in April and May.

#### Rain a Little Less

The total annual rainfall measured 41.79 inches, about 1.37 inch  
(Continued On Page Sixteen)

## INSTITUTE

(Continued From Page Two)  
Wisconsin industry." It added that careful and painstaking investigations by state and federal authorities charged with responsibility for protecting the public health have provided a means for official certifications of wholesomeness and safety of cranberries then being offered the consumer.

There appeared to have been a considerable revival of the old practice of stringing cranberries as Christmas decorations. Wisconsin's Governor Nelson suggested to the press and to his special committee on cranberry marketing problems.

The Flick-Reedy Corporation, largest manufacturer of machine grade air and hydraulic cylinders, strung thousands of cranberries for use in plant Christmas tree and other decorations. Frank Flick, president of the corporation suggested the decorating plan, saying "It's the American thing to do - to help another industry that may be in trouble. This information was sent to the Cranberry Institute.

From Dallas, Texas came a letter to Cranberries Magazine from L. A. Casey, agent for the Home

Insurance Company, enclosing a clipping in the Houston Post in which he protested the "great injustice" of the cranberry marketing situation, and asserting the Government must reimburse growers.

Ambrose E. Stevens, general manager and executive vice president of Ocean Spray Cranberries, Inc., on December 19th issued a press release. He said that in the six weeks cranberries have been under fire from the Department of Health, Education and Welfare, coded lot numbers of Ocean Spray cranberry sauce from all five Ocean Spray processing plants now on grocers' shelves have been tested and proven pure and free from any chemical residue.

He said "to complete this testing Ocean Spray retained the services of accredited commercial laboratories across the U. S. A." The project involved 20 laboratories, an army of 200 technical people and an estimated 60,000 hours of expert laboratory effort. Results have been reviewed by Arthur D. Little, Inc., of Cambridge, Mass., one of the nation's leading industrial consulting research firms.

"In all these cases, Ocean Spray

cranberry sauce showed no evidence of any residue of amino triazole," the release continued. Ocean Spray was to continue to test stocks of cranberry products remaining in warehouses, as well as fruit in freezers and not then processed.

"Ocean Spray cranberry sauce is one of the most thoroughly tested food items on the market today," Mr. Stevens said. He added, "Although we are convinced by the statements of eminent medical authorities that the minute traces of amino triazole found in a few lots of cranberries produce no health hazards, Ocean Spray has forbidden any use whatsoever of the weed killer control compound by any member grower and all have pledged complete cooperation."

The Boston Sunday Herald published a special article on Sunday, December 20 with Dr. Edwin B. Astwood, director of Endocrinology Research Laboratory of New England Center Hospital and professor of medicine at Tufts Medical School. In this he was quoted as saying, "If you ate 2,200 pounds of cranberries labelled as 'badly contaminated' every day of your life, the effect would be the same as if you had eaten one turnip daily, and neither would cause cancer."

He was further quoted, "The weed killer and similar drugs when given to rats, produce goiter, and the goiter develops nodules, But the nodules are not cancer. When you stop administering the drugs, the nodules go away." The eminent endocrinologist has previously been quoted in the cranberry situation.

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Congressman Russell Mack of Washington has pledged his help to the cranberry industry, according to an article in the Ilwaco Tribune, Washington. He recommended that a Congressional cranberry committee be formed, as has been done. He proposed designation of January as "Cranberry Month," with the House and Senate restaurants co-operating in serving cranberries at least once a week during the present month. He was reported in Washington as saying that if each of the nation's 43,000,000 families would consume three pounds of cranberries during the next few months the surplus would be ended.

On December 22, Secretary Flemming was reported as urging the Public Health Service and other Federal agency employees and Public Health hospitals to buy cranberries and use them over the holidays. He said he was assured there was a plentiful supply of tested berries.

Poultry growers, reported they were suffering somewhat from the ban by Flemming on stilbestrol, the hormone used to increase and hasten the fattening of caponettes.

On December 23 four members of Congress; Hastings Keith, Massachusetts, Mack of Washington, James C. Auchincloss, New Jersey and Melvin R. Laird, Wisconsin were reported as supplying President Eisenhower and Vice President Nixon of tested cranberries.

Ocean Spray through December 21 to January 2, was quoting the same price to the trade, \$4.00 and \$4.25 a quarter.

### Some Christmas Gain

Ocean Spray was packing fresh fruit for the Christmas market and reported a gradual improvement in orders. Canning lines were shut down and operations were to stop after Christmas. But the last-minute demand for Christmas was up. Marketing Research Corporation of America reported improvement.

For the week of December 6th to 12, when Christmas market shipping was heavy there was a total of 81,000 cases of processed

fruit as compared to 162,000 corresponding week last year. Of this Ocean Spray disposed of 73,000 cases. The total market was reported down by 48 percent, while Ocean Spray was down by 43 percent.

Decas Bros. of Wareham, Mass. also reported a very considerable improvement in the Christmas market over that for Thanksgiving when the uproar against cranberries was at its highest. William Decas said he had sold 7,000 barrels since the labelling program went into effect and this program had aided demand. He said, however, there would be a surplus of several thousand barrels at the end of the normal selling season, due chiefly to the Thanksgiving debacle. Decas had the lots of 29 growers tested, without a single instance of taint.

Beaton's Distributing Agency, Wareham, which had been packing and shipping on a limited scale following labelling, reported it was completely shut down just prior to Christmas, with no firm orders. Shipping could have gone forward on consignment, but this the company was not doing.

All in all it appears there was some gain at Christmas.

Tested cranberries were served on all Northern Pacific railroad cars over the holidays. Robert MacFarland, president of N. P. so informed Washington congressman Russell V. Mack. There was cranberry juice, cranberry jelly and cranberry pie on all dining car menus.

During the week of December 28 the legislative committee of the Institute was in Washington conferring with a newly-set up congressional cranberry committee and various organizations such as Farm Bureau. This consisted of George C. P. Olsson, President of Ocean Spray and chairman of the committee; Orrin G. Colley, Institute president and member ex-officio of all committees, John Decas, Wareham, Mass.; and Marcus M. Urann, not a member but secretary-treasurer of the Institute; New Jersey John Morelli

and Thomas Pappas; from Wisconsin Dr. Philleo Nash, lieutenant governor and grower and John Potter, president Wisconsin State Cranberry Growers' Association.

December 29 Dr. C. E. Cross, director of Massachusetts Cranberry Experiment Station sent lengthy letters to all 14 representatives in Congress and the two senators, from Massachusetts. This set forth the cranberry situation from the grower's point of view and gave them a basic outline of how seriously the industry is affected.

There is reported speculation in Washington that protection of the nation's food supply against taint from harmful chemicals may become an issue in Congress this session. Some seem to expect Secretary of Welfare Arthur S. Flemming to make a strong bid for Congressional action transferring federal food protective programs to his department.

This would take away from the Agricultural Department some programs of inspection and possibly the grading of scores of food items. This presumably would be opposed by Secretary of Agriculture Benson. Flemming's actions against cranberries and certain forms of poultry have aroused the ire of many farmers and farm organizations.

It is also reported Congress will be asked to make it easier for the government to prevent the use of possible cancer-producing agents in agriculture practices. The present law, Secretary Flemming is reported as saying, "doesn't make sense from a health viewpoint."

Governor Albert Rosellini of Washington State proclaimed December 20 to 26 as "Washington Cranberry Week." In the proclamation he urged Washington citizens to "restore cranberries to their traditional place over the holidays and to join wholeheartedly in giving a boost to this important Washington industry."

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## READ CRANBERRIES





### *New Cape County-Agent Manager*

"I don't know a thing about cranberries — except that I like them, especially juice," says Edward K. Knapp, new Barnstable County Agent- Manager, succeeding Bert Tomlinson, area cranberry expert in this county where cranberry cultivation began.

"But, I'm going to learn about cranberry growing, I find it very interesting," he continues. "As manager here I'll have quite an acquaintance with cranberry folks." He has already made a start, attending the annual meeting of Cape Cod Cranberry Growers' Association and one of the cranberry picking schools. This winter he will attend some of the

Cape cranberry club meetings.

He seems a real enthusiast for cranberry juice, saying there is always some in the refrigerator at his home and his family likes it straight or mixed with something like ginger ale.

Most of the real active cranberry work of the office will be continued to be done by Oscar Johnson. Mr. Knapp will divide his time between administration, 4-H work and agriculture. The physical aspects of the office he is managing are conceded to be perhaps the finest in Massachusetts. It is located in a relatively new building to the rear of historic Barnstable County Courthouse in

the Registry of Probate building. He has private office space as does Johnson, there is the main section for the entire staff, a model demonstration room with kitchen which can serve as a small auditorium and a room for office machines and equipment.

Under his administration are three secretaries, 4 home economic agents, two home demonstrators and Johnson for agriculture.

Born in Albany, New York, June 1, 1918, his father was a contractor and builder, but he had an uncle, Auguste Knapp who conducted a general farm just outside the New York State Capitol. There, there were six cows, 2,000 hens, 35 sheep and a very large garden of general farm produce. His uncle also did some farm products retailing.

"I was out there summers and holidays working around the farm," he asserts. "That was how it developed that I got an interest in agriculture and decided to go into something to do with agriculture as a life work."

He was graduated from Albany High School in 1936 and attended Albany Business College nights for a year, taking up accounting.

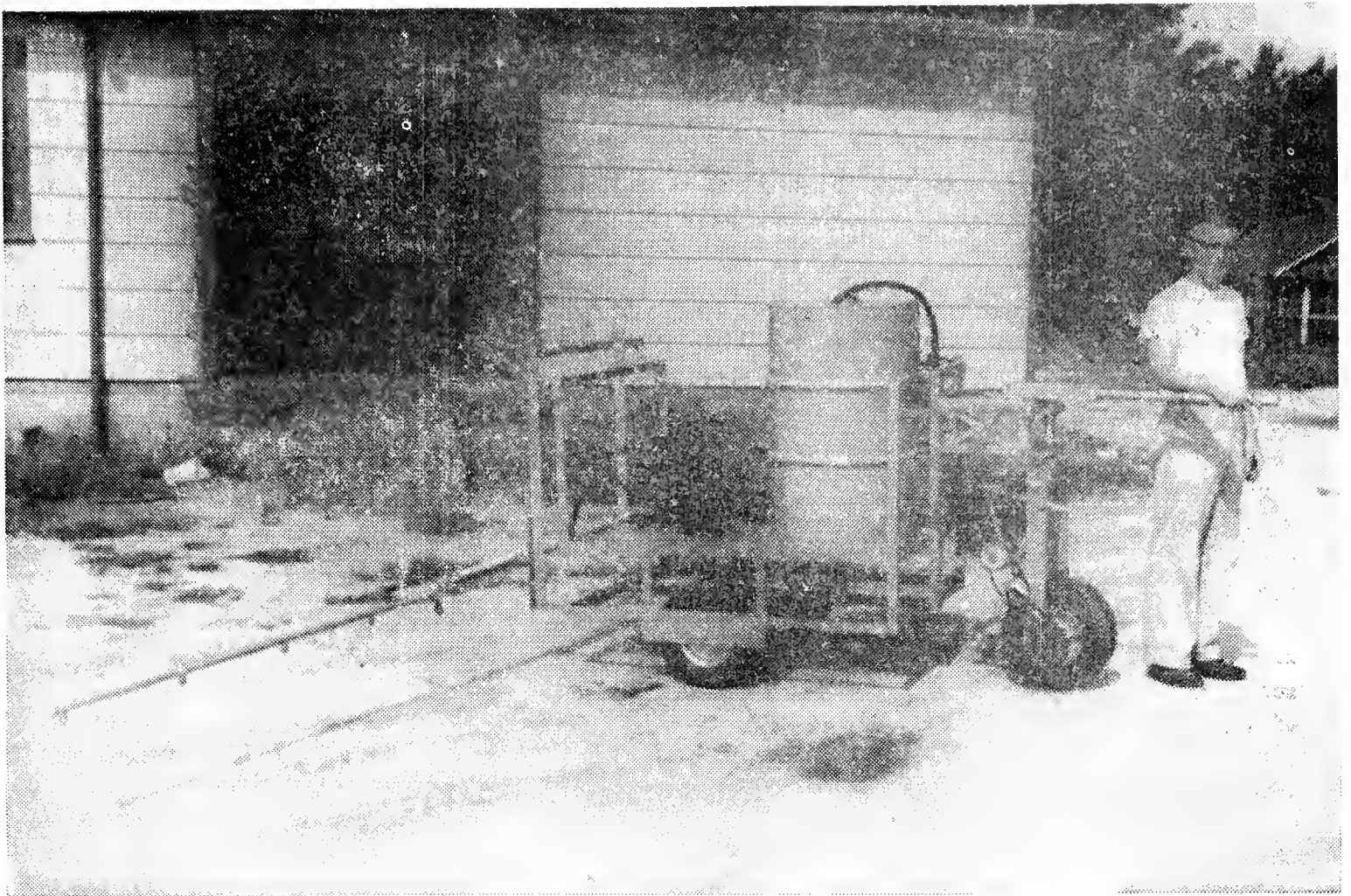
In September 1942 he entered the U. S. Army, where he served at Company headquarters as personnel sergeant. He was at several headquarters posts, but mostly at Phoenix, Arizona. He was discharged from service in February 1946 a master sergeant.

In the fall of that year he entered Cornell University, there receiving a B. S. in agricultural. He also studied extension work. What he took really amounted to a general course in agriculture. After graduation he stayed on and received a master of science degree in education. He is qualified to be a teacher.

His first job was in Broome County, N. Y. in January of 1951 where he was assistant to the agricultural agent. In 1954 he went with Farm Bureau Insurance Service in Massachusetts as manager, working out of Worcester.

With many growers applying two or more applications of fer-

(Continued On Page Fourteen)



"Bob" St. Jacques Shows the Hayden Separator Company low-gallonage sprayer on Power Cart.  
(CRANBERRIES Photo)

## *The St. Jacques Low-Gallonage Spray Rig*

Low-gallonage sprayers covered a great deal of acreage in Massachusetts this past season, more than ever before. They were used particularly for Zineb or other fungicides and beyond a doubt had a good effect upon the quality of the fruit harvested.

Last season, as any Massachusetts grower will attest was one of the worst seasons for timing sprays properly. Not because growers were not "on the ball" but because of very abnormal weather conditions, rains, fogs, mists. At one time there was a ten-day stretch of bad weather.

Controls from the air, planes or helicopters could not get in under such conditions. These sprayers, of which there were a number were able to work under weather conditions when air control could not be applied. It is expected in the future more of these ground low-

gallonage assemblies will be utilized by growers. They are if nothing else (they really are much more) an auxiliary protection which growers need.

One of these sprayers was assembled and put out by Robert St. Jacques of Hayden Separator Company of Wareham.

This has a 50 gallon tank, good for approximately two hours. There is a 21 foot spray boom, a Myers assembly.

The power is a 3 horsepower Briggs & Stratton, similar to picking machine engines. The pump is a Nylon Roller.

Moving at four miles an hour, theoretically the sprayer will handle 10 acres per hour. In actual practice this cannot be attained, about five being done. This is due to loss of time in turning, filling, etc. The boom is pivoted and can be swung up and back when any obstruction interferes, such as a rock, or bank or along ditches. By turning a valve there is three-way control by which all the boom or any part of it may be used.

The assembly can be mounted on any vehicle, such as an old duster or a cub tractor. St. Jacques has supplied the rig less engine, as a grower may use his own picking machine engine or the outfit is supplied complete, even to vehicle.

The assembly as shown in the photo is mounted on what is commonly termed a "bog buggy," although Bob St. Jacques calls it a "Power Cart".

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## **JERSEY BOG BUILDING DESTROYED**

Ten New Jersey bog workers were made homeless on the morning of December 2nd when fire levelled a rambling two-story frame house near Magnolia. Building was at the Armstead Simpkins bogs.

The building was one of 20 rooms and loss was estimated at \$7,000. Mr. Simpkins is reported as saying loss was not covered by insurance.

## Resume of 1958-1959 Season In Wisconsin

**Growing Conditions Were Ideal — Fertilizer Use Increasing — Fungal Losses Decreasing.**

By

Dr. George L. Peltier  
Cranberry Consultant

A good, old-fashioned winter, the coldest and longest in 30 years with heavy late snows especially in the central and southern areas, characterized the winter of 1958-59. Prolonged low temperatures and heavy snow cover prevented any extensive sanding program. Frost penetration to a depth of 5 to 6 feet resulted in more damage than usual to bulkheads and heaving in the beds. Deep frost continued on into May and in some marshes delayed the start of vine growth.

During March, April and May temperatures and precipitation as well as sunshine were all right, above normal. The ice went out the third week in April. Reflows in May were either of short duration or non-existent, since most growers had sufficient water to

put on nightly flood when necessary. As a result dormant vines started growth earlier than usual and by the first week in June their development was advanced a week to ten days. Good hooking was earlier, as well as bloom. In most areas full bloom was reached the first week in July. Setting for the most part was good to excellent.

June and July were warm and humid which enhanced vine growth. Too, this was abetted to some extent by the profusion of warm nights. Somewhat the same situation prevailed during August and the fore part of September.

### Growing Conditions Ideal

All in all the weather during the entire growing season was as ideal as could ever be expected, with no extreme ranges; degree days well above average, plentiful precipitation and ample sunshine. As a result of the favorable sequence of conditions, the largest crop of high-quality berries in the history of the industry was produced, with average state yields of near 100 barrels per acre with some beds yielding over 250 bar-

rels.

The harvest, though, was plagued by frequent cold rains which delayed operations. Harvest was in full swing the third week in September and was completed for the most part by the last week in October, although some raking extended into November under rather adverse weather conditions. Fortunately, sufficient mechanical driers were at hand so that more than 95 percent of the crop was machine dried. The large crop would never have been harvested, dried and stored by methods used only five years ago.

### Fertilizers Increase

Yields were enhanced on some bogs through the use of nitrates applied as soon as growth started, plus applications of complete fertilizer in late May or early June. Growers have learned that each bog, in fact each section, must be studied individually in order that the proper amount of correct concentrations will result in maximum yields of high quality berries. Each year the tonnage of fertilizers increases.

Insects were held to a minimum during the season. Fireworms (blackheaded) appeared the third week in May in small amounts. The second batch likewise was small on the majority of the bogs. In only one instance was a thick batch seen. The second brood was also light and no "brown-outs" observed. Fruitworms were later than usual. Only two flights were observed. For the first time in the history of one bog not a single fireworm was seen during the entire season.

Tipworms and leafhoppers though, have been increasing on those bogs where early applications of insecticides for fireworms were omitted. In general, losses from insects have been reduced materially through the use of effective insecticides, applied at the proper time; judging from my observations, losses from insects total less than two percent of the crop.

With many growers applying

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two or more applications of fer-mate, fungal losses in the field are decreasing each season. Storage losses from end rot were less than usual since the cold of October and November aided in maintaining suitable warehouse temperatures. Too, growers are becoming more aware of proper ventilation techniques in storage. Phomopsis rot has increased in the past three years and seems to be associated with surface bruising. It has also been noted that early-raked Searls become spotted due to a slow-growing surface fungus. Losses from field and storage rot have been much less than in previous years.

Again a full program of chemical weed control was held in abeyance for several reasons. Some control measures were applied shortly after the harvest on productive beds and in the spring on young plantings with good results. Misuse of one herbicide by a few growers, resulted in a knock-out blow for the entire industry November 4th. Enough said.

## Olsson Gives Full Time To Industry

In order to devote full time to help the cranberry industry recover from the devastating blow dealt by Welfare Secretary Fleming Nov. 9, George C. P. Olsson, president of Ocean Spray Cranberries, Inc., has resigned his position as clerk of Superior Court of Plymouth County.

While the actual daily operation of the co-op will continue in the hands of Ambrose E. Stevens, general manager and executive vice-president, Olsson will direct his full attention to problems created since the Flemming statement, which will include grower relations and certain phases of the corporation's public relations.

As a matter of fact since Nov. 14, when he was named chief spokesman for the entire industry, he has been putting in a great deal of time working in Washington and to improve conditions within the industry.

He has stated he was "More-or-less thrown into this situation, and now I want to see it through in the hope of seeing justice done to the cranberry growers."

He is of the opinion the industry

is the victim of a government blunder.

Previously, as president of the corporation and presiding officer of the board of directors, his duties have been generally confined to presiding at various board meetings when they are called, at annual stockholders meetings and other nominal work. His salary as a full-time official for the duration of the "crisis" as requested by directors, has not yet been disclosed.

Olsson has been a director of Ocean Spray for the past three years, president of the board for two, and is now serving his second term as president of the corporation.

Formal announcement of his intentions to retire as clerk of Superior Court was made at a meeting of the State Association of Clerks of Supreme Judicial and Superior Courts at Boston Monday evening. His retirement will become effective Feb. 1. His term, an elective one, does not expire until 1964. Olsson was elected Superior Court clerk at the age of 24, which made him the youngest person to hold such office in Massachusetts. He is now oldest in point of years of service, having served continuously for 32 years.

Active in numerous civic affairs including those of the Republican party, he said he will continue these and especially his activities with Plimouth Plantation, Inc. a non-profit organization founded 10-years-ago to recreate the Pilgrim village as it was up to 1627. He has served as a member and vice-president of the Plantation's board of governors.

He has been a cranberry grower since about 1952, having purchased, with Judge Amedeo V. Sgarzi also of Plymouth, the Rocky Meadow Cranberry Company in Carver.

This is a property of approximately 50 acres.

## PLANT SWAP WITH RUSSIA

We are again exchanging plant materials with Russia after a lapse of 15 years. Exchange was resumed at the urging of both American and Russian plant breeders.

International plant exchange was begun in 1898 by USDA's Plant Introduction Section. Over the years, trading plants has proved helpful to both countries because of their similarities in climate, agricultural interests, and crop problems. Our plant breeders received alfalfa and several important types of grass from Russia, while we gave the Russians sunflower, which are now their major source of vegetable oil.

Recent shipments have included grasses, legumes, oilseeds, and small-grain and other cereal seeds. Tobacco and fruit breeding materials will also be exchanged this year.

Sequests for foreign plant materials by U. S. research agencies and corresponding requests from abroad are cleared at USDA's Plant Industry Station, Beltsville, Md. In Sussia, all seed exchange is through the All-Union Institute of Plant Industry.

(Agricultural Research)

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## Cranberry Varieties of North America

A bulletin with this title has been approved for publication as a University of Massachusetts bulletin, No. 514. The galley has been edited and it may be expected as soon as it can be printed, stapled, and delivered.

The authors, F. B. Chandler and Irving Demoranville, have written this principally from the data compiled by Dr. H. J. Franklin and Josepa Kelley over a period of more than 50 years. The authors obtained additional information mostly from New Jersey and Oregon. The section, Varietal Susceptibility to Insects, was prepared by Professor William E. Tomlinson, Jr.

Four varieties, Early Black, Howes, Searles, and McFarlin, are described in detail. These varieties made up about 91.5 percent of the acreage at the time of the last survey. These four varieties and 52 others are listed alphabetically in a table with a general description of each. The bulletin lists 127 variety names and 44 synonyms, several of which will be new to many of the growers. Some have been in the literature only a few times, such as Applegate and Buckalew; some like names from a book, such as Bozarthtown Pointer, and Nancy Munyon; and at least one was named for a Civil War major-Dill. One really wonders what is the origin of the name Clinkerpin. Two names appear to be associated with our new state of Alaska, Juneau and Klondike (Juneau is a county name in Wisconsin).

About 50 percent of the variety names are names of people, given names or sir names; about 20 percent are names of places, towns, rivers, or counties; and about 20 percent are descriptive, that is names of shapes, size, color, season, or yielding ability.

The bulletin has a table giving the acreage by varieties and growing sections at the last survey (1955 or 1956 acreage). This shows Early Black leading with 10,306

acres, Howes 5,062, Searles 2,300, and McFarlin 2,253. The total acreage in cranberries was listed as 21,843. By states, the greatest acreage was Massachusetts 13,400, Wisconsin 3,900, New Jersey 2,800, Washington 960, Oregon 454, and Canada 329.

The bulletin has a key for the identification of the fruit, working principally on the berry shape. The key includes all varieties which had ten or more acres planted. There are 26 varieties in all which have been planted on more than 10 acres.



Present variety Early Black. Greatest acreage. Selected 1852. Yield in test plots 43 bbls./acre. Berries not uniform in size.



Possible future variety. Selections not named, in test plots only. Selected 1940. Yield in test plots (same location as Early Black) 95 bbls./acre.

The authors hope the cover will have two uprights of Early Black and two uprights of one of the selections.

A section is also included on the possible varieties for the future.

## Mass. Meetings Urge Letters

Combined meetings of the two Cape Cod Cranberry Clubs, the Upper and Lower Cape and of those of Plymouth County, the South Shore and Southeastern, were held at West Yarmouth on the Cape and at Carver, Plymouth County, January 13 and 19 respectively. These were for the purpose of updating growers on the current tragic marketing situation, of the 1959 crop and of berries already processed.

Speakers were Dr. Chester E. Cross, director Massachusetts Cranberry Experiment Station, whose subject was "Where Do we Go From Here;" George C. P. Olsson, president of Ocean Spray Cranberries, Inc. his subject being "Recent Developments;" Ambrose E. Stevens, general manager of Ocean Spray on "The Situation as Regards Ocean Spray Members" and Orrin G. Colley, president Cranberry Institute, who told of Institute activity and plans.

Dr. Cross told growers that there is still need for production, and added you can't get a good dollar from a bad one. He said present outlook for the 1960 production was "good." He said that amino triazole had been stricken from the list of recommendations on the weed chart for 1960. He added this is being done even though the chemical had been cleared by the Department of Food and Drug. He concluded by saying that to date nothing had been proven that by the prescribed and correct use of amino any residue had been found in cranberries.

"The only way to get rid of this year's crop," Mr. Olsson said "is total destruction. If this is not done" he continued, "the surplus will haunt the industry for years to come." He said that as of the moment two approaches are being made 1, direct aid with the Department of Agriculture taking the entire 1959 crop and giving some additional aid for three or four years to come; of 2, a special

bill for general indemnification of the whole cranberry industry.

Mr. Colley at the Cape meeting asserted that the immediate program was one of three points; First immediate relief, secondly the indemnification plan and third possibly litigation. He said the Department of Agriculture is continuing a promotional program to aid the industry.

Termining 11 a.m. November 9th as an "extremely black moment" for the cranberry industry, referring to the time of the Flemming statement, Mr. Stevens presented prepared graphs. These showed what happened to the marketing picture after that moment. He said that from November 9th to the end of 1959 sales were off 53 to 83 percent on comparable basis with 1958. This he said is equivalent to a loss of 434,000 cases of products.

Emphasis at the meetings, particularly at Carver was laid on the importance of a letter campaign by growers to the White House and to representatives in Congress in a plea for Federal relief.

None of the speakers at the meetings were optimistic about the situation, but noted there is hope for the recovery of the industry if the industry is successful in its efforts to obtain special Government indemnification. Growers were told that the losses from the Flemming scare will hit more than \$21,000,000.

President Howard Hiller of the Southeastern Massachusetts club presided at the Carver meeting, meeting speakers were while at the West Yarmouth meeting speakers were introduced by Associate County Agent Oscar S. Johnson.

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## **Massachusetts Is Declared Disaster Area**

The Agricultural Department declared the State of Massachusetts a disaster area on January 14th. This made cranberry grow-

ers eligible for Federal aid. They may receive emergency loans under the Farm Home Administration. This will be in the form of guaranteed 3 percent loans for growers who cannot get private financial assistance.

Massachusetts Representative Hastings Keith (R) of West Bridgewater and Wareham made the announcement. He asserted that more than 70 percent of the crop is rotting in warehouses. He further said that only six shipments of berries from the Bay State were found to be tainted with amino triazole. "But" he added "the crop could not be sold."

Senator Leverett Saltonstall (R) of Massachusetts reported that President Eisenhower expressed himself as in sympathy with the growers.

Similar loans were made available to the growers of New Jersey.

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### **GROWER BILLINGS HONORED**

Lewis Billings of Plympton, Massachusetts, cranberry grower, and prominent in Plymouth County agricultural circles was honored at a meeting of the Plymouth County Agricultural Council January 5th. In recognition of his practice of good forest management, he was named a "Tree Farmer," by the Massachusetts Tree Farm Committee. He was presented with a Tree Farm Certificate and this was signed by Charles Cherry, District Forester and Lovell Dawson, representing the Tree Farm Committee.

The Tree Farm program was put into effect in Massachusetts in 1940. At the present time there are more than 150 such farms in the state.

Billings is currently chairman of the Agricultural Stabilization and Conservation Committee, a supervisor of the Plymouth Soil Conservation District, past president of the South Shore Cranberry Club, member of the Plymouth County Farm Bureau, Plymouth County Agricultural Council and of Cape Cod Cranberry Growers' Association.

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## **Subscribe To Cranberries**

### **PERSONALS**

Dr. C. E. Cross, director of Massachusetts Cranberry Experiment Station attended the Northeastern Weed Control Conference at the Hotel New Yorker in New York, January 6th to 8th.

John "Stan" Norton Massachusetts Station's agricultural engineer at the same time attended a regional meeting of the Agricultural Mechanization Socialists in New York.

Dr. Herbert Bergman U.S.D.A. pathologist, retired, and formerly attached to the Massachusetts Cranberry Station, is spending the winter in the mountains of Mexico.

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## **Wisconsin Unit Passes Resolution**

### **Annual Meeting of State Growers' Association Brings out Big Attendance.**

Annual meeting of Wisconsin State Cranberry Growers Association was held at Wisconsin Rapids, January 9th. Session was in the Assumption High School Auditorium with a large attendance in view of the current cranberry situation.

Presiding was President John Potter who was re-elected to that office. He read the call to order. This was a day meeting starting at 10:30 a.m.

Technical talks were given by Dr. D. H. Boone plant pathologist, University of Wisconsin, Madison. His subject was 1959 "Berry Rot Control." He was followed by Dr. M. N. Dana, department of horticulture, also of the University of Wisconsin.

There was adjournment for lunch. Following this was the usual business session. In addition to the election of Mr. Potter, Dr. Phileo Nash, Wisconsin Rapids was elected vice president and Dr. George C. Klingbeil of the University was named secretary-treasurer.

Top feature of the day was a panel discussion giving a review of the 1959 situation from all angles. Taking part in this were William

Huffman, grower and editor of Wisconsin Rapids, Mr. Potter; Fred Griffith, Council Wisconsin State Department of Agriculture, Dr. Nash, who is a grower and is lieutenant governor of the State of Wisconsin, Bert Leasure, grower of Manitowish Waters, Wisconsin and Chicago who flew in from the latter city and Orrin G. Colley, president of Cranberry Institute, and Massachusetts grower who flew direct from meetings in Washington, D. C. Bernard C. Brazeau, president of Indian Trail, Inc. of Wisconsin and several State Representatives.

This was a good serious meeting with a minimum of emphasis on any selling organization. It appeared the growers were acting as a unit and will continue to fight for their interests in the "Great Injustice" which has been done the industry, beginning with the statement of Welfare Secretary Flemming on November 9th. The growers left the meeting with spirit somewhat improved and added determination.

The main portion of the meeting centered around the current situation with much outspoken criticism of Mr. Flemming. One of the most vigorous was Dr. Nash. The lieutenant governor said it was not the prepared text of the Flemming statement which had caused the damage but his remarks afterwards in a televised interview. In this, Flemming "wandered," he said, in his off-hand remarks.

He said he did not think a cabinet officer was obliged to give the sort of warning he did against cranberries. He used such terms "harsh, arbitrary, and improper treatment."

Dr. Nash was an aid to Presi-

dent Truman in the previous administration.

At the conclusion of the meeting the group voted a long resolution. This read that:

1. "Such advice was offered without constitutional or legislative authority";

2. Experiments leading to the denial of a permit for the weed killer were not discussed in open hearing or given a fair evaluation required by law and custom, although the weed killer aminotriazole had been cleared for post-harvest use;

3. The public was subjected to "panic and hysteria without a substantial basis in fact," the effect of which deprived the public of cranberries for Thanksgiving and Christmas;

4. The secretary's action reduced the sale of Wisconsin cranberries to between 5 and 25 per cent of normal;

5. The effect of the secretary's labeling plan, "forced upon a prostrate industry, was to destroy confidence in cranberries;

6. The secretary's action placed the burden of proof on the industry "in contrast to the American way of presuming innocence" until proven guilty;

7. "Aminotriazole is found naturally in many human foods such as cabbage, turnips, broccoli and mustards, in amounts larger than those condemned by the Food and Drug Administration in cranberries;

8. "Both the public and the cranberry growers have been left in the dark as to the reasons, if any, for this arbitrary and cruel blow to the cranberry industry."

## New Cape County Agent Manager

(Continued From Page Eight)

It was while engaged in this insurance work that he first visited Cape Cod. In February of 1958 he went to Middlesex County, a huge county with considerable farming as 4-H agent. He is, it goes without saying, extremely interested in and fascinated by the possibilities of 4-H club work; what it has already accomplished and of its future.

At present Mr. Knapp is making his home at Harwichport with his wife, Monica and two sons, Douglas, 7, and Richard, 3. He is a Mason and a member of Worcester County Farm Bureau which he will transfer to Cape Cod. He is also president of the Massachusetts 4-H Club Agents Association. For relaxation he likes to do wood working, repairing or making tables, chairs and such.

As a new project Mr. Knapp started, in September, a monthly mimeographed paper which he calls "The Cape Cod Extension Reporter." This touches on many phases of Extension work, and will include agriculture and presumably news of cranberry activities.

Already Knapp is considering if he can work up a 4-H cranberry project. He is considering the possibility that cranberry growers on the Cape, that is fathers, might allot a half acre or an acre of bog to their sons giving them full charge. "This might stimulate younger people to gain an interest in cranberry growing," he says.

A stimulation for cranberry cultivation is needed on the Cape, as the acreage there now (survey 1957) is only 1,910 and yield per acre 33.8 barrels per acre in this area once so famous for its cranberries.

Keep an eye on the fellow who offers you suggestions at the expense of another mutual friend.

★ ★

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## "THE GREAT INJUSTICE"

The cranberry industry is desperately in need of the help of everyone interested. We have been done a great injustice through the statement of Welfare Secretary Flemming and the subsequent adverse flood of publicity, which all but destroyed the market for cranberries. Legislation is being introduced in Congress for Federal aid.

Among the reasons why cranberry people deserve this reimbursement are:

1. Secretary Flemming's pronouncement of November 9 came without notice to the industry or even a hearing, just as the major part of the crop was about to go on to the market.

2. This government action actually destroyed the cranberry market, probably for some years to come.

3. Such governmental conduct is completely without precedent in America.

4. This conduct resulted in economic disaster to thousands of innocent people.

5. There was no sudden threat to public health. The compound, aminotriazole, was found in minute quantities in a few cranberries. It is found naturally without spraying in many of our common foods. Some of these foods are radishes, rutabagas, broccoli, turnips, mustard, cabbage, etc. We understand that a person would have to eat 2200 lbs of heavily sprayed cranberries to consume as much aminotriazole as is found in one turnip.

6. A good authority is quoted as saying that what was called "cancer" in the now famous test rats was in fact not cancer tissue.

The industry has been very fortunate in having many able and willing workers to devote endless hours, and thought and money to attempt to undo the wrong done. It is no use to single out any particular individuals. All who thought they could help have come forward.

Efforts have been put forward through the Cranberry Institute, which though at the time was inactive, was still

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EDITH S. HALL—Associate Editor

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Barnstable County Agricultural Agent

OSCAR S. JOHNSON

Barnstable, Mass.

---

### New Jersey

P. E. MARUCCI

New Jersey Cranberry and Blueberry Station

Pemberton, New Jersey

---

there to fall back on. This body is able to speak and to act for practically all of the growers, distributors and indirectly for all who have any interest in the industry.

Another respect in which cranberry growers were fortunate in that so many legislators in the five cranberry areas were willing to speak out in support of righting the "Great Injustice." Also in the press have been many editorials and news items calling attention to the "Great Injustice," and to urge its justice to one of the country's oldest industries. This shows the American sense of fairness. Cranberries have been called "A first Fruit of America."



# SERVING THE WISCONSIN GROWERS

## FRESH FROM THE FIELDS

(Continued From Page Five)

less than normal. January, February, April, May, June, September and October had above normal precipitation while March, July, August, November and December had an excess. Unusual features were the drought periods of May 16 to June 3 and June 14 to 30, as well

as the excessive showers throughout July.

## WISCONSIN

### December Warm

December was warm and wet, with a wide range of weather that compared somewhat with the weather extremes the State had all during the past year. Temperatures averaged 8.1 degrees over the state normal of 23.0 and 1.05 inches above normal 1.40 inches. The first two weeks were sunny and warm, followed by snow, rain and fog coupled with flood conditions in some areas. The warmest day occurred on the 16th when a record 57 degrees was recorded. Very heavy snow fell in the south on the 22nd and in the far north on the 27th. An oddity of the month was the sighting of a tornado cloud near Milwaukee on the 9th. A heavy rain in the central and south of almost an inch of rain caused flooding on the 27th and very heavy fog. The outlook for January was for below normal temperatures and precipitation.

### Extremes During the Year

A brief resume of the years weather was that it went from one extreme to the other from month to month. However, the overall statistics do not reflect the wide weather spread. State averages for the year were 45.6 degrees compared to normal 45.7 or a difference of -0.1 and 49.34 inches of precipitation compared to normal 30.00 inches or a difference of plus 10.34 inches. It was one of the coldest and snowiest winters in years, one of the most distressing Augusts ever, no Indian summer, record cold in November and winding up as one of the mildest Decembers on record. Snowfall was double normal in the south and less than half for the north. Deep frost held the vines back, but abnormal temperatures in May started the vines going thru a warm summer, with early bloom,

a good set and large berries.

### 101.8 State Average

Final crop figures for the state show a production of 440,000 bbls. for an average of 104.8 bbls. per acre. Berries were larger than normal and kept exceptionally well. The amino scare left at least one third of this fine crop spoiling in the warehouses at years end. A tragic climax to a fine growing season and growers' efforts.

## CRANBERRY PROGRAM WINS TOP AWARD

A program featuring cranberries and Miss Betty Buchan, publicity director of Ocean Spray Cranberries, Inc. won Joe Kelly, Farm and Food Director at WHDH radio and television, channel 5, the national top award of the American Farm Bureau Federation. This was the first time in history of Farm Bureau that the award was made in New England.

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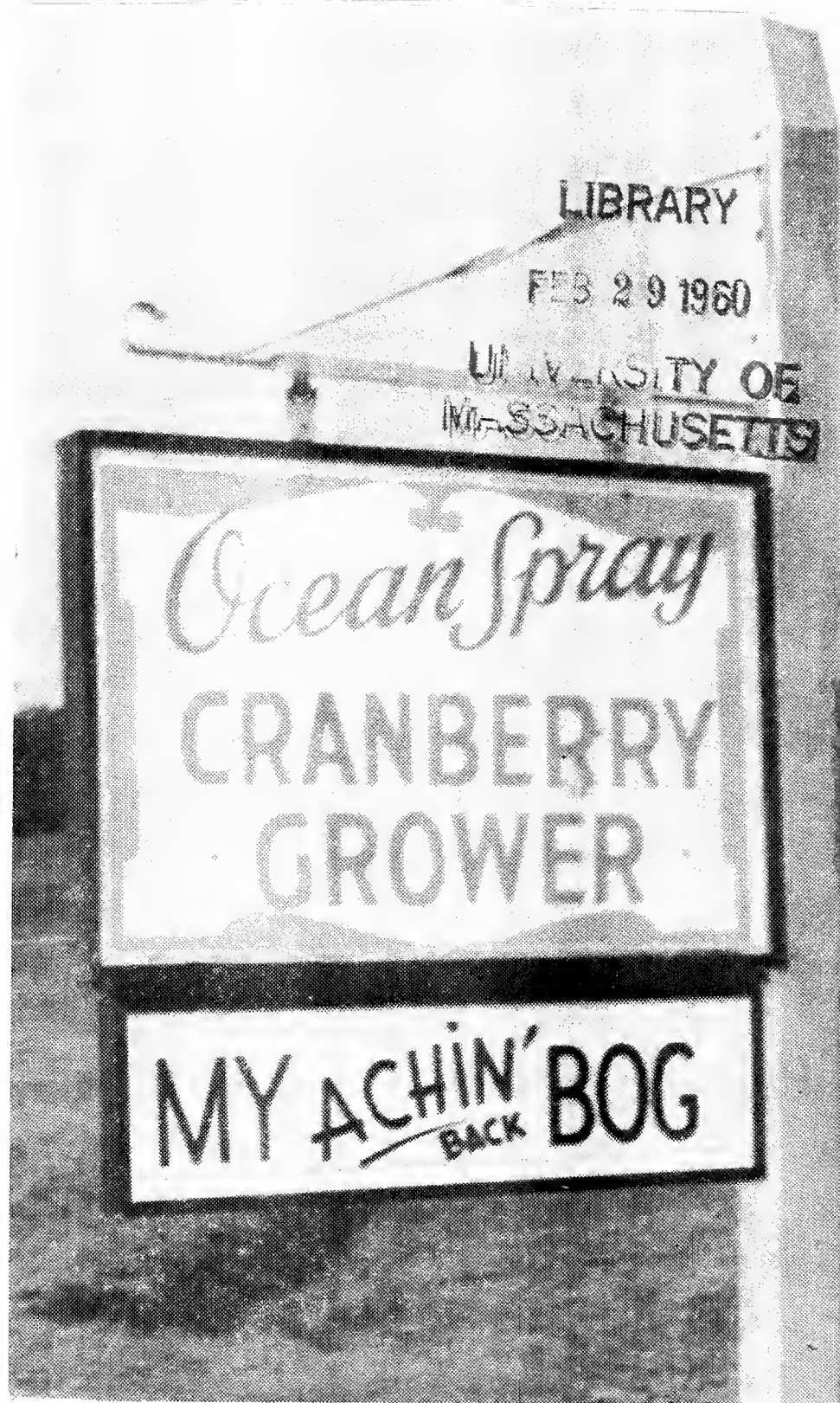
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# Progress Report On Cranberry Situation

## Less Than 3/10 of 1 Percent

A release from Cranberry Institute states that less than 3/10 of one percent of the berries were suspected of amino triazole taint, and these comprised the shipments of less than 10 growers. "The other 99 7/10 percent of the berries and the other one thousand nine hundred and ninety growers of the 2,000 of the country are given the same treatment and the loss of their year's work."

## Flemming Defends

On January 26th Arthur S. Flemming, secretary of welfare, health and education submitted a 12-page report on the history of last year's cranberry crisis at the request of the House Committee on Interstate and Foreign Commerce. In this he defended his agencies' action against the cranberry industry as a fine example

of public service.

## Keith Challenges

This was challenged by Representative Hastings Keith of Massachusetts. He said it was incomplete and it omitted mentioning the efforts of the cranberry growers to abide by the Government's warnings.

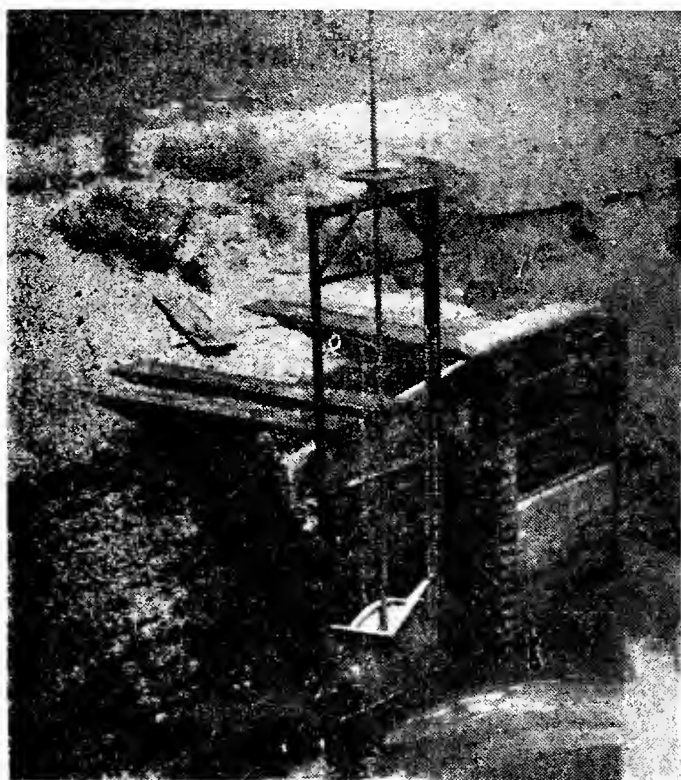
Flemming has asked Congress for greater control over the use of cancer-inducing color additives in foods, drugs and cosmetics.

## Emergency Loans for Mass.

Emergency loans were made available for Massachusetts growers the last week in January. This was announced by Charles C. Starr, supervisor for the Farmers Home Administration of Providence, R. I. County Agents and the Cranberry Experiment Station were assisting in making this 3-percent loan available. Pamphlets explaining the details were available to growers at the Station and County Agents office January 29. It was pointed out such loans are made

for the financing of normal operations, such as, the purchase of fungicides, insecticides, weedicides and irrigation systems, and to meet other needs. To be eligible applicant must be an established cranberry grower who is temporarily unable to obtain credit from normal local sources. Loans must be secured by a lien crop as well as by liens on chattel on the grower's property.

Due to the unusual manner in which the need for emergency credit was created and also because of the peculiarities of the business as an agricultural enterprise a number of limitations normally applied were amended. As a result cranberry growers whether owners or tenants operating as an individual, partnership or corporation might apply for a loan as long as he, or a partner, or a principal stockholder person-



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nally manages the operations involved.

Repayment is scheduled as the income from the crop being harvested is expected to be received. Borrowers must agree to repay as soon as possible as is consistent with their repayment ability. Applications for these loans will be received until June 30 of this year.

It was emphasized that the Department of Agriculture would not have offered the loans if there had been any reservations as to whether cranberries, as they are currently being marketed and as

they will be grown offered any health hazard to human beings.

#### More Washington State Committee

Five Washington State members of the House of Representatives are serving on the Congressional Cranberry Committee which is seeking government aid. These are Catherine May of Yakima, Walt Horan of Spokane, John Westland of Everett, Thomas Pelley of Seattle and Russell V. Mack of Hoquiam. Rep. Mack was a charter member of original 12 congressmen from cranberry-producing districts. The committee voted to open its membership to those

not from cranberry areas, but wishing to help solve the problem of the growers.

#### Wisconsin Names Policy Committee

On January 28 Gov. Nelson of Wisconsin announced the formation of a special committee of distinguished scientists, representatives of the medical profession and agricultural experts to "develop a decisive and consistent public policy in respect to regulation of the use of chemicals as food supplements, additives, pesticides, weedicides, growth regulators and for similar purposes."

This is headed by Dr. Conrad A. Elvehjen, president of University of Wisconsin. He is an internationally-renowned scientist in his own right. He has assured full cooperation of the University which is one of the world's foremost scientific institutes.

"Public policy in this general area has not been clear and consistent," Gov. Nelson said. "This exposes the industries concerned to serious economic hazards. The extreme hardship suffered by the cranberry industry demonstrates the potential dangers that exist in this situation, even for firms and individuals completely innocent of any wrong-doing or negligence."

On the committee besides Dr. Elvehjen, are vice chairman, Dr. J. E. Powers, dean medical school, U. of W.; secretary, Dr. James Miller, professor of Oncology (study of cancer), McCordle Research Institute, U. of W.; Dr. William B. Hildebrand, president, Wisconsin State Medical Society; Dr. Carl N. Neupert, Wisconsin health officer.

Also, Dr. Henry T. Scott, director of Biological Laboratories, Wisconsin Alumni Research Foundation and chairman, Wisconsin Food Standards Advisory Committee; Dr. Aaron Ihde, professor of Chemistry and member of Wisconsin Food Standards Advisory Committee; Prof. H. L. Ahlgren, associate director Agriculture Extension division, U. of W.; Prof. R. J. Muckenhirn, assistant di-

(Continued on Page 14)

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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE

Extension Cranberry Specialist



growers have followed recommendations as evidenced by the fact that after exhaustive testing by the Food & Drug Administration, State Boards of Health, and many private laboratories, only a fraction of one percent of these tests showed any residue of the controversial herbicide. Frankly, we are not ready to accept the results of some of these tests which were supposed to indicate a residue problem, but that is another subject.

The matter of reading labels and following directions is the topic under consideration, which leads the writer to a most amusing incident that occurred at a Washington hearing on January 28. The incident was well publicized in the Boston papers and was included in the latest edition of 'The Scoop', prepared for members of Ocean Spray Cranberries, Inc. Growers who need a "lift" at this time should locate a copy of the Boston Herald, dated January 28, 1960, and see page 2, or borrow a copy of "The Scoop" from one of their neighbors and refer to the last page. The article is entitled "Cranberry Ministers Get Caught Sinning".

In essence, it deals with a hearing attended by Secretary Flemming and several of his deputies

with proper use of pesticides, would conclude from these newspaper, radio and TV releases that many growers were willfully, or through ignorance, violating the rules of the game. Actually, the percentage of violators in any industry is extremely small and our cranberry industry is no exception, but as is often the case, it is these few who cause the trouble. The importance of reading and following directions printed on labels appearing on containers of various chemicals has always been stressed in our educational programs, and we will continue to do so.

Many techniques have been developed for this purpose, such as the use of flash cards, circular letters, newspaper releases, Cranberries Magazine, clinics, field meetings, bog visits, telephone and office calls. We firmly believe the overwhelming majority of our

Much has been said and written concerning the cranberry crisis caused by Secretary Flemming's unfortunate remarks of November 9. We have learned that our industry has many friends who wish to assist us during these difficult times. They include such staunch supporters as the Farm Bureau, Grange, the trade, U.S. D.A., and editors of many farm journals, newspapers, and trade journals, who have prepared excellent articles condemning the scare technique used by Secretary Flemming. It is encouraging that many congressmen and senators have pledged their support to our cause, and the list is growing, but unfortunately we have been unable to reach all consumers with the simple truth that cranberries are still pure and wholesome as they have been for the past century. On the other hand, Secretary Flemming, because of his position, has no difficulty reaching the public, and unfortunately his remarks and "off the cuff" comments are considered by the vast majority to be the absolute truth. This situation places our cranberry industry at a great disadvantage in its attempts to set the records straight concerning the purity and wholesomeness of its products.

Among the many statements released by Secretary Flemming in recent weeks, and including a few editors of some of our trade journals, were comments that our cranberry growers were not following the directions clearly printed on the containers of various pesticides. The public, not realizing the tremendous amount of work done to acquaint growers

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who were stressing the importance of following instructions as it applied to agricultural chemicals. Congressman Hastings Keith of Massachusetts was also present and finally had an opportunity to speak. He agreed that it was important to follow directions but observed that the several "NO SMOKING" signs clearly visible in the hearing room were apparently not being obeyed by some people, and proceeded to name the guilty parties who happened to be top officials in the F.D.A. His timing was perfect, his point well made and the general discomfiture of the guilty "ministers" was a source of great amusement to the assembled group.

### GREEN SCUM

Our relatively mild winter is a welcome relief from a year ago. Temperatures for December, January, and early February were well above normal. In fact, the lowest temperature this winter to date (February 11) was 7 degrees above zero and occurred on three successive nights - December 23-25. We have seen no evidence of any winter killing damage or injury from ice pulling. However, the mild weather does favor the development of green scum which is beginning to make its appearance and should be treated if its past

history on a bog indicates a problem. Copper sulfate, as recommended on the weed chart, is still the best treatment.

Apparently oxygen deficiency conditions have not become critical on an extensive acreage but were approaching the danger point on some properties by January 20. As a result, a flash card was mailed to growers informing them of the situation, but weather conditions moderated shortly afterwards which decreased the hazard. We are indebted to Richard Kierman of the A. D. Makepeace Company, and George Rounsville of this Station for the results of their tests.

### Charts

The cranberry pesticide charts have been revised and are now being printed. The county agents will mail the new charts to growers in March. Again, the experience and observations of growers who assisted with this work was most appreciated. The major revisions will be discussed at the March cranberry club meeting.

Plans did not call for a revision of the fertilizer chart during the last two years so the 1958 copy should be retained. However, a few minor revisions in this chart will be included in the circular letter accompanying the charts. There is

a limited number available at the county agents' offices and at the station for those who may have misplaced their copy.

Finally, we are confident that growers will continue to read directions and follow the recommendations clearly outlined on the pesticide and fertilizer charts and heed the directions and the warnings that are carefully printed on the containers of agricultural chemicals. We certainly cannot afford to be caught again sinning as were the "cranberry ministers".

## Jersey Blues Up '59 Dollar Value

The 1959 blueberry crop marketed through the Blueberry Cooperative Association of New Jersey brought a return of \$2,750,911, it was reported at the annual meeting of this group at Fenwick Hall, Pemberton, January 21. This is up four percent, in dollar value, even though the crop was down about two percent in volume.

Sales represented 648,364 crates of Jersey berries, valued at \$1,793,680 and 230,966 flats from North Carolina marketed for \$57,239.

Directors are Fred Dietrick and William Steadman of Pemberton and Thomas Darlington of Lisbon, New members, and Elmer Haines, Pemberton and Russell Dunfee of Chatsworth, re-elected. The board elected as officers; president, Fred Crammell, Toms River; vice president, William Haines, Chatsworth, general manager and sales manager Stanley Coville, New Lisbon, secretary-treasurer Harry Bush, New Lisbon and W. Albert Jarvis, sales manager, and assistant general manager, Michael Scepanky, Pemberton.

### WASHINGTON WEED CONFERENCE

A conference on "cranberry weeds" is scheduled for March 4th at Grange Hall, Long Beach, Washington. It is expected to have weed authorities from both Washington and Oregon on the program.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of February 1960 — Vol. 24 No. 10

Published monthly at The Courier Print Shop, Main St., Wareham, Massachusetts. Subscription \$3.50 per year.  
Entered as second-class matter January 26, 1943, at the post-office at Wareham, Massachusetts, under the Act of March 3, 1878

FRESH FROM THE FIELDS

Compiled by C. J. H.

## MASSACHUSETTS

### January Mild

January, 1960 was one of the mildest Januaries in many a year in the Massachusetts cranberry area, following a much milder December than normal. The degrees plus were 54 or approaching two a day. There was no zero weather, the coldest days being on the 12th and the 14th when 8 above was recorded at State Bog.

### Precipitation Light

Total precipitation for the month was light, being only 2.85 inches. Normal is 4.12 inches. Of this 8.2 inches was snow. There were no bad snow storms during the month. The few which occurred were of the "vest-pocket" variety. At end of month the ground was completely bare of snow and the surface was not even frozen ringing hard.

### Oxygen Deficiency

However, there was snow on ice and on January 26 the Experiment Station sent out the following flashcard to growers through the offices of the county agents: "Tests made at the Cranberry Experiment Station and on neighboring bogs, January 25, showed that the oxygen content in the flood water was considerably reduced on some bogs. The only practical technique of avoiding oxygen starvation of the buds and vines is the withdrawal of the flood from under the ice. If flood is withdrawn it is suggested that no water be left on the surface of the bog."

Many growers who had sufficient water supply to reflow followed the advice. By February

first the situation was easing as far as this problem went. Dr. Cross says he believes no bog injury resulted from the situation.

### Little Bog Work

There was little or no ice sanding during January or other bog work going on apparently. Ice was not thick enough to support trucks and there was probably none or at least not much sanding by wheelbarrow as reports have it.

## NEW JERSEY

### January Normal

Weather during January was just about normal, with very little extreme weather. The mean temperature was 34.5°F., about half

a degree above normal. The minimum temperature was 13° on the 12th and the maximum was 62° on the 27th.

Very little ice accumulated on flooded cranberry bogs in New Jersey and a mild rainy spell toward the end of the month caused large patches of open water.

### Little Snow

There was little snow to bring about oxygen deficiency. Only 1.3 inches of snow was recorded during the month in two light snowfalls. The total precipitation was 3.05 inches, about one-quarter inch less than normal.

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## WASHINGTON

Very little bog work was being done in January. There was some pruning going on. This was partly because of weather conditions during January, which on many days were not favorable for outside work.

### Some Spring Planting

Some new acreage will be planted this spring. However, in view of the situation it is hard to estimate just how much. There is a good bud set on most bogs and prospects are for another good crop. The 1959 production was 98,000 barrels.

### Weather

Rainfall to January 28 was 10.61 inches. At the beginning of January there was a week to ten days of cold weather, with a minimum of 19 on several different days. Maximum temperature for the month was 51 degrees. There was a lot of east wind, actually for 15 days, with accompanying relatively low humidity.

At the weed meeting to be held at Long Beach, March 4, the herbicide situation will be discussed. Speakers are expected to include Dr. Virgil Freed and Dr. Crabtree of Oregon State College and Dr. Legault and Dr. Telford, Dwight Peabody and perhaps one or two others from Washington State Extension Service. Several commercial field men have been invited to be present and plan to bring the growers up to date in this field. Other phases of cranberry production will also be under discussion.

## WISCONSIN

### Mild Winter

The only pleasant thing to report from the cranberry country in Wisconsin was the mild January. Continuing the trend of November and December the state to Feb. 1 was experiencing one of the mildest winters on record. With the coldest part of the winter behind and with the extended forecast for a warm and dry February, the mild weather could set a new record. This pattern is

of course a complete reversal of last year's sub normal temperatures and heavy snows.

Temperatures for the state averaged three to five degrees over the normal of 17 degrees. Precipitation was slightly below normal in all sections except the south where the heavy snows on the 20th and 26th piled up as much as twenty inches. Temperatures stayed above zero most of the month with only three to five below readings during the entire month. Coldest was on the 5th when it dipped to nearly 30 below in the north, the 21st to 12 below in the south and on the 26th to 20 below in the north.

### Eligible For Loans

Wisconsin was declared eligible for emergency crop loans through the Farm Home Administration, the latter part of January. It was expected that details would be made out and loan applications ready before the middle of February. Wisconsin was the third cranberry area made eligible for these loans.

### Some Sanding

Some sanding was done during January as conditions were ideal as far as ice and snow and temperatures were concerned. Conditions were somewhat weak but plan-

ing enabled the trucks to get on the beds safely. Most growers had planned extensive sanding operations this winter but the debacle in the market has held up a good portion of the planned work.

### Berries In Storage

Approximately one third of the marshes in the state still have some berries in their warehouses, with several having several thousand barrels. Although heating was stopped at the first of the year, very few of the berries have frozen due to the mild winter we have been having. The berries continue to keep exceptionally well, although shrinkage can be expected to increase with each passing week.

## LATE MASSACHUSETTS

February to the 16th had been remarkably warm, with the plus degrees side racking up a total of 110 degrees or more than seven per day. The ground was totally bare of snow and while there had been 2.73 inches of precipitation there had been only four traces of snow.

There had been no losses from oxygen deficiency, and while there were cold winds, such conditions had not lasted long enough to use any winterkill.

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# *Emil Fischer Built His Own Small Property, and Named It "My Ackin' Back Bog," Active At 71 Years*

**He Did Things He Was Told Couldn't Be Done,**

by

**Clarence J. Hall**

"My Ackin' Back Bog," is the sign which hangs by the bogside of a small cranberry property on Route 18 at East Freetown, Massachusetts. That this is a well-named piece of bog any small growers who have done most of the actual labor of building and maintaining a bog can attest.

The owner is Emil Fischer, 71, who is supposed to be retired, but is still going strong.

The name came about a few years ago when Mr. Fischer says "one of the helicopter fellows came along and asked why cranberry growers don't name their bogs to make them easier to find."

"I said I'd name mine and I did and it cost me \$7.00 to put up the sign. That was the only name I could think of when I think of the hours and year I have 'slaved' on this bog. Not that I've minded it, really, and I like hard work but my back has ached more than once. I've named it right."

Fischer has been a grower since 1914.

He was born in Switzerland. His father and mother, Mr. and Mrs. Engelbert Fischer, after a short sojourn in Germany arrived in this country when he was two years old. For a time his father worked in cotton textile mills in Warren, R. I. and later in New Bedford when the New England textile business was thriving.

His father eventually bought a large piece of property, 82 acres and began farming in East Freetown. He had a general farm, cows, horses, woodland. Emil still lives in this farmhouse across Middleboro road from the "My Ackin' Back Bog." He came there when eight. Since his father's death he has sold off some of the property, now owning about 42 acres.

For many years he was employed by the City of New Bedford Water Works. He entered this work as common laborer, and when he retired in 1944 he was an engineer in steam, third class. "I still keep renewing my state license as an engineer," he says, "I don't know just why but I do."

It was while he was engineer that he started to become a cranberry grower. "I got into it be-

cause some of my friends told me there was good money in growing cranberries. Well, I've had my berries sold for \$2.50 a barrel and as high as \$33.00. That was in 1946, when the price was more than \$10 more than it should be and it was those high prices that caused all the trouble of the depression we've been going through."

He first built a quarter acre, working, evenings, early mornings, holidays while he held his job with the water-works. He has been content to be a little fellow in cranberry growing and his holdings now total only four acres, three and a half in the "Ackin' Back," and another half acre on Hemlock Point, Long Pond, nearby. With a little help he did all the building himself.

Part of his main bog was on Maple Swamp and the rest on fresh meadow, "where they told me I couldn't grow cranberries, but I have," he asserts. He is planted to about three-quarters Early Blacks and the rest Howes.

Production has averaged about 200 barrels for the four acres, but he has harvested as high as 300.

At the rear of his bog there is a high bluff, or was, and during the 1930's in WPA days, Mr. Fischer began cutting this down selling gravel for road building. As he dug down he found he kept getting water. He used a Blue Cyrus steam engine in his operations. He found that under the gravel ridge there were natural springs. The water kept at the same level no matter how much

he pumped out. He decided to make this gravel pit into a reservoir for flooding.

"I was told I couldn't do this, but now I've got a reservoir that never goes dry."

He can put on a flow in three hours. Water can be pumped back. He gets his bog sand from the bottom of this pit and after screening he says it is not like sand often used, but is entirely free from any weeds, or seeds to spread to the bog.

"I have hornpout and perch in this reservoir I made in a gravel pit. Don't ask me how they ever got there, but they did," he declares.

Mr. Fisher says "I'm very short of equipment as you can see," when he shows you around. He really means he isn't. He is inventive and makes a good deal of his equipment. He built a small bog vehicle which he calls his "bog-mobile," which is powered with a Briggs & Stratton engine. With this he carts off berries and does other work, such as using it with a spray rig and for cleaning ditches and also sanding. When he is cleaning ditches or sanding he puts on a contraption of his own which consists of one-third of a round oil cylinder such as is used for furnace heating in a home. This, he says, keeps the sand from spilling and also is handy to throw the debris into when he is cleaning his ditches.

He also has two jalopies, Model As, cut down mostly for ice sanding. "Why do I need two for such a small bog? If I am sanding I don't want to be delayed, and with two, if one breaks down we hop and get to the other."

His "bog-mobile," he made from what he calls a "gentleman's lawn-mower." This had a wide swath to one side and was originally covered by an umbrella to protect the operator against the sun. He discarded the umbrella, but the hole in which it rested is still there. He has home-designed and built well-drilling equipment and has hired out for that work.

He uses the barn of his father



to store various equipment and there are also several sheds. Mr. Fischer has two sons, the oldest Raymond Emil who lives in a house near the bog. He now works at Morse Twist & Drill Company in New Bedford, after getting training as a machinist for six years at New Bedford Textile and New Bedford Vocational schools.

Where his father kept the cows there is now a complete machine shop owned by Raymond. His son Clinton was formerly extensively in the poultry business at the farm but recently became custodian of the Lakeville-Freetown Regional school. He trained for farming at the Segregansett School of Agriculture in Bristol County.

Both, sons, who will inherit the bog some day, Fischer says, help out at times, particularly during harvest. This past fall the two were doing all the picking with two Western Pickers. That was his 9th season of using the Westerns, which he likes once they get the vines properly trained.

He also has a daughter, Ruth Etta, who lives in Middleboro. He has been a widower for 17 years living alone at the farm his wife having been the former, Etta Bayreuther of New Bedford.

One of his most cherished possessions at the Farm is a German Linden tree at the rear of his house. This, his father planted from a twig 64 years ago. It now measures 13 feet in circumference, six inches from the ground and is a magnificent shade tree.

His bog is what he calls a cold bottom bog because of springs and he believes in running it as dry as possible. Every year he fertilizes weak spots and this has added to his production. His insect control is by helicopter, although he has his ground spray rig for spot work and emergency. He sands as needed, often on the ice, when he can get it. His "bug man", he says, is Kenneth Beaton of Wareham, who conducts a bog service and he depends on Beaton to tell him when to spray for insects.

Mr. Fischer is a member of Cape Cod Cranberry Growers' Association, of Southeastern Cranberry Club, meeting at Rochester, and of the East Freetown Lion's Club. He formerly sold through New England Cranberry Sales Company, but now belongs to Ocean Spray Cranberries, Inc.

"I'm supposed to be retired," "but I'm the busiest retired man you ever saw," He declares. "I feel that I'm always under pressure to get things done."

He has run the gamut of cranberry work,-does his own frosting,-has had his crops picked by hand, by snaps, by scoops and now mechanically. I've lived and kept busy through three depressions."

"Now," he adds, "we are coming slowly out of the third one." He indeed does keep busy. Last winter a Boston newspaper featured him in picture and a story, sanding his bog on the ice by jalopy, with the temperature at around zero-at the age of 70.



Mr. Fischer is shown at the controls of his "Bogmobile."  
(CRANBERRIES PHOTO)



Fischer Bog has artificial Sump Reservoir.

(CRANBERRIES PHOTO)

## ***Survey Shows Growers Not To Quit Business***

In Massachusetts, where the bulk of the crop is still produced, there seems to be no real thought of going out of the business on the part of any growers. Nor, are there at the present moment, at least, any plans to cut back or abandon acreage. For one reason there is too much investment.

The attitude is at the worst to "wait and see" what develops. In Massachusetts possibly 90 percent of growers depend upon their bogs as the sole means of support.

This is what your cranberry reporter finds in talking to growers and this is also the report from the Cranberry Experiment Station, where growers are always stopping in.

From a well-informed source in Wisconsin, Leo A. Sorensen, consultant, comes comment such

as this. No growers are seriously contemplating quitting - initially all were panicked, shocked, frustrated. But most growers think the amino triazole scare will only be temporary. This especially in view of the fact that Food and Drug has made seizures of or charges against other products, a wide range of them. This includes possible cancer-producing products such as lip-stick, cigarettes, caponets and many other things.

The bulk of the Wisconsin growers are in good financial condition. More than 90 percent depend on cranberries as their sole support. If in the extreme the scare should continue for several years growers might be forced to sell, but no acreage probably will be cut down. It was pointed out that during the period 1949 to 1956 when returns were low few properties changed hands.

Bank loans are reported a small and local bankers have stated they would approve of emergency loans. Growers made fair

profit in 1957, good profit in 1958 and would have been in very good shape in 1959. The two reasons for this are the high yield per acre and low production cost.

The situation will stop any large scale new developments, but a number of growers who have acreage scalped and ready to plant will do so this spring. There will probably be no acreage remade this year.

From another source, that of Vernon Goldsworthy, comes a similar prediction, that no growers are going out of business or cutting down acreage. Also that growers are planning to be ahead with spring planting where new marsh has been in preparation. The cost of the actual planting is relatively light.

A source in Oregon says, "the growers are beginning to recover their senses and self-respect and they do not feel the situation is hopeless. They are disgusted but not desperately despondent. More and more acres have been put in."

## *New Insect Pests Wanted While They Are New*

If this coming season you find a new or unusual insect, entomologists want to know about it, according to AGRICULTURAL RESEARCH, publication of the USDA. Dead insects should be sent to county agents, agricultural experiment stations or entomological field workers.

Within past months, USDA investigators confirmed the discovery of a new pest in Florida. It is the Pumpkin caterpillar, introduced probably from Africa or Asia. It attacks plants of the gourd family, but also has caused damage to cotton plants.

Many of our destructive crop and forest pests came from other countries. The European corn borer, first found here in 1917, last year destroyed over 1.5 million bushels of corn. Formerly, others, such as the Mediterranean fruit fly, were eradicated because an effective campaign was undertaken immediately upon discovery.

## *Annual Jersey Meeting Feb. 26*

Orrin G. Colley of Cranberry Institute to be Principal Speaker.

The annual meeting of the American Cranberry Growers' Association will be held on February 26th at the County Agent's meeting room of the new Burlington County building, Mount Holly, N. J.

Orrin Colley of the Cranberry Institute, the main speaker, will present the activities and plans for the future of his organization. Almost every New Jersey grower is a member of this Institute.

Fred Mahn of the Soil Conservation Service will discuss payments to cranberry growers for soil and water conservation practices. Chester Tyson, New Jersey



Fischer's sons, Raymond, left and Clinton Comprise his Harvest Crew.  
(CRANBERRIES PHOTO)

director of F.H.A., will explain the eligibility of cranberry growers for emergency loans by this agency.

Phil Marucci and Larry Raniere of the Experiment Station staff will present papers on cranberry insects and diseases. A lively business session on the cranberry crisis and on the proposed jet airport in the Pine Barrens is expected.

### CORRECTION

In last month's issue it was stated John "Stan" Norton of the Massachusetts Cranberry Experiment Station attended a regional meeting of the Agricultural Mechanization Socialists in New York. This was a misprint and it was Society and not "Socialists." This meeting formulated Northeast Regional Research project on "Principles of Mechanical Harvesting of Fruits and Vegetables."



# Disease Control Experiments In Massachusetts In 1959

By

Dr. Bert M. Zuckerman,  
Cranberry Experiment Station

The results of the 1959 disease control program and the study of other factors which affect the quality of cranberries are given in this article. The past season was one in which the berries were generally of poor keeping quality. However, the catastrophic events initiated by the action of the Food and Drug Administration shattered the normal marketing pattern and many of the normal effects of berry condition were obscured.

## Frost Injury

When late-water Howes from the State Bog which had been treated with phaltan were compared with untreated berries from an adjacent section, it was noted that the fungicide-treated fruit contained very few frosted berries, whereas the untreated fruit contained many frosted ones. A count showed that 9.3 percent of the untreated berries were frosted, whereas only 0.1 percent of the treated berries had been frozen.

Shortly after this observation was made, one of the larger growers reported that a similar condition existed on a number of his bogs. These observations indicated that further study of the relation of fungicide treatment to frost injury was desirable.

Examination of late-water Howes from the permanent plots on the State Bog yielded evidence of more conclusive nature. Table 1 presents the data from these 25 plots. It can be noted that only one of the fungicide-treated plots contained more frosted berries than the untreated plots. Further, the plots treated with the more efficient cranberry fungicides, zineb and maneb, contained a lesser percentage of frosted berries on the average than did those plots treated with ferbam or Bordeaux mixture. Statistical analysis indicated that the fungicide treatments were related in some manner to the smaller incidence

Table 1. Frost in late-water Howes treated with various fungicides as compared with frost in untreated late-water Howes, State Bog, 1959\*.

Treatment	Maneb	Zineb	Bordeaux	Ferbam	Untreated
	0.9	0.0	3.9	3.9	6.4
	1.7	0.8	2.6	9.1	5.1
	1.4	1.0	2.9	1.9	9.2
	1.7	0.3	2.9	1.8	7.6
	1.7	1.5	2.5	1.6	9.2
Average Frost	1.5	0.7	3.0	3.7	7.6

\* Figures represent % of frosted fruit in each sample.

Table 2 Control of fruit rots by zineb and phaltan applied to Early Blacks at two different dosage levels, State Bog, 1959.

Treatment	Field Rot (%)	Storage rot 6 wks. (%)	Tatol (%)
Phaltan, high **	7.6	10.6	18.2
Phaltan, low **	12.7	16.0	28.7
Zineb, high	8.1	10.5	18.6
Zineb, low	11.1	9.6	20.7
Untreated	20.8	13.3	34.1

\* Each treatment replicated 5 times, figures in chart are averages.

\*\* High equals 9 lbs. chemical/300 gals. water/acre/2 applications.  
Low equals 6 lbs. chemical/300 gals. water/acre/2 applications.

of frost damage in the treated berries.

In an attempt to explain this relationship freezing points were determined for a number of berries from the replicated plots. It was theorized that fungicide-treated berries might freeze at lower temperatures than untreated berries. The test comprised four series of 10 berries each, giving 8 berries from each of the fungicide treatments and the untreated plots. The method used to determine freezing points was as follows: A thermocouple was inserted into each berry prior to freezing. A 12-point recording potentiometer measured and recorded temperatures. Freezing temperatures were attained by inserting the berries into the freezing compartment of a refrigerator. The methods used here were devised by Dr. Fred Chandler and Prof. John Norton for other studies currently in progress. The results of these tests showed that there was no difference in freezing point between fungicide-treated berries and untreated berries.

A second theory which might explain this phenomenon is that the treatments protect the leaves from fungus attack, resulting in a heavier leaf cover in the treated vines than in the untreated ones. The heavier leaf cover in turn serves to give a degree of protection to the berries against frost. Further work is planned to test the validity of this theory.

It is believed that these observations comprise the first evidence that a relationship may exist between fungicide treatment and the resistance of cranberries to frost injury. The observations reported herein were made only on berries of the Howes variety. Several years work will be needed to establish the consistency of the relationship.

## Machine-picking vs. Scooping

The results of experiments run in 1957-58 which showed that machine-picked berries do not hold up as well in storage as do scoop-picked berries were given in the January, 1959 issue of this magazine. The following is a report



Table 3. Field and storage rot of Early Black cranberries in comparative fungicide tests, 1956-1959

Year	Fungicide														
	Maneb			Zineb			Bordeaux			Ferbam			Untreated		
	F	S	T	F	S	T	F	S	T	F	S	T	F	S	T
1956	2.1	2.5	4.6	2.2	4.5	6.7	1.2	3.1	4.3	2.7	5.2	7.9	5.9	5.4	11.3
1957	3.1	7.5	10.6	4.3	9.8	14.1	11.3	16.4	27.7	9.9	15.3	25.2	20.0	25.9	45.9
1958	3.2	3.9	7.1	6.8	6.0	12.8	5.8	6.1	11.9	7.6	5.5	13.1	24.9	13.3	38.2
1959	4.3	5.7	10.0	10.6	7.9	18.5	15.0	7.9	22.9	9.7	11.2	20.9	25.3	11.4	36.7

\* Each treatment replicated 5 times, figures in charts are averages.

F - Field rot (%)

S - Storage rot, 6 weeks (%)

T - Field and storage rot (%)

of a similar series of tests that were run in the fall, 1959.

Samples were made up of scooped and machine-picked berries taken from 11 locations on the State Bog. The samples which were to be compared were taken from within two feet of each other. Samples were examined within 21 hours after harvest and the rotten or badly bruised berries removed. The berries were kept in common storage for 6 weeks, then re-examined and the amount of breakdown recorded. Every effort was made to ensure that the comparison between the cranberries picked by these two methods was a valid one; however, there were two possibilities for error which were extremely difficult to evaluate. The first was the possibility that we scooped berries more gently than would a commercial scooper, and the second was that some machines apparently cause more berry bruising than do others. In regard to the former, it can be stated that every effort was made to simulate commercial picking methods in gathering the berries used in these tests. In 1957-58 berry samples were collected using the Western, Darlington and Dana

pickers; whereas in 1959 berries were collected only with the Dana and Darlington machines. There were no observed differences in the amount of breakdown in berries picked by the different machines.

The averaged results for the 11 samples showed that 6.6 percent of the scoop-picked berries broke down during the 6-week storage interval, as compared with 9.9 percent of the machine-picked berries. Statistical analysis indicates that the probability is greater than 95 in 100 that a lot of berries will break down faster if they are machine-picked than if they are scoop-picked.

These results support the conclusion drawn on the basis of the 1957-58 experiments. Certain refinements of picking machinery currently in use appears to be desirable from a quality standpoint.

#### Fungicide Tests

Phaltan and zineb were each applied at two dosage levels in tests which compared the currently recommended rate of application with application at lower dosages. The rate of 9 lbs. per acre per application was compared with 6

lbs. per acre per application. Sprays were applied by ground concentrate rig in about 25 gallons of water per acre and by a high gallonage sprayer in 300 gallons of water per acre.

The results of one experiment, which were typical of this test series, are given in Table 2. It was apparent that both chemicals performed equally well at the higher dosage rate, and that phaltan was considerably poorer than zineb at the lower dosage rate. The berries treated with phaltan at the 9-lb. rate were slightly larger than both the untreated and the zineb-treated berries.

Table 3 gives the results of four consecutive years of fungicide applications to the permanent Early Black plots at the State Bog. Maneb has consistently given superior rot control and we hope to be able to recommend use of this chemical in the near future.

An interesting comparison emerges when the percentage loss due to berry breakdown and desiccation in storage is translated into terms of barrels per acre.

In Table 4, the yield from the permanent Early Black plots in 1959 is calculated as barrels per acre. These figures include both sound and rotted berries. The sound berries which remained after a 6-week storage period were weighed and the weight loss was tabulated as barrels per acre for each treatment. Viewed in these terms, the intrinsic value of fungicide treatment on bogs which produce poor quality fruit is apparent.

Table 4. Total weight of berries from fungicide plots at harvest as compared with weight of sound berries after 6-week period in common storage\*.

	Maneb	Zineb	Ferbam	Bordeaux	Untreated
Total harvested (bbls./acre)	120	122	120	106	117
Sound berries after 6 wks. storage (bbls./acre)	105	94	91	77	69
Loss (bbls./acre)	15	28	29	29	48
% Weight loss	12.5	22.9	24.2	27.4	41.0

\* Each figure in chart is based on an average of 5 replicates. Berries from the permanent Early Black plots, State Bog, 1959.

## **Marcus M. Urann Canadian Ocean Spray President**

Marcus M. Urann (Cranberries, Sept., 1958) was elected president of Ocean Spray of Canada, Ltd. at a Directors' meeting held, January 22, in Hanson, Massachusetts. The Canadian company is a subsidiary of Ocean Spray Cranberries, Inc. The processing plant of the Canadian association is located in St. Johns, Province of Quebec.

Mr. Urann is also President of United Cape Cod Company, world's second largest cranberry producer and a member of Ocean Spray. United's cranberry properties stretch over some 15,000 acres in the southeastern Massachusetts towns of Hanson, Halifax, Pembroke, Plympton and Duxbury. 700 are bearing acres and yield 7,000 pounds of cranberries per acre, far exceeding the Massachusetts average.

Cranberries are both a vocation and avocation for Mr. Urann, who comes from a famed cranberry family whose leadership contributed to the progress of the industry for more than half a century. He is the son of Carl B. Urann, retired grower and former President of United, and the nephew of Marcus L. Urann, organizer of United in 1907 and founder of the Ocean Spray brand in 1912.

Himself a grower, owner of a 12-acre bog in East Bridgewater and a partner in Three M cranberry bog in Middleboro, the newly elected President began his cranberry career working summers at the Cranberry Experiment Station in Wareham while attending Bates College. He has served on the Board of Directors of Ocean Spray Cranberries, Inc. since 1948 and on the Board of Ocean Spray of Canada since 1959. He received his first pay check from United Cape Cod in 1932, later serving as Assistant Manager, Treasurer, and as Vice President. He is Secretary-Treasurer of the Cranberry Institute, which represents all growers and

distributors in the cranberry industry, and is active in the Cape Cod Cranberry Growers Association and the South Shore Cranberry Club. He has been one of the most ardent in the attempt to obtain government indemnification for market losses and has made several trips to Washington.

Mr. and Mrs. Urann and their two sons, Marcus and David, make their home in South Duxbury, Massachusetts.

Other officers elected to Ocean Spray of Canada were: Vice President, Norman Holmes of New Westminster, British Columbia; Secretary-Treasurer, Kenneth G. Garside, Duxbury, Massachusetts. Directors are: Elmer E. Raymond, Jr., Braintree, Massachusetts; David E. Pryde, Grayland, Washington; William E. Crowell, Dennis, Massachusetts; Thomas B. Darlington, New Lisbon, New Jersey; Russell Makepeace, Marion, Massachusetts; Frank P. Crandon, Acushnet, Massachusetts; Carroll D. Griffith, South Carver, Massachusetts; Urann and Holmes.

### ***For Women Only***

To those of us who enjoy and use cranberry products and who are concerned with the present

cranberry crisis, the following suggestions may help to some degree in selling the crops of the future.

You probably have continued to enjoy cranberries, but why not share them with your neighbors and friends? This could be done in two ways; by taking a cranberry product to a friend with the recipe attached - and by sharing your favorite recipes with other readers of Cranberries. We would like to establish a "Recipe Corner" publishing recipes and suggestions for uses of cranberries sent in by our readers and their friends.

A good deal of the fun of cooking is found in the satisfaction of using "tried and true" recipes. Sometimes even more fun can come from experimenting; for example, have you ever tried to substitute a cup of strained cranberry sauce for 1 cup of applesauce in the standard applesauce cake? It's delicious and gives a party pink color to an old standby. In making an upside-down cake, whole cranberry sauce can be substituted for pineapple or the two fruits may both be used to make an attractive design.

A large amount of Cranberry-Orange Relish can be made at one time and the relish used in var-

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ious ways later - in jellied salads, or peach and pear salads, etc. To save time in making Cranberry bread the relish can be used in place of chopped cranberries and orange rind and juice. By using some ingenuity Cranberry Relish could be used in many other ways. Also, a small jar of Relish or cranberry sauce in a lunch box is a refreshing addition to any lunch.

Have you ever tried Cranberry sauce on waffles or pancakes? In mincemeat? Or candied cranberries in fruit cake or as decoration of cookies?

Women can and will be helpful in developing or finding new uses for the delicious little red berry.

## Berry Papers At Boston Meeting

The Northeastern Region of the American Society for Horticultural Science had its annual meeting January 29 and 30 at the Biological Laboratories at Harvard University. This meeting was better attended by professional cranberry people than usual. There were three from Massachusetts, Beattie, Chandler and Demoranville; and two from New Jersey, Barrett and Stiles.

In the fruit section there were three papers on cranberries, the first by I. E. Demoranville entitled "Cranberries - their size in relation to weather". This presented his study of size in relation to early and late drawn winter water of both Early Black and Howes. The results show a relation with the weather for the season and for short periods. These data will be prepared for Cranberries Magazine at a later date.

Chandler presented "Cranberry Varieties of North America" which is being published soon, and an abstract was in a recent Cranberries Magazine. He also presented "The Harmful Effect of Salt on Cranberry Bogs". This has also appeared in an issue of Cranberries. Demoranville was junior author on the two latter papers.

Following the meeting, Chandler and Demoranville had a very pleas-

ant visit with Barrett and Stiles on the general research plans in the future.

There were many very interesting papers presented in other fields and there were people in other fields very interested in cranberries - in other words, it was a good meeting.

## Hopeful Report From Washington

"We are hopeful the Government will formulate plans which will embrace a substantial part of the 1959 cranberry crop," was a statement made at a meeting of South Shore and Southeastern Cranberry Clubs at Gov. Carver School, Carver February 16. This was contained in a brief report from President George C. P. Olsson of Ocean Spray Cranberries, Inc. to directors of the co-op.

This was hailed by growers as the most encouraging report since the amino-triazole scare was begun November 9 by statements of Secretary of Welfare, Health and Education Arthur D. Flemming. The report told of many meetings with the USDA, the Congressional steering committee, and others in Washington. Report further said the cranberry committee was much encouraged by developments. Olsson at the time was in Washington with President Orrin G. Colley and Secretary-Treasurer Marcus M. Urann of the Cranberry Institute.

This was part of a program which had also been given at West Yarmouth Community building Feb. 10th but without the Washington committee report. Meeting was built around the thought of how growers might make plans for 1960.

A principal speaker was Prof. Bradford D. Crossmon, extension farm business management specialist. Object of his talk, he said, was to make growers think in advance of how they should manage their bogs in the coming season,— whether it would be better economics to root-grub, flood and keep out of production next Fall, or to practice the usual insect, fertilizer and fungicide controls, and if so, to what extent. It was brought out many practices couldn't be dropped or the bogs would suffer permanently. This will appear in full in March issue.

"Emergency Loans for Cranberry Growers," was the topic of Sinclair F. Kenney, Providence office of FHA, USDA. He said growers could obtain emergency loans only after they had been

unable to obtain credit from their usual credit sources, and told the growers to see their banks if they needed assistance and then come to FHA for the three percent interest Federal assistance. He said if there was sufficient demand an office, on full or part-time might be opened in Wareham. Assistance could be obtained at the Cranberry Experiment Station now.

J. Richard Beattie, extension cranberry specialist, was in the mid-west, Cincinnati and Detroit at the time the "cranberry scare" broke. He said the trade did not hold the situation against the cranberry industry and comments were by no means all bad. He told how substitutes had been rushed into the markets; apple sauce and a cherry jelly sauce. These did not sell any better than cranberries, he said, and cranberry growers were fortunate in having a traditional item that is "going to be awfully hard to run down permanently."

## MASS. GREENHOUSE DESTROYED BY FIRE

A greenhouse, owned by Oscar Norton, superintendent of the Cape Cod Cranberry Company, off Walnut Plain road Rochester, Massachusetts, was destroyed by fire during the night of January 26th. The building was 43 by 50 with a 12 foot foundation. Also burned was Union Chapel, formerly a meeting house a half mile distant, which had been used for storage. The fires were believed of suspicious origin.

The greenhouse was at Porter bog and there was evidence the doors had been dimmed open. Both buildings had been entered by vandals recently and Mr. Norton said that last July vandals broke most of the windows in the greenhouse.

The contents consists of freezer boxes, harvest boxes and a motorized cranberry rake.

## CONGRESS REPORT

(Continued from Page 2)  
Director Agricultural Experiment Stations, U. of W. and Dr. Don McDowell, director, Wisconsin State Department of Agriculture.

### Washington Gets Loan

Growers of the State of Washington have received notification

(Continued on Page 16)

The cranberry "scare" headlines have faded from the headlines of the daily newspapers long since, and the words "cranberry scandal" are no longer heard on radio and television. Of course, we all know there was no need for the scare of prospective cranberry consumers and there certainly was no cranberry scandal.

But for those with a stake in the cranberry industry the crisis still lingers on and will for a long time to come. The industry, chiefly through the Cranberry Institute is constantly on the job, patiently trying to get some form of financial redress from the Government. This attitude is just and right. It was the Government, or one arm of it, the Department of Health, Education and Welfare, under Arthur S. Flemming which caused all the trouble beginning last November 9th when the market was going along so smoothly and so well.

This crisis has proven one thing. This was something the industry as a whole did not realize. Cranberry growing needed a cranberry institute as do other industries need an institute. The Institute was in-active at the time of the outburst. It lacked general support of the distributors and growers. Now it has the full support of all.

Members allotted to the task are giving much of their time and unlimited effort to get the Government help needed. It is perhaps not in good taste to mention only a few names, as many are working hard for the industry in its time of need. But certain ones are carrying the brunt of the burden.

To name only three: Institute President Orrin G. Colley, secretary-treasurer Marcus M. Urann and George C. P. Olsson, president of Ocean Spray Cranberries, Inc. and designated spokesman for the industry are spending unlimited time in Washington, quietly at work on the problem of redress. They are usually there from Monday to Friday of each week. It is encouraging

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New Jersey Cranberry and Blueberry Station  
Pemberton, New Jersey

to note they express optimism and believe that eventually there will be Government financial assistance to the growers.

Funds are available in the United States Department of Agriculture if a directive can be obtained to obtain their use for the hard-hit cranberry industry. The situation seems to be a little better than it was. Low interest rate loans are now made available to growers of all cranberry areas, who are unable to obtain funds locally to carry on the usual bog practices this season. This is only temporary relief, but it is relief—even though it must be paid back—for those who desperately need it.



# SERVING THE WISCONSIN GROWERS

## CONGRESS REPORT

(Continued from Page 11)

from Senator Jackson that emergency loans may be obtained. It was expected a number would avail themselves of this opportunity to obtain funds to carry them over the coming season. But it is recognized these must be paid back and this will provide no permanent help, but that what is wanted is for the Government to take further steps.

As in Massachusetts and Washington, growers of New Jersey may also obtain 3 percent government loans. It is understood a considerable number have made applications. Many of the growers are small growers.

### Oregon Farm Bureau Call for Gov. Indemnity

The Oregon Farm Bureau has

called for Government indemnity payments to Oregon cranberry growers, Gerald Detering, president OFBF announced on February 4th. The proposed payments would cover production costs losses suffered.

He said the action was not challenging the authority of Secretary of Welfare Flemming, but his sweeping accusation against an entire industry without discrimination and facts in his announcement of November 9.

He said the damage to the growers of Oregon and of the nation will run into millions, and that Oregon growers lost approximately 75 percent of their normal sales. Nearly 4½ million pounds of cranberries were grown in Oregon in 1959. In Oregon last year, he added, only one small lot of berries

was found to be tainted with amino triazole, and this was weeks before the Flemming statement.

He said the Government proposal of emergency loans to cranberry growers, as is now effective in some states, did not repair the damage done. He said farmers must be able to have faith in Government testing and that once a chemical is released for use on a crop, as amino triazole was, that authority should be accepted as final.

### Wisconsin Now Eligible

Although it was first announced Wisconsin growers were not eligible for USDA loans through Farm Home Administration, this came through the latter part of January. It was expected that details would be made out and loan applications made ready the middle of February.

### Some Pickup

Cranberry Products, Inc., of Eagle River, Wisconsin reports some pickup in sales, particularly in the middle west. But the gain is spotty, in some regions almost back to normal while in other areas there is practically no movement at all. The firm is now operating on real marachino cranberries as a new line.

### Oregon Also

Oregon was declared an emergency area on February 10, according to notices received from Senator Richard L. Neuberger and Congressman Charles O. Potter. At first Oregon was not granted this form of relief, as through a misunderstanding it was believed not necessary. Then the matter was reconsidered. At first there was some reluctance on part of growers to apply, then it was decided by some that this might be the only form of relief.

This makes all the cranberry areas eligible.

A spokesman for Ocean Spray asserts that while this is never a "busy season" for cranberry sales, more sales are coming in than expected.



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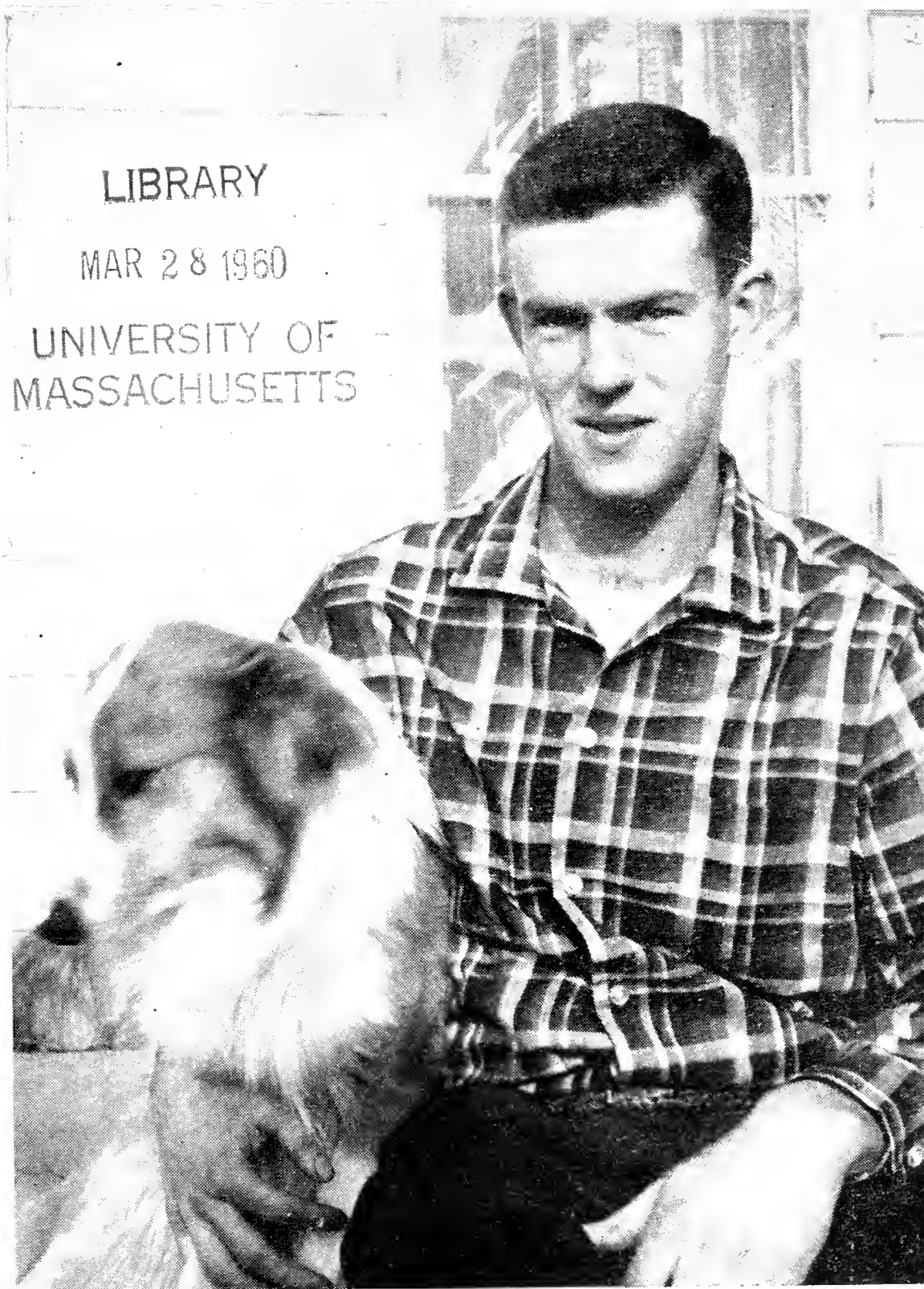
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# Colley Declares Prospects Are Brightening

President of Institute principal speaker at annual meeting of American Cranberry Growers' Association in New Jersey.

Annual winter meeting of the American Cranberry Growers' Association was held at the new Burlington County Administration Building February 26. A good gathering of New Jersey growers attended this meeting, presided over by President Herbert Gardner.

## Colley Encouraging

The highlight of the meeting was the talk concerning the cranberry crisis by Orrin G. Colley, President of the Cranberry Institute. Mr. Colley gave the growers assurances that their cause was being vigorously represented in Washington. He stated that dismal prospects for relief from the Government were brightened con-

siderably after the retainment of Attorney Joseph Parker, who is famed for his success in representing agricultural commodity groups in their grievances with the Government.

Mr. Parker is basing the claims of the cranberry industry on three acts which have already passed Congress and not on any new legislation. Mr. Colley told of a recent White House conference attended by the President's chief aides and gave encouragement that a top level decision would soon be made in favor of the cranberry growers' claims. He urged patience and discretion. He did not consider it good diplomacy to openly discuss details of the possible actions the Government was considering, since they were still only in a delicate formative stage and could be upset by hurried demands or undue publicity. The fact that growers did not press him for details indicates their acquiescence.

## Courage of Growers—Urann

Marcus Urann, a director of the Cranberry Institute, made some

interesting remarks. He stated that if he had to single out one fact that has made the strongest impression on him during the cranberry crisis, it would be "the courage demonstrated by the cranberry growers and their families throughout this ordeal". He also commended the Congressmen and Senators of the cranberry States who, regardless of party affiliations, are making a determined fight for assistance to the cranberry growers.

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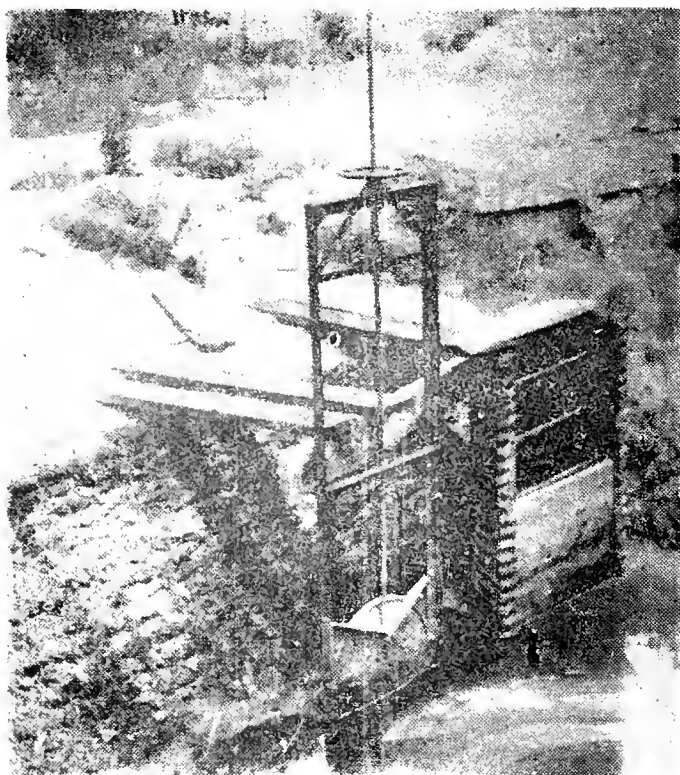
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### Benson Called "Best Friend"

Secretary Benson was acclaimed by both Colley and Urann for his unwavering help during the crisis. Colley declared that Benson was the best friend the cranberry people had in Washington and that through him the Institute was able to work from the top down rather than vice versa. He said that this had enabled them to make much faster progress. He realized that the growers must feel that things were creeping along, but without Benson's help it would have been much slower. Colley stated that Benson's favorite juice is cranberry juice and that he predicts a tremendously increased market for this product.

### Jet Airport

The proposed jet airport in the Lebanon State Forest in the heart

of the cranberry growing area in Burlington County was discussed. A very large proportion of the growers appeared to be strongly opposed to it. Opposition is based on tax considerations, loss of public lands supposed to be held in trust for present and future generations, and pollution and loss of valuable water supply. A motion to form a committee of three to study this proposal was unanimously carried.

### Insect Control

Phil Marucci of the Cranberry and Blueberry Research Laboratory warned growers that in the long run the "natural enemies" of cranberry growers were more important than politicians and discussed one of the most important of these, the cranberry tipworm, in detail. Many growers anticipat-

ing market problems may keep the flood water on their bogs until July in 1960 to kill this year's crop and strengthen the vines for 1961. He advised that unless tipworm, army worm and grasshoppers were controlled on these late-held bogs, the 1961 crop could be seriously hurt.

Fred Mahn, soil conservationist, discussed ways in which the S.C.S. could help cranberry growers both in technical planning of ditches, reservoirs, canals, etc., and in cost sharing payments.

### Sanding Benefits

The membership voted unanimously to accept the proposal of the petitioning of the Soil Conservation Services to make sanding of cranberry bogs a practice eligible for cost sharing payments. Under this proposal which was drawn up by Dave Jones, Hobart Gardner, Dan Kensler and Phil Marucci, a payment of \$50 per acre would be paid for sanding an acre of cranberries.

Election of officers resulted as follows: President, Anthony R. DeMarco, Hammonton; First Vice President, Clarence J. Worth, Mt. Holly; Second Vice President, Stephen Lee, Chatsworth; Secretary, Philip E. Marucci, Pemberton, and Treasurer, Charles A. Doehlert, R. D. Columbus. Mr. Doehlert retired as horticulturist at the Cranberry and Blueberry Research Laboratory last July but will continue to serve his friends in this office.

President DeMarco, assuming the chair, made short remarks in which he averred his faith in the cranberry industry and predicted not only a recovery of old markets but a large expansion within the next few years. He commended Liebart Gardner's leadership of the organization in the most difficult year the cranberry industry has faced.

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# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE

Extension Cranberry Specialist



## Weather

Weather is one of the few subjects of conversation that cranberry growers can discuss today in an impassive manner. It provides a useful diversion from the many controversial and disturbing topics that eventually creep into the conversation. To this end the big storm of March 3 and 4 was indeed a welcome relief for all concerned with the unhappy subject of amino triazole. With this thought in mind, a few comments on weather might be in order.

The unusually mild weather enjoyed through February came to an abrupt halt on March 1st. Temperatures dropped into the teens, high winds were experienced both day and night, in fact there was some concern that winter-killing conditions were becoming a threat to exposed bogs. However, any possible threat was quickly removed on the afternoon of March 3rd when a real No'easter hit the entire cranberry area, depositing a record snowfall of 18.9 inches at the Cranberry Experiment Station. This was the largest accumulation for a single storm in our records. The town of Falmouth in Barnstable County reported nearly 30 inches for the 2-day blizzard. As stated earlier, discussions on amino triazole came to a halt for a few days, at least while the entire area devoted its energies to 'digging out'.

Cold weather has continued since the storm with the result that heavy accumulations of ice and snow may have created oxygen deficiency problems on flooded bogs. Temperatures have averaged 7° per day below normal for the first 16 days in March. As a precautionary measure, a flash card and newspaper release were prepared following the storm, ad-

vising the prompt removal of the winter flood in order to avoid oxygen problems. Records at our station show there is little danger of winter-killing damage by exposing bogs this late in the season. In fact, no damage of this type has been observed after March 20.

## Green Scum

Green scum has been reported on a few bogs and should receive the growers attention. Removal of the flood will of course correct the problem. A few growers took advantage of the ice early in March and treated their properties with copper sulfate as recommended in the weed control chart.

## Frost Warnings

The Cape Cod Cranberry Growers Association is again sponsoring the telephone frost warning service. Frost applications have been mailed to growers who have used this service during the last

several years. However, if a grower has not received an application but would like one, he should notify Mrs. Ruth Beaton, Treasurer of the Association, Wareham, Mass., or the writer. There will be no change in assessments or in the frost warning system. The frost pad for writing down the message has proved to be very popular and will be mailed to growers subscribing to the service. All applications should be returned by April 1st in order that the necessary arrangements can be completed prior to the frost season. In view of the present crisis, there may be fewer subscribers in 1960. If there is a substantial reduction, it may be necessary to reappraise the matter of frost assessments for another season in order to meet expenses. We hope this won't be necessary.

The 1960 Cranberry Insect, Disease and Weed Control Charts have been printed and mailed to growers through the county agents' offices. There was a delay in the printing of the weed chart because of a technicality involving iron sulfate which will be discussed under the appropriate heading. Extra copies of the charts are available at the County Extension Service offices or at the Cranberry Experiment Station. The major revisions and items for study in

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the new Insect and Disease Control Chart are as follows:

Growers are urged to review the Notes found at the bottom of the chart. This important section contains a summary of **flooding practices**, suggestions on **concentrates**, the use of the **insect net**, and a **grub control table**.

The first major change in the body of the chart came under the section listed as **Dormant to Delayed Dormant**. The amount of **dieldrin** and **aldrin** was increased to 10 lbs. actual per acre for the original treatment. In dry form these chemicals may be applied alone or combined with fertilizer. If **dieldrin** and **aldrin** is used to control cutworms following the grub flow, avoid drift to nearby bogs. **Heptachlor** is no longer recommended for pest control.

In the **New Growth** stage, the amount of **aldrin** was reduced to 1 pint in the recommended formulation.

Under the **5% Bloom** stage, **zineb** is the only fungicide recommended at present on the new chart. However, there is a possibility that **maneb** and **ferbam** can be recommended for 1960 if clearance is obtained in time.

In the **Late Bloom** section, **parathion** is now first choice for the control of **fruitworms**, **black-headed fireworms** and **blunt-nosed**

**leafhoppers**. Treatment involving this particular chemical is confined to aircraft applications. A low-gallonage application of **dieldrin** and **Aldrin** by aircraft or ground rig has been added as a control for **weevils**. **Diazinon**, a relatively new insecticide, is now recommended for the control of **Sparganothis fruitworm**.

Growers are urged to read and observe the **Warning** outlined in red ink at the bottom of the chart.

The work of revising the **Weed Control Chart** was a frustrating experience for all concerned. Two useful chemicals, namely **iron sulfate** and **2, 4-D** had to be omitted from the chart because of a technicality involving their clearance, and a third, **amino triazole**, was dropped from the chart and is not recommended in 1960 in order to avoid further adverse publicity. Reference to these chemicals and weeds effected will be made under the appropriate headings.

The **Notes and Cautions** at the bottom of the chart should be reviewed. Under the **April to mid-May** stage, it should be noted that **hairecap moss** and **sphagnum moss** were omitted due to the lack of suitable controls. For many years **iron sulfate** has been recommended and widely used on bogs and has proved to be a very useful herbicide. However, we learned very

recently that it is not cleared for agricultural use, even though there is no public health hazard involved as far as we know. Until the situation can be clarified, it cannot appear on the chart. If clearance can be obtained this season, growers will be notified immediately. **Wool grass** and **panic grass** were added to the list of weeds controlled with **No. 2 fuel oil** and **kerosene**. **Summer grass** was included with the weeds controlled with **Stoddard Solvent**.

In the **Mid-May and June** stage, **needle grass**, **pitch forks**, **sand spurrey**, **tear thumb** and **asters** had to be dropped from the chart until iron sulfate can be cleared. The use of **amino triazole** and **dalapon** was discontinued and is definitely not recommended as a control for **general ditch weeds**.

Under the **June through August** period, it was necessary to omit the **four Ferns**, **marsh St. Johnswort** and **cinquefoil** until the situation regarding iron sulfate can be clarified. While the list of weeds controlled by iron sulfate is rather impressive, a number of these weeds such as **sand spurrey**, **tear thumb**, **marsh st. johns wort**, **cinquefoil** and the **mosses** are not of major importance over the entire area and are confined to a limited acreage. The use of **2, 4-D** as an herbicide on the bogs was discontinued, which eliminates the practice of wiping the tops of such weeds as **3-square grass** and **leather leaf**. Again, it is a matter of obtaining the proper clearance for this useful chemical.

In the **After Harvest** stage, **amino triazole** has been omitted from the chart. Growers are urged not to use this controversial herbicide at any time during the 1960 season. Further research will be continued, but until the studies concerning its use can be completed, its use should be discontinued.

For the second year plans did not require a revision or reprint-

(Continued on Page 6)

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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## FRESH FROM THE FIELDS

Compiled by C. J. H.

### MASSACHUSETTS

#### February Very Warm

February turned out to be the third mild winter month in succession. It was the warmest February since 1954 and the second warmest in a quarter century. Total plus degrees ran up to 176, or about six a day on the last day of the month. End of month was colder than the first part.

There had been only .7 of an inch of snow on one occasion and three traces. So it was practically a snowless month.

#### Mild Winter

However, there were a number of days, as all during the winter, when high winds prevailed, many of these days bringing winds up to gale force. November was practically a normal month. It had been a plus temperature month until the final day brought it down to normal. There were only a few snow spits.

December continued on the mild side, no severe cold spells, water on ponds and reservoirs being barely frozen over for any length of time. There was skating on bogs after Christmas. Precipitation was about normal with 3.90 inches of which 6¼ were snow. Coldest day of the winter occurred in December with 7 above registered at the State Bog.

January was one of the mildest in many a year, 54 plus for the month. Precipitation was light 2.85 inches of which 8.20 snow. There was no bad snow storms during the month.

#### February Precipitation Up

Precipitation in February totaled 5.30 inches, with the average being 3.67. Many bogs, perhaps

half, were out of water. Some had been pulled in late January when there was possibility of some oxygen deficiency. As weather continued mild more flood was pulled. This was good for the crop and growers who had water off reported vines and buds looking good. There was a high sunshine factor. February was a beautiful month for cranberries, and March began with no loss because of oxygen deficiency or winterkill.

Reservoirs, ponds and streams were well built up for spring frost protection.

### NEW JERSEY

Continues Above Normal  
For the third consecutive winter

month the weather in New Jersey has not been very wintry. The average temperature for February was 37.5°F., or about 2.8° above normal. This marks six out of the last seven months in which the temperature was above normal.

There were two days with the maximum temperature in the sixties and seven days in the range between 56 and 60 degrees. There was not a single day in which the maximum was 32° or below.

#### Less Snow

Precipitation was 1.89 inches more than normal, with a total of 4.66 inches occurring. There were only four very light snows which totaled only 1.2 inch. This is about four inches less than the normal snowfall for this month.

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## Open Water

The flood water on cranberry bogs remained open for a very large proportion of the time and strong winds throughout the month assured high oxygen content of the water.

## WISCONSIN

For the cranberry area of the state, February was warm. The northern and central areas averaged 2 to 4 degrees above normal, with the southern area experienced below normal averages of 1 to 3 degrees. Precipitation was also variable with the north receiving normal amounts of snow, the central area below normal and the south very heavy amounts. At the end of the month the north had an average snow depth of about 24 inches, the central five inches and the south about 24 inches. Surprisingly the south received a record 34 inches of snow during the month, which added on to the previous months snowfall totalled a whopping 77 inches compared to a full winters total of 40 inches.

Temperatures the first week of the month were six to 11 degrees above normal, which left the south and central areas devoid of snow cover. The big storm of the 10th, which approached blizzard propor-

tions, dumped snow over two feet and resulting drifts of 15 ft. in the south. The central area escaped this storm and lacked measurable snow cover until the 16th. These first two weeks of no precipitation and snow cover in the central area constituted a mid-winter drought in this area. The extended forecast for March is for below normal temperatures and normal to below normal precipitation.

### Limited Sanding

With ideal weather conditions prevailing some limited sanding and dyke hauling continued in the state. This limited work is expected to continue into March if colder weather prevails and delays the early spring breakup.

### Winter Satisfactory

The winter to date could be classified as most satisfactory as far as any damage to the vines is concerned. There has been little chance for oxygen deficiency conditions and with adequate ice coverage no chance for winter killing of exposed vines.

### FHA Loans

A state wide meeting of FHA administrators from the cranberry producing counties of the state was held in Wisconsin Rapids on Feb. 8th. The state FHA director, Aaron Hanson and Mr. Clayton Allen, FHA representative, Dan

Washington briefed the group on loan procedures for handling the emergency cranberry loans. Loan application blanks are now available at the local FHA offices. It is reported that some growers have made application for these loans and they have been forwarded for processing. With the possible hope of additional money in the form of indemnification, most growers are withholding applications in view of the June 30th deadline for these loans.

### Shrinkage

Growers with berries still warehoused in drying crates are anxiously awaiting word for disposition of same. Shrinkage of these berries is reported at from one third to one half of the original amounts. Whatever the final disposition, it will be time consuming and more important very costly.

## BEATTIE

(Continued from Page 4)

ing of a new Fertilizer Chart. However, there is a limited number of the 1958 revised edition available at the county agents offices and at the Cranberry Experiment Station for those who may have misplaced their copy. It should be understood that the key to the success of this chart depends on a thorough understanding of the introductory statement and the general notes. It is further suggested that growers put out their own test plots to determine the most economical amount of fertilizer to use on their bogs. The figures in the next to the last column of the chart will be useful for plot work.

### Tolerances

Finally, Professor Tomlinson has prepared some very timely information on the present tolerances established for all chemicals that may be used by cranberry growers. He has also summarized the many flooding practices that may be used to control various cranberry insects. This useful information has been mailed to growers and is available for others that may be interested at the county agents offices and at the Cranberry Experiment Station.

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# *Bog Decisions For 1960*

by

**Bradford D. Crossmon**

**Professor of Farm Management,  
University of Massachusetts**

(Editor's Note: The following is a talk, in full, delivered by Dr. Crossmon before Massachusetts Cranberry Club Meetings.)

An agricultural producer facing a new crop year has two major decisions to make:

1. What to produce and
2. How to produce it.

The first decision is conditioned by market demand and what other uses can be made of the productive facilities. The second decision involves a choice among various ways of producing a crop.

## **I. Will you Produce Cranberries in 1960?**

This is not your decision alone. Since cranberry plants are perennials, Mother Nature takes a hand in deciding whether or not a crop is produced in 1960. You may decide to ignore the bog this year. But, in spite of your neglect, a bountiful crop appears blessed by freedom from frosts and destructive pests. Thus, at time of harvest, another decision may be necessary: Will market returns exceed costs of harvesting the crop?

### **A. The Market For Your Berries**

Most decisions to produce a crop are based on considerable certainty of market outlet. After Secretary Flemming's public warning of last November, regarding berries tainted with amino triazole, no one knows how much consumer demand for cranberries will re-

build in 1960. If sales in the Thanksgiving-Christmas period of 1959 were 50 percent of normal, projection of a 50 percent reduction in 1960 from normal consumption of recent years seems overly pessimistic. From this despair base of 50 percent of normal, a rebuilding of 1960 demand to 75 to 90 percent of normal per capita consumption seems logical. Many consumers will have faith that the Federal Government's alertness and immediate response of the industry will prevent any more tainted berries from reaching the market.

A problem remains. Suppose 1960 sales are nearly back to normal (and your guess on this may not be as optimistic as mine), the carryover of 1959 inventory will still be troublesome. We need to know much more about the demand for cranberries. However, it appears obvious that the November-December 1959 sales resistance was not due to price but berry uncertainty. The Institute working for the entire industry is trying to clear the carryover from 1959. Although pure and wholesome in its entirety, this volume has a depressing affect on the market.

Retailers, wholesalers, independent canners or Ocean Spray seeking to avoid further storage and holding charges, including liens on these stocks, may be forced to sell carryover stocks in competition with the 1960 crop. Dumping or the overhanging threat of it may lower cranberry product prices. But how likely is it that consumers in 1960 are going to buy more cranberry products, than normal, at lower prices?

### **B. Suppose A Particular Bog is Not Harvested?**

The decision to not harvest a bog will benefit the total industry in 1960. It will lessen the total supply of cranberries. Will helping the industry benefit the individual producer? If many producers make the same decision to not harvest bogs it has the aggregate effect of reducing over-supply and strengthening price. If a single grower's decision to withhold berries from the market is not followed by other competitors, the effect is slight, e. g., 1,000 barrels withheld is only 1/10 of 1 percent of a million barrel crop.

When a particular bog is not harvested, certain fixed costs remain. Taxes will still come due as will interest and possibly principal payments on debts. Where pump houses, tool sheds, tenant houses, screen house and other buildings and contents are insured for fire and wind damage, these costs continue whether berries are picked or not. Depreciation on buildings and equipment, also con-

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tinues. Some depreciation of bog can be expected when there is no bog maintenance. Depreciation is not a cash cost and its full impact can be postponed to a final reckoning day or a point of no return to production.

Weed encroachment on bogs receiving no care in 1960 will probably be less for Howes than for the Early Black variety. The dense growth of the Howes tends to be more difficult for weeds to penetrate. A summer flow for root grub will not only destroy this pest and other insects—it will eliminate the crop. In fact, vine damage from the grub and the flooding will probably necessitate replanting patches of the bog. This decision involves balancing (1) declining crops from grub damage with (2) curtailed crops from the control program plus rebuilding costs. Higher yields and net returns, three and more years in the future must be anticipated when the decision to summer flow for root grub is planned.

### C. Will Some Other Product or Use of Facilities Pay Better?

A grower who is deciding whether to leave all or part of his bog acreage untended in 1960 should consider other use of the time and facilities freed. A full-time job away from the bog may provide higher net returns than a cranberry enterprise coupled with part-time odd jobs, the latter limited by extent of cranberry operations. A bog owner with a blueberry plantation, a nursery business or other enterprise should give careful consideration to whether labor freed from cranberries can be dismissed or more profitably used elsewhere. One question is, will the cranberry enterprise pay its direct production costs in 1960 and help with fixed costs. A related question is whether more time and other production materials, freed from cranberries, and devoted to other productive alternatives will provide a higher net income.

### D. Costs and Their Relation to Size and Ownership of Bogs

Costs of cranberry production can be divided into three parts:

1. Fixed cash costs - whether you produce or not.

- a. Real estate taxes.
- b. Interest on real estate debt.
- c. Insurance on buildings and equipment, fire, wind, and liability

2. Direct cash costs of production

- a. hired labor
- b. pesticides
- c. gas and oil
- d. fertilizers, other supplies
- e. repairs to break-downs
- f. machine hire
- g. other operating expense

3. Assigned costs or desired returns for

- a. Depreciation
- b. Operator and family labor
- c. Interest on owned investment

Families fully owning and operating their bogs have less cash expenses than large corporations which must hire all labor, the most important production item on bogs. These same families can choose "Operation Belt Buckle" in the short run, receiving no return for depreciation and none on investment. If returns for their labor and living are unsatisfactory they may be freer to seek more profitable alternatives. Operators of part-time bogs may have even greater freedom in meeting fixed bog expenses and necessary family living costs from other sources of income. The corporation or large owners of bogs may be forced into a least-loss situation rather than the highest profit combination in holding their productive facilities together during this market crisis.

### II. Alternative ways of Producing Cranberries

Where anticipated gross receipts in 1960 from both the 1959 and 1960 crops appear inadequate to cover both cost items 1 and 2, a borrowing of capital may support the productive organization until supply and demand are in better adjustment to each other. Productive combinations with such high proportions of fixed and direct cash costs of production need careful scrutiny as to lower cost or

more efficient ways of performing essential operations. Unless there is a special price differential offered, the productive combination producing the finest quality berries appears to be a costly one. Once slack in management is taken up (e. g. better timing of sprays, etc.) improved quality can only be obtained by added care and costs in sprays, handling, etc.

With depressed market conditions there is little anticipation that added costs to secure maximum yields will pay. On the other hand, the least cost combination is rarely the most profitable one. Using less sprays, less fertilizer and other materials could easily cut production and its value more than the expense saved. Each practice must be evaluated as to whether its present or future benefits will more than exceed its added cost.

### Summary

Bog operators face an uncertain consumer demand for cranberries in 1960. With the continued carry-over of 1959 inventory some depressing affect on grower price is anticipated. Although the Ocean Spray Cooperative provides a market channel for its members and probably others willing to join, their functions of assembly processing and merchandising do not mean a ready sale for all berries available in 1960.

Probably gross receipts will exceed direct cash costs involved in production. The difference will be available towards meeting the fixed cash costs which exist whether berries are produced or not. Since many cranberry facilities, (e.g. bogs) cannot be used for other products some returns from cranberries are better than none. Thus, until a more favorable market is assured, the major 1960 decision is: will such labor and capital as can be freed from cranberries pay better in any other use?

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**READ CRANBERRIES**

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# *Lee Crowley, Son Of Retired D. J. Crowley Becomes A Cranberry Grower*

**Long Beach Youth, 22, has Planted  
Between 6 and 7 Acres**

by  
**Clarence J. Hall**

Lee Crowley, son of D. J. Crowley for many years director of the Washington State Cranberry-Blueberry Station, and Mrs. Ruth Crowley, has definitely cast his lot with the cranberry industry. He is in the business, like most growers, because he likes it. This is a way of life which he has selected for himself regardless of its fluctuations and other hazards.

Lee is 22, more than six feet tall and may be described as of the quiet type. He graduated from Ilwaco High in 1955. Outside of being a member of the Long Beach Cranberry Club and the Long Beach Presbyterian Church he has no other affiliations at the present time. He was recently elected to the board of trustees of the Church. He has been around cranberry bogs since he was able to walk. He has worked in every phase of the cranberry business with the exception of marketing.

When Mr. Crowley retired in 1954 he did so because he had reached the compulsory retirement age for Washington State College faculty members. He was not ready to retire from active work, however, and he and his three sons expanded the farm and planted some cranberry acreage. The two sons are Jim who is now at the University of Washington enrolled in a pre-med course and the other is David who is still in the local school.

The Crowleys own 250 acres of land on Pioneer Road at Long Beach. This was cleared. Because there is a lot of upland there is a small herd of beef cattle so as to utilize that part of the property. There are between 40 and 50 head of Herefords on pasture during the summer and the herd will be increased as more land is cleared and planted to grass. The farm therefore will have two "crops". But the emphasis will be on cranberries as the acreage is increased.

The first acre of bog was planted in 1956 and Lee harvested about 110 barrels last fall. Most of the bog is not yet in production but between 6 and 7 acres are now planted. An overhead sprinkler system has been installed for irrigation and frost control.

As to amino triazole and the critical situation of the industry, D. J. Crowley believes the Secretary of Welfare Arthur S. Flemming on November 9th last did a disservice both to the public and to the cranberry industry. He believes that further research will prove that ATZ is a comparatively harmless herbicide considering the amount of residue which was found on cranberries. He thinks further research will clarify this and the scare may react very favorably for the cranberry industry. At least, he says, "everybody has now heard about cranberries."

The Crowleys think the Long Beach area along the Pacific Ocean is a most beautiful part of the country in which to live. They are pleased that one member of their family wanted to become a cranberry grower. They are enjoying their retirement.

While Mr. Crowley acted in an advisory capacity to Lee, it is Lee who is now the "cranberry grower" of the family.

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## ***Launch National Easter Cranberry Promotion***

Grocery stores, allied manufacturers, food trade associations and the U. S. Department of Agriculture are rallying behind a big Nation-wide Sale of Cranberries for Easter, Ocean Spray reports. With Ocean Spray leading the parade, Easter advertising, store promotions, holiday serving suggestions will join forces in a unique lend-a-hand promotion

stretching across the nation.

The cranberry's bounce-back powers have not been reduced by depressed sales in recent months. Normally at peak sales at Thanksgiving and Christmas, cranberries have had their third biggest market at Easter. Easter 1960 is expected to be no exception.

Basis for this prediction is the steady, through gradual, improvement of cranberry movement at the retail level, according to surveys conducted by Market Research Corporation of America and A. C. Nielsen.

Ocean Spray Cranberries, Inc., handling 75% of the nation's cranberry crop, credits the wholehearted cooperation and assistance of the food trade, allied manufacturers, along with government departments and farm groups for the progressive recovery of cranberry sales. Larry E. Proesch, Ocean Spray Director of Marketing, states that "offers of help are coming to us from all directions, and we are receiving enthusiastic backing from the trade in the coming nation-wide sale.

"Launching the campaign, "he reports, "will be full-page, full-color advertising in Life Magazine, with local cooperative advertising tying in cranberries with Easter ham or turkey."

Feature of the point-of-sale material is a theme poster for wall or store window, headlining "Nation-wide Sale Cranberries for Easter". Imprint posters, wrap-arounds, shelf talkers, riser cards and newspaper mats highlight the nation-wide sale or cranberry combinations with poultry or meat, while recipes and news bulletins blanket the country with holiday serving suggestions.

"We feel confident that Easter will be the turning point in the business crisis facing our industry since November," concludes Mr. Proesch. "April should see cranberry sales at or better than normal."

# Cranberries, Their Size In Relation To Weather

## I. E. Demoranville, Mass. Cranberry Experiment Station

The original purpose of this study was to find when the cranberry fruit had attained its maximum growth. Many growers begin harvesting the last few days in August and by September 8th to 10th, harvesting is general. If the weather is favorable, up to 40 percent of the acreage may be harvested by September 20th. There was a possibility that many growers were losing a fair percentage of their crop by harvesting before berry growth had been completed.

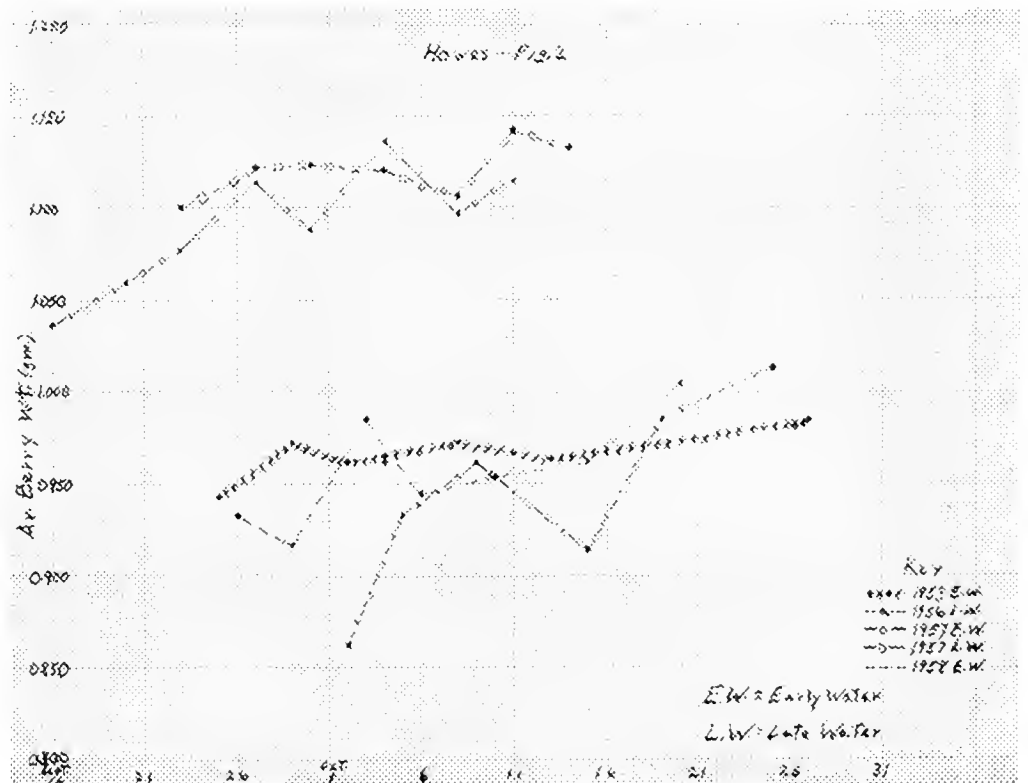
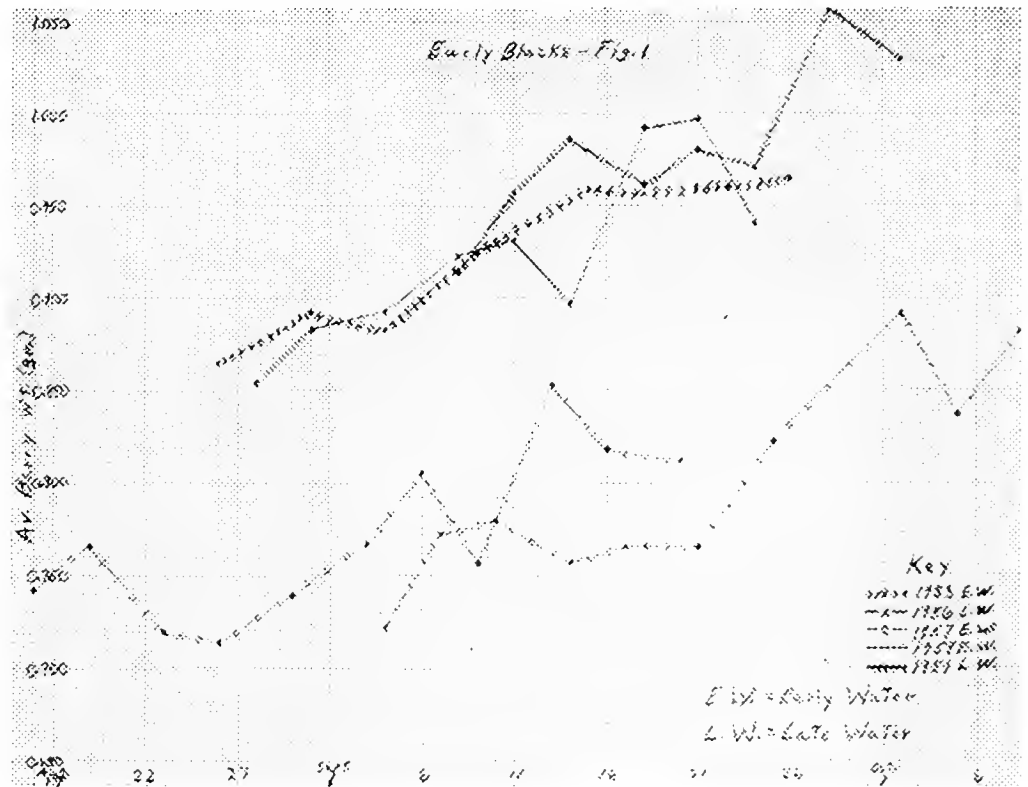
This study was started in 1953, and all samples were taken from various areas on the State Bog at East Wareham. The areas to be sampled were chosen to have a uniform stand of vines and a crop that was at least as good as the state average (state average 1953-1959, 34-50 bbls./A). The only varieties considered were Early Blacks and Howes which produce 96% of the state crop. The cranberry is probably the only perennial crop where the grower can partially control the times of blossoming and fruit maturation. This is accomplished by holding the winter flood on the bogs until late May, called late water, causing the plants to blossom later than normal and the fruit to mature later (usually 10 days to 2 weeks). The two types of culture for each variety are considered. Average berry weight is used rather than berry size because nearly all growers are paid on a weight basis. However, berry size

and berry weight are closely correlated within varieties.

The data shows that the most practical time (on a weight basis) to begin harvesting "early water" Early Blacks is from September 13 to September 19, "late water" Early Blacks September 23 to September 29, "early water" Howes October 3 to October 9, and "late water" Howes anytime after October 9. The first general fall frost

on bogs has occurred from September 16 to October 7, with the average date being September 25.

Early Blacks, both "early" and "late water", show an average increase in weight of nearly 12% in the 2½ week period from the date of first harvest to maximum berry growth (Table 1). This means that growers who harvest early may be losing about 6 bbls. per acre, or in normal years about \$66 per acre, on a crop that is average for the state (50bbls. per acre). Many growers, however, are raising 100 bbls. per acre and in this case may be losing approximately \$130 per acre. Howes did



### Berries from First Harvest to Optimum Growth.

#### Percent Increase in Weight of

Year	Water Management and Variety			
	E.W. E.B.	L.W. E.B.	E.W. H.	L.W. H.
1953	8.8		3.1	
1954		9.2		4.6
1955	12.9		4.1	
1956	12.1	14.2	7.5	4.4
1957	19.5	23.3	9.6	2.0
1958	6.0	4.5	7.4	
1959	11.2	7.9		6.1

not increase as much as Early Blacks, averaging 6% for "early water" and 4% for "late water".

In graphing the average berry weights for each year by variety, it was found that "early water" Early Blacks (Fig. 1) had the heaviest berries in 1953 and 1959. 1953 had the largest total rainfall ever recorded at the Cranberry Station, and 1959 had the largest total rainfall recorded during the growing season. For "late water" Early Blacks (Fig. 1), 1959 had slightly heavier berries (State Bog did not have "late water" in 1953); however, 1956 is the year that stands out with berries that were considerable lighter in weight. Since total rainfall in 1956 was well above average and total rainfall in the growing season was slightly above average, a possible explanation for the lighter berry weight may be found in the fact that the 1956 growing season was the only one in this study having below normal temperatures. The blossoming period, especially for "late water", was extended for an abnormal length of time, with some bogs having a large percentage of blossoms in August.

In comparing the Howes variety (Fig. 2), it was found that "early water" Howes had berries that were of substantially lighter weight in 1953 and 1958. These years had the largest and second largest total rainfall recorded. In contrast, the heaviest berries were in 1957 which was a drought year. This is almost the opposite of Early Blacks where high rainfall seems to favor heavy berries and drought conditions resulted in berries of less than average weight. For "late water" Howes (Fig. 2), 1957 (the drought year) again had the heaviest berries. As the State Bog did not have "late water" Howes in 1953 and 1958, the two years with heaviest rainfall cannot be compared. However, 1956 had berries that were below average in weight. This is in agreement with the findings for "late water" Early Blacks.

There are a large number of bogs in Massachusetts that have both Early Blacks and Howes planted in one flooding area, therefore the moisture conditions

(drainage, irrigation, etc.) are probably the same for both varieties in these areas. From the data it would appear that moisture requirements are quite different for the two varieties, and growers with this situation should strive to get maximum weight from the berries on these bogs. This may be accomplished by several methods, such as improved drainage, stop waters, irrigation systems, small dikes, etc. The resulting increase in berry weight could amount to as much as 10 to 11 percent. It is possible that by a combination of improved moisture conditions and later harvest that some growers would increase their crop from 15 to 25 percent without increasing the set of fruit.

### SOME STATISTICS

Recent surveys have shown: . . . that 86.8 percent of all Russian sympathizers have eaten pickles . . . that 79.7 percent of the people involved in traffic accidents consumed pickles within 14 days preceding the crash . . . that 63.1 percent of juvenile delinquents come from homes where pickles are served frequently.

Perhaps you seek evidence of a long-term nature; of the people born in the year 1839 who later dined on this vegetable, there has been a 100 percent mortality. All pickle-eaters born between 1839 and 1873 have wrinkled skin, brittle bones, and failing eyesight.

Even more convincing is the report of a noted team of medical specialists: rats force-fed with 20 pounds of pickles for 30 days developed bulging abdomens.

If you are a skeptic try this experiment; buy 5 quarts of pickles from your neighborhood grocer. (You'll be shocked to learn this dangerous food is actually on sale near your place of worship.) Grind the contents to a pulp and place in a bowl. Drop in one live guppy. It will die within four hours! If this sounds ridiculous, compare it with the logic that condemned the entire cranberry industry because of the actions of a few. American Vegetable Growers and reprinted in Wisconsin Cranberry News.

## Cranberry Men Favor Chemical Treatment Bill

Cranberry growers went on record as favoring passage of Massachusetts House Bill 2774 at a hearing at the State House March 8th before the legislative committee of the House and Senate on public health. Action was taken through Gilbert T. Beaton, president of Cape Cod Cranberry Growers' Association, who spoke in favor of passage.

The bill concerns the use of agricultural chemicals and provides that each commercial farmer must file an application of intent to so treat his crops; also to obtain a prior permit for the use of air application of dusts or sprays either straightwing or helicopter. In the case of a cranberry grower, the grower would file the weed, fertilizer and pesticide charts which are prepared by Cape Cod Cranberry Growers' Association and distributed through county agents.

Also favoring the bill were apple growing interests and the Massachusetts Farm Bureau Federation. Those opposing included wildlife, fish and game, groups and those interested in mosquito control.

Bill was introduced by George Michaels, State Officer of Public Health and the Farm Bureau.

### A NEW BLUEBERRY

Collins. A new blueberry variety has been named and introduced by the U.S.D.A. It was tested as 18-116, a cross of Stanley and Weymouth made by the late F. V. Coville in 1936. It ripens between Earliblue and Bluecrop. The plants are said to be erect, vigorous and moderately productive with about the same winter hardiness as Berkely and Pemberton.

The fruit is borne in medium-sized, rather tight, attractive cluster. The berries are as large as Earliblue, firm, light blue in color and are highly flavored with sweet to mild subacid taste. Fruit does not drop or crack. It is recommended by the U.S.D.A. for trial as a second early large fruit variety for the northeast. Bushes of this variety at the University of Massachusetts are still too young for fruit evaluation.

(John S. Bailey in "Fruit Notes")



### RESOLUTION

The Governor's Council of Massachusetts last month unanimously voted to accept a resolution to the Governor. The members drank a toast of cranberry cocktail on the occasion. The resolution was submitted by Ernest C. Stasium read

as follows:

Your Excellency:

I respectfully ask your Excellency to use the prestige of your office to request of the members of Congress, and in particular the New England delegation, to support any bill which may effect a sound

measure of relief for the cranberry industry.

This industry has suffered recently in an amount estimated at \$27,000,000.00 because of incidents which can only be interpreted as an act of God for which nobody can be wholly held responsible—certainly not Commissioner Flemming for doing his job;—certainly not the cranberry industry for trying to improve and maintain the quality of their product.

This matter vitally affects the economy of Massachusetts and in particular the district I represented in this honorable body.

The necessary relief will not and cannot come from the granting of loans to an industry already impoverished by this great loss.

Relief cannot come by the purchase of some 7 or 8% of the crop by the Surplus Commodity Division of the Federal Government.

It would seem to me, that with the Government expanding several millions of dollars per day for storage purposes alone for commodities grown in other areas, that it would not be unreasonable for the Federal Government to make an outright grant of the money necessary to stabilize this industry in this period of disaster. I respectfully ask my colleagues to join in this resolution to the members of Congress by your Excellency.

### CRANBERRY FLOAT LONDON ILLUSTRATED

"Illustrated London News," London, England has a series of pictures and a brief article upon "Cranberry Gleaning by Speedboat; a New Devise in U. S. Industry." Although this is scarcely new to the cranberry growers now, a floatboat at Marshfield, Massachusetts is shown at work and also getting the berries ashore after they have been floated.

Article also refers to Flemming statement stating the "industry was critically disturbed," by the situation.

Machine shown is that developed by John Garretson for Garretson Cranberry Company.

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### MARCH 1960

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## FLEMMING ON 1960

Arthur S. Flemming, secretary of Welfare, Health and Education, is reported as saying in Pittsburgh interview he sees little chance of another "cranberry scare", in connection with the coming 1960 crop. He said he felt certain the few cranberry growers who violated the amino-triazole regulations would repeat.

"I feel certain next fall's crop will be perfectly safe," he is quoted as saying. He added the industry is vigorously urging its members to use the herbicide correctly. It is not expected any of the material will be used this year, as such use has been prohibited by Ocean Spray and other distributors.

## Blueberry Growth In New Jersey

Times advertiser of Pemberton, New Jersey in a current 25th anniversary edition pays tribute to the growth of the New Jersey blueberry industry in that period. Article says this activity has contributed much to the prosperity of the region.

Two-thirds of the crop is handled through the Blueberry Cooperative Association. Organized in 1927 with but 9 members the co-op handled the first season only \$45,000 in money volume. In 1959 there were 332 members who shipped more than \$3 million dollars worth of berries. Total for New Jersey was nearly \$5,000,000 last year.

Biggest single day's shipment in history of the co-op was 37,000 crates in the peak of the 1955 season. This represented about as many berries as was shipped by the organization during operations of the first year. President is Fred Scammell of Toms River. First president was H. B. Scammell of Toms River.

## WISCONSIN FROST WARNINGS

In a letter to members of Wisconsin State Cranberry Growers, Prof. G. C. Klingbeil, secretary-treasurer tells that on May first frost warning service will again begin under Meteorologist Jim

Georg. Members who sign up are assessed 60 cents per acre.

The services include: frost warnings twice daily from May 1 to October 15, the forecasts being sent out twice daily from about 25 radio and TV stations and one daily radio report on a national hook-up, the facility to call the meteorologist directly if a grower so desires. It is pointed out there is an unlimited amount of advertising as the result of the frost warning, which alone is worth the price many times over.

"One of our jobs," Dr. Klingbeil asserts "is to get cranberries on the shopping list of every consumer."

## No Spring Meet For Berry Group

Directors of Cape Cod Growers' Association meeting March 8th at Cranberry Experiment Station, East Wareham voted not to hold a spring meeting this year. It was decided no gathering would be held unless special circumstances necessitated as there had been large attendances and many matters discussed at winter cranberry club meetings.

Group voted that the frost warning service costs be at the same rate as in the past. These rates are based on a sliding scale of acreage. Bog vandalism has continued through the past months and there was discussion concern-

ing this. Growers were to be urged to report any instances to a special bog vandalism committee of the association.

First vice-president Philip H. Gibbs of South Carver presided in the absence of president Gilbert T. Beaton, Raymond H. Morse, Robert C. Hammond, Mrs. Ruth Beaton, treasurer, J. Richard Beattie, cranberry extension specialist, all of Wareham; Louis Sherman, Plymouth; Dr. C. E. Cross director, Experiment Station; Howard Hiller, Marion.

## MISS BUCHAN NAMED COUNTY CHAIRMAN

Miss Betty Buchan, publicity, Ocean Spray Cranberries, Inc., has been named by Gov. Furcolo as temporary chairman of a Plymouth County (Massachusetts) Group to promote the state as a desirable place in which to live, work and vacation. There are county groups all over the Commonwealth. These groups will formulate plans for a statewide civic committee to "boost Massachusetts."

First Plymouth County meeting was scheduled for Tuesday, March 29 at Ocean Spray Cranberries, Inc. headquarters, Route 27, Hanson.

## READ CRANBERRIES

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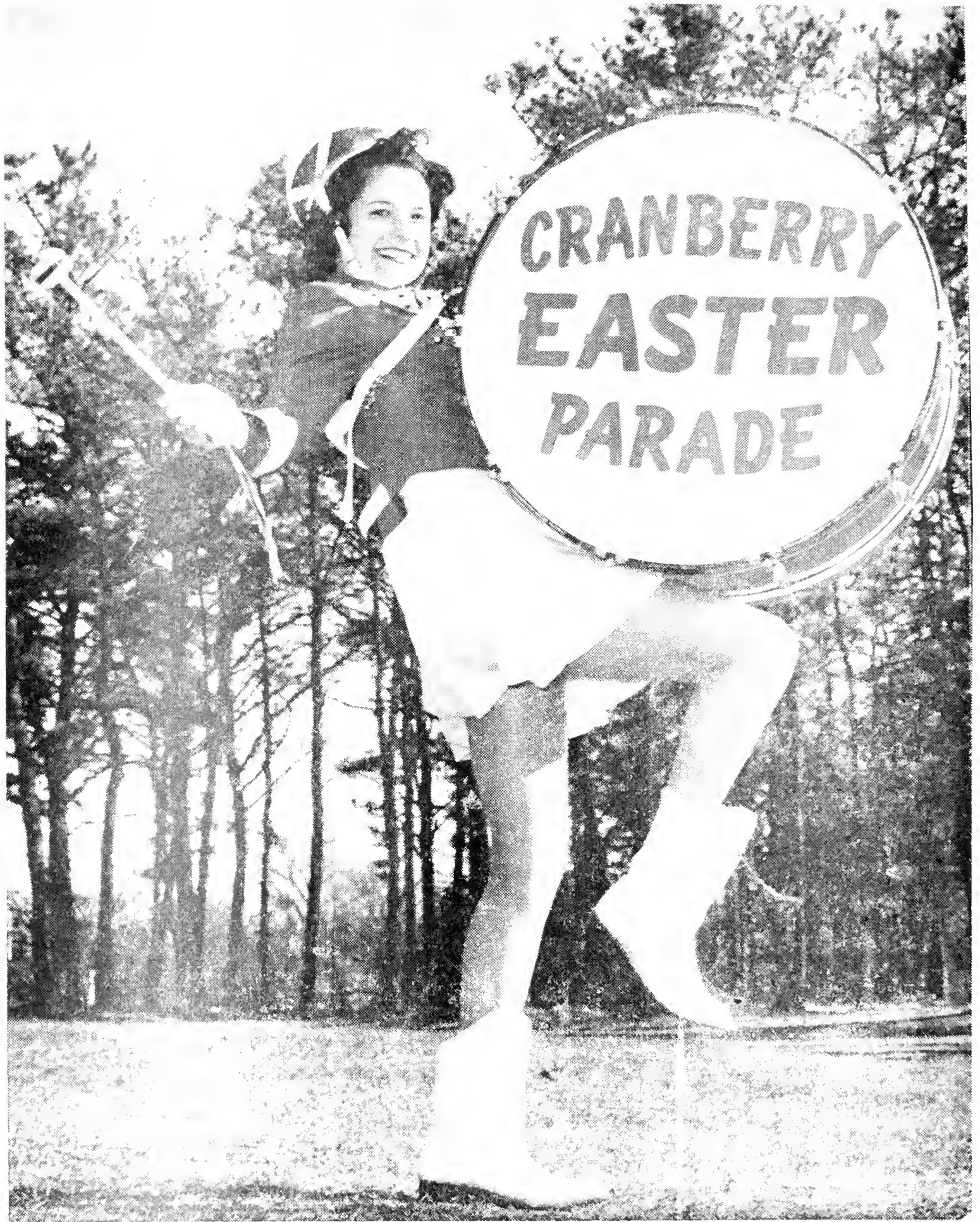
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Leading Cranberry Easter Parade, Miss Betty Ronan Bowen, drum majorette in Wareham (Mass.) High School Band.

(Photo courtesy Ocean Spray)

## WE NEED CLEARANCE

One of the major things the industry needs now is an issuance of general "purity" of the crop from Secretary of Welfare, Health and Education, or other Government department. This clearance of the crop as a whole, which has never been had, would make a tremendous difference. It would clear the consumers' minds of any suggestion of a taint.

It was government allegations which produced the so-called "cranberry scare," and it seems only justified that in view of the facts that such a clearance could now be issued.

Understanding is that only about 330,000 barrels of the million or so crop have been tested to date by Food and Drug. In view of the fact that figures seem to show that less than 3/10 of one percent of berries were found tainted and these from only about ten growers over the whole country, that a blanket clearance could be ordered—or further testing and, then a clearance.

Massachusetts Senator Leverett Saltonstall is reported to have made such a position to Welfare Secretary Flemming, in a letter. He pointed out, citing Massachusetts berries only, but which apply to the entire crop in general, that such a small quantity of berries was found tainted that the cranberry industry should have far better treatment, than it has thus far been accorded. Assistance with the testing program to the end that a general clearance may be issued would seem to be the least the Government can do, he further urged.

## BETTER TO PRODUCE

"... some returns from cranberries (in 1960 production) are better than none," is what Prof. Bradford D. Crossmon said in his important paper before Massachusetts cranberry clubs, carried in full in this issue. We agree with that and imagine the majority of cranberry growers

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Wareham, Massachusetts

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Cranberry Specialist  
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East Wareham, Mass.

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Barnstable County Agricultural Agent

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Barnstable, Mass.

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P. E. MARUCCI  
New Jersey Cranberry and Blueberry Station  
Pemberton, New Jersey

will. We don't believe too much acreage as compared to the total will be held out of production through flooding or lack of bog work.

As Dr. Crossmon says, Mother Nature may produce a big crop anyhow, even if unaided by the growers to any great extent. A bog or marsh will go to pieces if certain major controls are neglected. In the long run it is probably better to try and produce and keep the bogs up, even though this means borrowing money and it may seem discouraging in view of the surplus which will develop next fall.



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## CRANBERRY PRODUCTS GOES INTO JUICE

Cranberry Products, Inc., Eagle River, Wisconsin has gone into production of cranberry juice and expects to be in full production within a month. President Vernon Goldsworthy feels that this is one of the better ways to cut down the cranberry surplus. The consumer demand for this item is increasing and if the industry can increase its use this will be a big help.

Eagle River also supplied 5,000 4-ounce jars of spiced cranberries at a banquet of the National Turkey Federation. A letter from M. C. Small, executive secretary-treasurer of the Federation to Mr. Goldsworthy stated in part "We emphasized the fact that it was a gesture on our part to indicate continued confidence in the cranberry industry, and our desire to cooperate in every way possible to help promote the happy marriage of turkey and cranberries that has existed for many, many years."

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## LATE NOTES

Winter really set in in early March for Massachusetts growers with the first big snow storm of the year March 3 and 4. As a matter of fact this was called the worst single storm in 90-year history of Boston Weather Bureau. Driven by a northeast wind snow was deposited to a depth of 19 inches at Cranberry Experiment Station. East Wareham. Thirty inches at Falmouth on the Cape and to various other levels at various points. Drifts were much higher. The area was all but paralyzed for a day or two.

As the weather was cold several day before the big storm, reservoirs and ponds were frozen over and the snow cover remained thick. This brought about conditions ideal for oxygen deficiency on bogs and the Experiment Station sent out warnings to growers through newspapers and radio to withdraw the flood from bogs. Much acreage, however, was already out of water when the storm struck. How serious the condition was will not be known immediately.

Following the storm cold weather set in. To March 11 there was a minus of 74 degrees or practically 7 a day. With such cold,

reaching 8 above on the 11th, melting of the cover was slow.

New Jersey got nine inches of snow on the 2nd and 3rd.

Wisconsin was having bitter weather the first of the month. There were well below zero readings and temperatures had been 10 to 15 degrees below normal since March 1.



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## Final Winter Meetings Of Mass. Clubs

Final winter meetings of 1960 of Massachusetts cranberry clubs heard a program made up of reports by Cranberry Experiment Station researchers and elected officers for the 1960 season.

Officers for 1960:

Lower Cape elected: president, Francis Kendrick, East Harwich; vice president, Ernest Crowell, Dennis; secretary-treasurer, George Nickerson, Chatham and directors, Warren Rich, Orleans, Nathan Clark, Eastham, Ralph Crowell, Harwich.

Upper Cape: president, Arthur S. Handy, Pocasset; vice president, C. Arnold Lane, Centerville; secretary, Mrs. H. Crawford Hollidge, Marstons Mills and treasurer, Alvin Crocker, Forestdale.

South Shore club, Kingston: president Alvin Reid, Hanson; vice president, Robert Meharge, Clifford road, Plymouth; secretary-treasurer, Robert Alberghini, Clifford road, Plymouth.

Southeastern Club, Rochester: president, Howard Hiller, Marion, vice president, Kenneth Beaton, Wareham, secretary-treasurer, Paul Morse, West Wareham; directors, Robert C. Hammond, Wareham and Oscar Norton, Rochester.

Dr. Bert M. Zuckerman, "Progress Report on Nematode Research", brought growers up to date, using colored and black and white slides on progress made in the cranberry nematode program. He said he had checked 160 bogs and found nematodes on all, and apparently all had this infestation.

He said his was a long-range program as he had to ascertain that nematodes were present on cranberry bogs; that they were harmful and then to determine the proper controls, if they can be controlled.

He showed how some various kinds on bogs fed on the roots and root systems of the cranberry plant and it seemed certain they were one factor in cutting down cranberry production, an adverse factor unrecognized until a few

years ago, although their injury to other crops had been under study with regular control practices for several years in other crops of the country. He will continue his research this coming season.

He said water is not a control of nematodes, but in fact they thrived in moist conditions such as provided by cranberry bogs.

Irving Demoranville discussed the weed charts for 1960, and emphasized that amino triazole was conspicuously absent. He urged growers not to use this material at all as it might create more unfavorable publicity and distributors would probably refuse berries so treated, or perhaps any berries from a grower who used the herbicide. He urged growers to read the charts carefully and to study the notes with special care. He said analyzing work on A.T. will be continued.

He stressed that timing was important in weed control as in other practices, and said a good vine growth is an effective weed preventative and this can in many instances be helped along by proper fertilization.

Dr. F. B. Chandler discussed fertilizers briefly and suggested that each grower set out his own test plots to determine how much fertilizer he should use to suit his individual bogs. He said the use of fertilizer is growing.

He said he had been suggesting for some years that growers cut down or eliminate their sanding processes. This, he felt is an unnecessary and costly process which can better be replaced by pruning. "Sanding is only a process of pruning, after all," he said. Sanding covers up terminal buds and cuts the crop unnecessarily.

(Reports of Professor William E. Tomlinson on "Insect Control Recommendations for 1960", "Progress Report on Mechanization," are given more fully elsewhere in this issue.)

Both the Upper Cape Club and the Southeastern group voted to remit dues for 1960 as there were substantial sums in the treasury.

Upper Cape Club voted a resolution to be sent to President Orrin G. Colley of Cranberry Institute

that the club was on record that the cranberry industry should start the 1960 season next fall with only 1960 fruit and that packages should be so labelled. This would mean a clean slate for the coming crop in the minds of consumers, showing the crop to be totally free of any possible taint from amino triazole residue, as that material is not expected to be used commercially anywhere in the country on cranberries this year.

At the Southeastern meeting, Gilbert T. Beaton spoke briefly of a pending bill before the Massachusetts legislature which would compel farmers, including cranberry growers, to file applications before using spray measures or employing air service.

In answer to a question he said that Ocean Spray products were now back to about 65 percent in sales and that a special Easter campaign, nationwide, was on. He said that while there were plenty of cranberry products in the warehouses the country over many retail outlets did not have large supplies on display and it was hoped the campaign would bring this about and increase demand.

---

### MARKETING BEGINS IN THE FIELD

"The American Fruit Grower" recently ran an editorial under the heading "Marketing Begins in the Field." That point cannot be borne out too strongly to cranberry growers or any other grower of agricultural products.

It continues, that, little by little, grower opinion that marketing is the sole province of those who take the fruit onward from the grower is being straightened out. Marketing is not the sole province of the distributor, but also of the grower. Marketing is not just charts and graphs and theories of the distributor, it is also a biological process concerning the grower as to the quality of what he produces. Thus marketing problems are growing problems in the final analysis.

# Mass. Cranberry Station and Field Notes

by J. RICHARD BEATTIE

Extension Cranberry Specialist



## Elton B. Gass

We at the Cranberry Experiment Station have lost a valued colleague in the death of Elton B. Gass on March 29. "Gus" had been a member of our staff a little over a year and in that short period had earned our respect and admiration for his conscientious and dependable work as Dr. Zuckerman's assistant. Those attending the recent cranberry club meetings heard an excellent report on nematode research, given by Dr. Zuckerman who acknowledged the splendid work of his assistant. Our staff joins his many friends in extending our deepest sympathy to his family.

## Late Spring

Weather conditions to date (April 20) have not favored an early spring. Temperatures in March averaged five degrees per day below normal and the first half of April was about a degree and a half per day above normal. Incidentally, temperatures dropped to the middle high teens on some bogs April 18 and 19. Bogs in Easton, Sharon, Foxboro, and Carlisle were beginning to "green up" by April 19 but bogs near the coast have shown little change in color except in sheltered locations. However, a few warm days could change the picture very quickly, which leads up to the subject of frost.

## Frost Service

Arrangements have been completed to send out frost reports over the telephone and radio. The Cape Cod Cranberry Growers Association is again sponsoring the telephone frost warning service. Mrs. Ruth Beaton's record shows 160 subscribers compared to about 185 last year at this date, or a loss of 25 subscribers. While this is

not considered to be a serious problem, at least under present conditions, we sincerely hope that a number of the "regulars" will mail their applications to Mrs. Beaton. The below radio schedule will supplement the telephone relay system. This is the same schedule that has been used for the last several years.

## Preliminary Keeping Quality

The preliminary keeping quality forecast was prepared April 5 and has been mailed to growers through the county agents' offices. It reads as follows: "Preliminary Keeping Quality Forecast: Examination of weather records through March 5 points out a pos-

sible 10 which favor good keeping quality fruit next fall. This is 3 points more than a year ago this date and the most points in recent years. We believe that the prospects at this time are good for the general keeping quality of the 1960 Massachusetts cranberry crop. However, this forecast is intended only as a guide. We know that certain bogs produce poor quality fruit regardless of how favorable a general forecast may be. Fungicide treatment should be considered for such bogs. For details, see the new insect and disease control chart."

We regret the delay in mailing the new pest control charts to growers. The delay was due to a legal complication involving the use of iron sulfate which we had hoped to clarify several weeks ago. Through an oversight it was not included in the list of chemicals exempted from tolerance requirements when used according to good agricultural practices. Every effort was made to have iron sulfate placed on this list but ap-

Station	Place	Dial			
		A. M.	P. M.	Afternoon	Evening
WEEI	Boston	590 k.	103.3 mg.	2:00	9:00
WBZ	Boston	1030 k.	92.9 mg.	2:30	9:00
WOCB	W.Yarmouth	1240 k.	94.3 mg.	3:00	9:30
WBSM	New Bedford	1230 k.	97.3 mg.	3:30	9:00

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parently this procedure will require some time. Until the situation can be clarified, iron sulfate, along with several other chemicals, had to be omitted from the charts.

Dr. Fred Chandler and Irving Demoranville have completed a bulletin entitled "Cranberry Varieties of North America." It is a very comprehensive piece of work, representing many hours of labor by the above authors, the former director of the Station, Dr. H. J. Franklin, and Joseph Kelley. The bulletin contains a description of 56 varieties—both old and new—plus many interesting points of information. Copies are available at the county agents' offices and at the Station.

Growers will be sorry to hear that Dr. Chandler has been hospitalized for several weeks and is not expected to be back on the job for some time. We are sure that his many friends will want to write him a card wishing him well. His address is Front St., Marion, Mass.

#### TEMPORARY FHA FIELD OFFICE, MASS. STATION

A temporary field office of the FHA has been opened in the conference room at Massachusetts

Cranberry Experiment Station, East Wareham to care for emergency cranberry loans under the special disposition of this form of loan. In charge is Robert B. Hiller of Marion, with Charles Starr, supervisor of the main office at Providence sometimes also in attendance.

Hours are from 8:30 a.m. to 5 p.m. on Wednesdays with special meetings by appointment on Thursdays. This will be in effect until June 30 when the date for application of this form of loan expires.

#### MARKETING ORDER MEET IN WASHINGTON STATE

A meeting was recently held by cranberry growers of the Grayland, Washington area to discuss the theory of Marketing Orders. Purpose of the meeting was to present to the growers a review of experiences of other commodities and other areas which have operated under both state and federal orders.

The question arose in the Grayland area as a result of a sincere effort to investigate the available resources which might be of future help to industry. Little interest exists among the Washington growers to establish action for an

industry-wide marketing order for cranberry growers, particularly now in view of the favorable action from Washington in regard to partial indemnification for the 1959 crop losses.

#### A BOOST FROM CONTINENTAL CAN

Continental Can Company, Inc. in its monthly publication "Canned Foods Merchandising Digest," carried an insert in a recent issue boosting cranberry sales. This urged the use of cranberry sauce for every meal, and used the slogan "Cranberries, the Natural Mate for Every Meat." This publication reaches approximately 115,000 people monthly.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of April 1960 — Vol. 24 No. 12

Published monthly at The Courier Print Shop, Main St., Wareham, Massachusetts. Subscription \$3.50 per year.  
Entered as second-class matter January 26, 1943, at the post-office at Wareham, Massachusetts, under the Act of March 3, 1878

## FRESH FROM THE FIELDS

Compiled by C. J. H.

### MASSACHUSETTS

#### March, Month of Snow

March, contrary to the past succeeding months turned out to be the most "wintry," and out of season month. There was more snow on the ground than on any other month. During the month there was recorded at the Cranberry Experiment Station a total of 23.30 inches of what was classified as snow and sleet. Most of this fell in the blizzard, the worst in many years of March 3 and 4—and it lingered on during the month. Total precipitation was recorded as only 2.40 inches, however.

#### Colder Than Normal

The month, as might be expected also averaged out colder than normal. It was more than five degrees a day colder. There were many days of bitter wind, which made it, as a whole, a very disagreeable 31 days. This was the first time March has been colder than February since 1872.

By April first most of the bogs that were not being held for late water were bare of the winter flood. This constituted well over 50 percent. Many had been out since the latter part of January when there was a warning from the Experiment Station that there could be oxygen deficiency from light snow on ice. In fact a few bogs had had no winter flood at all, as the weather had been so mild. Bogs in general looked "good" for the coming crop. Massachusetts did not "throw" a really bumper crop last fall. There was no winterkilling nor any oxygen deficiencies during the winter, so no loss from those sources.

### NEW JERSEY

#### MARCH BITTER

Having had an unusually mild winter through February, we rather expected that in order to bring the winter's average temperature closer to normal, it would be quite cold in March. However, we did not imagine that it could be as severe as it was. The first 26 days in March were all below normal with several record lows recorded. The average daily temperature for the first 17 days was below normal and six of these were below freezing all day. Four times the temperature went below 10°F. and on 14 days it was 20°F. or below. The extreme low was 4° on March 7. The average temperature during March was 32.4°F., almost 10° lower than normal and

the coldest March on record at the Laboratory. The closest to this was March of 1941, when it averaged 36.6°.

#### COLDER THAN JAN.—FEB.

This was only the second month in the past eight months in which the average temperature was colder than normal. It was colder than January and February by 2° and 5°, respectively. Although the winter months of December, January and February were all warmer than normal, the extremely cold weather of March brought the mean winter temperature to below normal. The average for the four winter months was 35.5°F. as compared to the normal of 36.6°F.

#### 10 INCHES OF SNOW

Nine inches of snow fell on March 3rd and an additional one inch occurred on March 5th. Since

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this came during a severe cold snap, when there was about six inches of ice on most bogs, the oxygen content of the flood waters quickly declined and by March 10th the oxygen level on several samples was very low. Consequently an oxygen deficiency warning was sent out to all cranberry growers, most of whom withdrew the water from their bogs.

#### TOTAL RAINFALL

The total rainfall during the month was 2.14 inches, about 2½ inches below normal. Almost all this resulted from snow. There was snow cover on the ground for 15 days, which is another record for March.

#### PETITION DISAPPROVED

Word was received from the Soil Conservation Service that they had disapproved the petition of the American Cranberry Growers' Association to have sanding of cranberry bogs listed as an approved practice for which growers could receive cost sharing payments. This Petition had been approved at County and State levels but was defeated in Washington. Officials ruled that this was not conservation practice and that it was not similar to other weed and

tree growth control measures in the Agricultural Program which are primarily for noxious weeds.

## WASHINGTON

### COLDEST MARCH

Weather for March was the coldest temperature in the entire history of the Cranberry Experiment Station at Long Beach. On March one there was a reading of 15 degrees on the bog with maximum of 70 on the 20th. The last week of February was rather mild with a minimum of 15 to 19 degrees each night. Rainfall for the month of March totaled about 9 inches. As April opened up there was apparently going to be an early Spring. A number of flowers were already in bloom and shrubs, trees, etc. looked as if they would be in bud before long.

Work at the Experiment Station has been progressing satisfactorily. Applications have already been made for a number of new herbicides, more than ever before and these with others will be applied later on in the season. Main emphasis will be on herbicide work.

Most of the blueberry plantings have been removed and from now on work will be restricted to work

on this crop in maintaining a variety test and on continuing work on crossing the domesticated varieties with several of the wild species. Other work this year includes nutrition studies of cranberries and additional investigation on the control of frost injury.

### Few Apply For Emergency Loans

In spite of the current outlook several have applied for help to install sprinkler systems, so it is apparent they have not lost faith in the cranberry industry. A few new plantings are being made and spring activities were underway by the last day of March.

## WISCONSIN

### The Good News

In contrast to the bad news of last November 9, the good news of March 30th relative to indemnification for the country's cranberry growers has been the main topic of conversation. Growers are anxiously waiting for the detail plans and also the green light on the disposition of some odd hundred barrels of berries in growers warehouses throughout the state. It is estimated one third of the states one hundred fifty warehouses have berries in them. Only a small percentage would be salvageable and then the quality would be sub-standard.

### One of Coldest Marchs

For the record March was one of the coldest on record. The northern part of the state averaged six degrees below normal, the central eight and the south about fifteen. The north had below normal precipitation, the central well below and the south way above normal. The south had very heavy snow, which was followed by two and one half inches of rain the last of the month. With milder temperatures finally arriving on the 27th, the snow cover disappeared in the central area, although there was snow in the north at the end of the month. Flood conditions prevailed in the south but the other areas expected little flooding due to below average snow cover. The month can be summed up as 27  
(Continued On Page Sixteen)

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# A REAL CRANBERRY BOOSTER IS ROBERT A. ALBERGHINI

**He Works at the Business, as Technical Assistant at Massachusetts State Bog—Assists on Bogs of his father—Has just been re-elected Secretary-Treasurer of South Shore Cranberry Club.**

He thinks cranberries, grows cranberries, works at cranberries and eats them. This Robert Alden Alberghini is a real cranberry booster.

Young Alberghini is now technical assistant at Massachusetts Cranberry Experiment Station. Last month he was elected for the second time as secretary-treasurer of the South Shore Cranberry Club.

He plans to make cranberries his life work. He says he has been in cranberries "my whole life," and "although things don't look too bright right now at the moment, I intend to make a career in association with the cranberry industry."

He was born in historic Plymouth, Massachusetts, July 7, 1935, the son of Mr. and Mrs. Alden Robert Alberghini. His father owns 13 acres of bogs in Carver and adjacent Kingston. After putting in a full week of work at the State Experiment Station bog at East Wareham he spends his spare time—or much of it—working with his father on the family bogs. He frost flows on cold spring and fall nights, does whatever he can to help out.

He came to the Experiment Station in the summer of 1954, after being graduated from Plymouth High School in 1950, and being graduated from the Stockbridge School of Agriculture, University of Massachusetts. There he studied agriculture and subjects which would help him especially in cranberry culture. He came to the Station as field hand and was promoted to technical assistant last December.

At the State Bog his work is so varied that it is hard to define it. But he has a hand at almost every experiment which is conducted there and then assisted in carrying through the research to a logical conclusion. This he considered invaluable experience to anyone who plans to make cran-

berries a career. He has been assigned to research problems on many bogs and thus has become familiar with a great variety of cranberry bog problems. He has watched these problems from weed control to insect control. This has entailed a lot of hard physical labor, which he has put in at the State Bog.

He was given a leave of absence from the Experiment Station to serve in the Armed Forces from 1957-58 with the U. S. Coast Guard. He was stationed at Lorain Station at Nantucket and also at Woods Hole, Massachusetts spending a year at each position. He returned to his East Wareham work after getting his discharge July, 1959.

Alberghini has attended meetings of Massachusetts Cranberry clubs since he was old enough to understand anything about the cranberry business. He belongs to no other organizations than to those pertaining to cranberries.

As stated before he not only works at cranberries, but he eats

them enthusiastically "in any form." He likes sauce, juice, cocktail, any sort of cranberry dish. He speaks with pride of the cranberry sauce his wife makes. She is the former Beverly Ann Busi of Plymouth. They make their home on Cotten street in Plymouth.

When "Bob" finds a little spare time he likes to put it in at hunting—deer, rabbits, pheasant, quail, in season. He also likes to bowl on an occasional evening.

While in school he studied bee culture. This summer he plans to put in four hives of bees at the Carver bogs of his father. These will be useful in pollination there, but he intends to build up the colony in time. "I love living things such as bees, useful creatures," he says.

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# MASS. PEST CONTROL THOUGHTS 1960

William E. Tomlinson Jr.

Pest control at present cannot be neglected completely, but I'm sure no one will argue the desirability of keeping costs of pest control at a minimum.

With this in mind there are a few practices that may be helpful. Number one is holding the water until late May where you have facilities and water supplies to do so. This practice in most years will very nearly eliminate cranberry fruitworm, or at least reduce it to a level where control measures are not necessary. In addition, late water held over entire bog, so that high edges are under, concentrates the emergence of insects into a much shorter period of time so that control of fireworms in particular is possible with one well-timed spray or dust in all but the most irregular and rank vined bogs.

The second approach is in a reversion to real old-fashioned methods. In the not so dim past, ample water supplies were an asset, not only in frost control but in insect control. With the exception of weevil, leafhopper, Sparganothis, and Tipworm all important spring insects can be satisfactorily controlled with reflows. If done with care and water is not held unnecessarily long, crop reduction can be held to a minimum. If the bog has a poor keeping quality record, the use of reflows after Memorial Day is poor policy.

For those who can't hold late water or reflow easily, the cheapest and most effective insecticide application methods should be used. For the larger growers that means air-applied concentrate sprays. For the smaller grower, do it yourself semi-concentrate spray rigs are hard to beat. Even the larger grower could use them to advantage in isolated pockets of infestation, hot spots and during poor flying weather.

The spray chart has been re-examined and gone over with a fine-tooth comb for any recommendations not in line with

U.S.D.A. and F.D.A. approval have been made to correspond to approved U.S.D.A. labelling; specifically for malathion in the concentrate sprays and aldrin and dieldrin for weevil in the summer brood and aldrin in the spring under **New Growth and Rough-neck**. For grub control we are allowed 10 pounds of actual aldrin or dieldrin in the early spring or after harvest. This was our original recommendation and results in other areas on other crops support our findings that on peat and muck soils more toxicant is required because the chemicals become tied up in the soils rather quickly, so that only part of the toxicant is available for killing grubs.

Manipulation of water to control pests is briefly summarized as follows:

1. Normal winter flood-controls **Red striped fireworm**.
2. Hold winter flood till early May—controls **Yellow headed fireworm**.
3. Remove winter flood before May 20—controls **Black cutworm, Spotted cutworm and Armyworm**.
4. Hold winter flood till after

May 20 or reflow Apr. 20 - May 24-31—controls fruitworm, False armyworm and Southern Red Mite.

5. Reflow about May 18 for 10 hours—controls **False armyworm and blossom worms**.

6. Remove winter flood early and reflow from May 20 to July 15-20 to control **root grubs, white grubs and all other insects**.

7. Reflow June 1 and 12 for 10 hours—controls **black-headed fireworm, green spanworm, spotted cutworm, black cutworm, sawfly and armyworm**.

8. Reflow June 1 for 36 hours—controls weevil (**Not recommended**).

9. Reflow 24 hours just as first few blossoms open—kills ½ hatch of **blunt-nosed leafhopper**, and controls **spittle insect and cranberry black bug**. 30 hours controls **spotted fireworm**. (**Not recommended**).

10. Reflow 24 hours in August—controls **fruitworms and girdler**. (**Not recommended**).

11. Reflow 6 days by September 25, with late berries still on vines if necessary—controls **girdler and blossom worm**.

## OFFICIALLY ACCEPTED USAGE OF PESTICIDES

### RECOMMENDED ON CRANBERRIES IN MASSACHUSETTS

Exempt from the requirement of a tolerance when used according to good agricultural practice are:

Copper Sulfate  
 Petroleum Oils - Kerosene, No. 2 Fuel Oil, and Stoddard Solvent  
 Rotenone

Materials having an established tolerance that we recommended at present are as follows:

Pesticide	Tolerance in Parts per million (PPM)	Pounds actual Pesticide per acre	Min. Allowable time from last applic. to harvest
Aldrin	0.1	0.25 to foliage	21 days
Aldrin	0.1	5.0-10.0 to soil	Pre-bloom or post-harvest
DDT	7.0	6.0	35 days
Diazinon	0.75	3.0	7 days
Dieldrin	0.1	1.25 to foliage	21 days
Dieldrin	0.1	5.0-10.0 to soil	Pre-bloom or post-harvest
Ferbam	7.0	6.8	5% Bloom & mid-bloom
Malathion	8.0	1.5	3 days
Maneb	7.0	7.2	5% Bloom & mid-bloom
Parathion	1.0	0.4	15 days
Parathion	1.0	1.0	30 days
Zineb	7.0	6.0	5% Bloom and mid-bloom
2,4-D	0	)	Not recommended for use on vines so no
2,4,5-T	0	)	tolerance required because no residue will
Silver	0	)	result from this usage.

12. Reflow 17 days, starting by September 25—controls fruitworm and sawfly.

Remember that black-headed fireworm larvae are killed more easily by flooding when near maturity. Short floods for big worms are safer and more effective; long floods against smaller larvae.

6-day flood in late September, even with late berries still on vines, should be considered if regular sanding program is abandoned. Should be done every 2nd or 3rd fall to prevent development of girdler infestations.

Also remember that reflows, particularly after June 1, tend to increase fruit rots, and also may smother developing blossoms. Flow on and off during night.

I still like the concentrate spray rig for the control of most cranberry insects. We have a safe recommendation for its use against all pests except fruitworms, where we have run into blossom and berry blasting with Malathion, and para-

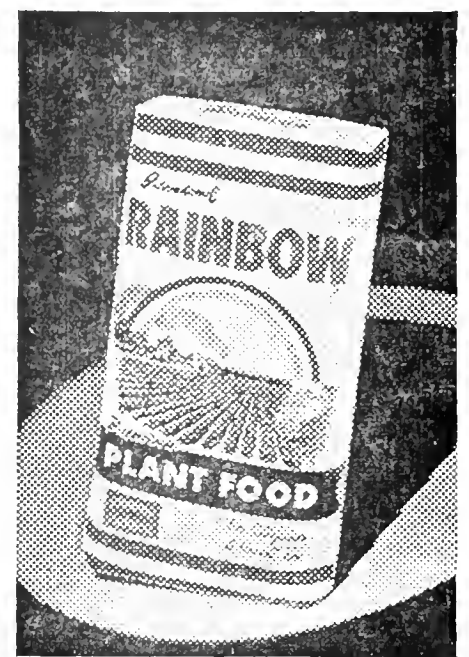
thion is too dangerous to recommend for general grower use. We are working on this problem with materials that I hope will overcome this weakness in controlling fruitworm with grower operated concentrate rigs. Diazinon might be tried, but we have had some trouble with burning when using the EC in concentrates and haven't tried the wettable, and we don't like Diazinon for fruitworm as well as some other insecticides anyway.

Relative efficiency of spray nozzles on concentrate sprayers has not been worked out on cranberries, but results on other crops indicate the hollow cone on a boom is the most efficient unit because of thorough coverage and even distribution that it gives.

#### APRIL WARMER IN MASS. FIRST 3 WEEKS

April to the 21st had been warmer than normal in Massachusetts by a total of 34 degrees. No frost

warmings had been sent out from the State Bog to that date, although there was a cold night on the 19th, with a little ice in the ditches, but the bogs in general are late this spring and it was figured that no harm would occur.



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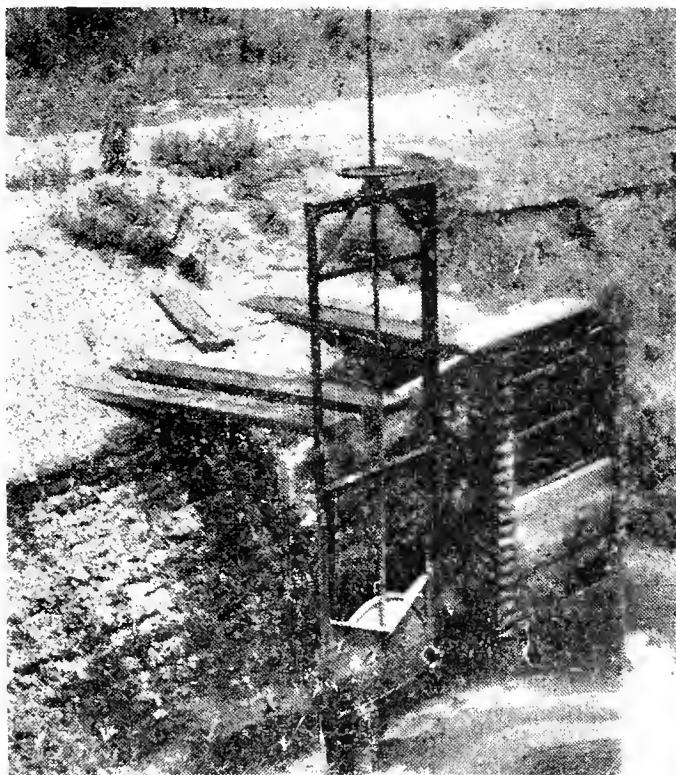
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## **Mechanization Program**

(Editor's note: Following is a report given by John "Stan" Norton engineer, Massachusetts Cranberry Experiment Station at final meeting of Massachusetts Cranberry Clubs.)

The sprinkler frost protection work was continued last spring and fall. More data were collected on temperature differences that could be maintained with a 65 GPM/acre application rate.

Also, in the spring, work on the experimental bog vehicle was continued. This project, since it does not tie in with any particular season, is frequently interrupted by the seasonal urgency of other projects. The basic vehicle has been constructed and has been in and out of the shop under its own power a number of times. However, difficulty is maintaining alignment of the belt has thus kept us from running it on the bog.

### **Ditch Cleaner**

The work on the ditch cleaner was continued during the summer. The carriage was made self propelled. However, the small engine

we had on it did not have sufficient power to drive the cutter with four blades on it. We acquired a new 5 HP engine about the first of the year to try on this machine. Needless to say, it has not yet been tried. I am hopeful that this method of cleaning ditches will prove to be considerably faster and less expensive than hand cleaning. I feel certain that it will be when compared to hand cleaning that results in as clean a ditch as the mechanical system will produce. The goal I am aiming for is 10 feet a minute operating speed. With this operating speed the average production would probably be down in the range of 50% of that, when the time required to move from ditch to ditch or bog to bog is taken into account.

### **Water Raking**

During the harvest season some preliminary work was done on bruising as related to the speed of operation of the picking machine. This work indicated that bruising would be increased 50% or more by changing from an operating speed of 3/4 MPH to 1MPH. Reducing the speed to 1/2 MPH did not materially reduce the amount

of bruising below the 3/4 MPH figure. More extensive studies will have to be run before average figures for the amount of bruising caused by the picking machines can be determined.

The great gains in average production that Wisconsin is making over Massachusetts led us to initiate a new study in water harvesting. We want to determine whether the production from areas harvested in water will increase from year to year over adjacent areas harvested dry. We feel there is a possibility that the vines suffer less damage in water harvesting than they do in dry harvesting. If this is true, the production should increase. With these thoughts in mind we harvested three areas in water: One with a Darlington, one with a Getsinger which is used in Wisconsin, and one with a water reel like they use on the West Coast. These same areas will be harvested by the same machines for several years with each year's scrop compared to that from adjacent dry picked areas.

### **New Type Separator**

During this past fall and winter we have continued work on the experimental separator. A new model was built using smaller rollers. The latest version, offers new hope for a machine that would be superior to the bounce board separators, in regard to shelf life of the product after separation.

Our one-acre sprinkler system is getting a good work-out in our research program. As we reported last year, it was being used for irrigation, frost protection (When recommended by forecasters) insecticide, fungicide and fertilizer applications. Now in addition to these, it has been used for winter protection of the bog.

This winter protection program is based on theories of Dr. Bergman and others that cold injury often occurs to the buds in the fall before the winter flood is applied (Dr. Bergman found injury in flower buds taken after the temperature fell to 15° on November 8, 1958). In this experiment the

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irrigation system was set to come on automatically at 28° on October 1. The control was set one degree lower each week until a starting temperature of 20° was reached by December 1. After December 1 the system was to be operated whenever ice could be built up and expected to remain through the next day. The spring program will call for the system to start automatically whenever the bog temperature falls below 32°F. This will be initiated as soon as we are able to determine that the buds have started to grow.

## *Elton B. Gass*

Elton B. Gass, assistant to Dr. Bert M. Zuckerman, pathologist at Massachusetts Cranberry Experiment Station, East Wareham died March 29 at Tobey Hospital, Wareham. He was 53.

Mr. Gass had been doing valuable work in assisting Dr. Zuckerman in his studies of nematodes on Massachusetts cranberry bogs. This is a comparatively recent and important project of research. He had been employed at the Station for about a year.

Born in Watertown, April 24, 1907, he had been a resident in Wareham for a number of years and for a time was employed as a cranberry foreman for the J. J. Beaton Company, Wareham. More recently he worked for the Cape Cod Shipbuilding Corporation at Wareham. He served for several years in the U. S. Coast Guard and then worked for Chamberlain & Co. in Boston in the wholesale meat business. In 1941 he re-enlisted in the Coast Guard and served through World War II on convoy duty in the Caribbean and Greenland runs. He was brought back from overseas duty to attend Officers Training at New London at the Coast Guard Academy. Upon his discharge in 1948 he held the commission of lieutenant.

He is survived by a widow, Winifred (Evans) Gass.

A replacement at the Cranberry Station is being sought.

## *Dalapon For Weed Control*

by

Malcolm N. Dana

Department of Horticulture,  
University of Wisconsin

Label registration for the use of dalapon on Wisconsin cranberries was granted by the United States Department of Agriculture in January 1960. This registration followed the establishment of a safe tolerance level (5 ppm) for dalapon on cranberries by the Food and Drug Administration of the United States Department of Health, Education and Welfare. The label registration for cranberries reads approximately as follows:

“Over-all treatment applied 10-12 pounds per acre of Dowpon as a spray application (dissolved in water) in the fall after cranberry harvest for the control of grass and sedge weeds, including wide leaf grass, bunch grass and round rush. Apply when the ground is dry. Dowpon at this rate, will prevent next year's crop so such application should be made only to young, non-producing beds, or old beds which are so badly infested with grassy weeds as to be unproductive. Do not harvest the crop the following year.

Swab treatment - Apply Dowpon (to the grass and not to the cranberry foliage,) at the rate of 2 pounds in 5 gallons of water (up to 5 gallons mixture per acre) as a swab treatment as soon as the grassy weeds appear above the vines. Swab applications will suppress growth of grassy weeds and may result in crop reduction in the year following application if the concentrated solution is applied carelessly by dripping on to cranberry vines. Do not apply within 60 days of harvest.”

Registration was granted for the use of this material only in Wisconsin marshes. Insufficient data was available from other areas to support a petition for registration.

It is the purpose of this brief paper to more fully set forth the situations in which dalapon may be used without undue risk of vine injury and to re-emphasize the limitations, other than legal, which must be imposed upon the use of this material.

Dalapon is primarily useful as an herbicide on certain sedge and grass species. It has little or no effect on any broadleaf weeds other than a foliar burning on sensitive kinds. The suggested uses that will be presented here will involve only grass and sedge species.

We know that the use of dalapon will usually result in vine injury, the amount of injury depending on the quantity of material used per acre and the method of application. Spray applications, either after harvest in the fall or before the blossom period in the spring, will result in malformed blossoms which fail to set fruit. Low rates of application, 1 to 3 lbs/A, may not destroy the total crop but they may be expected to materially reduce production. Rates of application of 5 lbs/A or more can be expected to completely eliminate the crop for one year. Applications by the swab method are known to be less injurious than spray applications but here also the rate of herbicide must be kept at a low level if undue injury is to be avoided.

Spray applications may be useful in two situations. In very weedy, poorly producing sections where the predominant weeds are bunch grass, wide leaf grass, and round weed a fall or early spring application of 10-12 lbs/A of dalapon may be very beneficial. Wisconsin experience indicates that a fall application is more effective than equal quantity of herbicide applied in the spring. This kind of application will destroy the coming crop of fruit but, if successful, it should benefit fu-



ture crops. This kind of treatment has also been very effective on beds of young, non-producing vines which were heavily populated with bunch grass and wide leaf grass.

Spray applications during the summer have not been too effective for weed control and have resulted in excessive injury to vine foliage as well as fruit buds and flowers.

Swab applications have been successfully used by a number of Wisconsin growers and with less success by other growers. Those that have been happy with their results have limited the concentration of material to approximately 2 lbs. in 5 gallons of water and then walked at such a speed as to apply approximately 2 gallons per acre. Usually two swabbing per year are sufficient to suppress grassy weeds for the season. The first swabbing is done June 10 and the second shortly after blossoming. Considerable care must be exercised when using the swab to prevent dripping of the solution directly on the vines and to minimize doubling or overlapping of the swab swath. Growers who have used concentrations in excess of 2 lbs. in 5 gallons or who have been careless with their application technique have often found that fruit production was reduced in the following year.

Swabbing with the concentrations recommended on the label of the material will not kill many weeds. This method suppresses the grasses and may be used as a supplement to or replacement for mechanical clippers. A grower who has not had experience with this material is urged to act with caution by working out techniques on to larger areas only when he has gained an understanding of the a small acreage and proceedings limitations of the material.

You can damage your crop by the improper use of dalapon. Properly used, however, dalapon will cause but a minimum amount of vine injury and may be of considerable help in controlling certain grasses and sedges in cranberry beds.

## ***Large Property Changes Hands In Wisconsin***

**Central Cranberry Company,  
Brazeau Bog has new owners,  
has 100 Bearing Acres.**

A large cranberry marsh sales has gone through in Wisconsin. This is the sale of the Central Cranberry Company at Cranmoor, principal owner B. C. Brazeau.

The new owners are his brother, Richard S. Brazeau, Ben Pannkuk, vice president of Indian Trail Wisconsin Rapids, and Theodore H. Brazeau, all of Wisconsin Rapids, Nelson Johnson, St. Lucia of British West Indies and Richard Yankey of Kansas City.

Possession was taken April first and reputed sale price was \$240,000.

The property consists of 3300 acres, with 120 acres of cranberry vines of which 100 acres are in production this year. The property ranks as one of the best

equipped and most attractive cranberry marshes in the country, and has been known as a showplace of cranberry cultivation.

The marsh is an old one, first established in 1873 by John H. and Antoine Arpin and was acquired by B. C. Brazeau about 30 years ago.

The new company is known as the Winnebago Cranberry Corporation and the property will market its crop through Indian Trail, Inc., as it was formerly done. Facilities for sorting and packing cranberries there will be available to surrounding marshes, as in the past.

Officers of the new corporation are T. W. Brazeau, president; R. S. Brazeau, vice president; Pannkuk secretary and Theodore H. Brazeau, treasurer. Johnson and Yankey are also members of the board of directors together with the officers.

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## ***Growers To Get Indemnity From The Government***

Announcement was made March 30 from Washington that partial indemnification was to be given to cranberry growers of the country. Announcement was as follows:

"The White House today announced that the Department of Agriculture will offer to make indemnity payments to cranberry growers, who through no fault of their own sustained losses on berries harvested in 1959.

"The Department of Health, Education and Welfare will undertake, cooperatively with the growers a program of testing and certification.

"These actions represent an effort to assure the wholesomeness of all cranberries offered to the public, restore consumer confidence in the product and assist cranberry producers who suffered an impairment of their market as a consequence of improper use, by a few growers of the weed-killing chemical amino triazole. No payments will be made on berries found to be contaminated.

"Payments will be made pursuant to the authority conferred by Section 32 of Public law 320, Seventy-fourth Congress, approved August 24, 1935 as amended, and will approximate \$8.00 per barrel of cleaned, marketable cranberries.

"Various alternative methods of assisting the cranberry growers have been explored, the indemnification procedure, which been found to be legally appropriate by the Comptroller General, was chosen as the only satisfactory approach.

"Details of the offer to make such payments will be issued shortly by the Department of Agriculture, Washington, 25, D.C."

This was signed by James C. Hagerty, press secretary to the President.

The amount specified is not to exceed \$10,000,000.

Growers had asked for \$27,000,000 in full indemnity of losses as estimated to have been sus-

tained. However \$10,000,000, distributed among the industry in accordance with berries produced will go a long ways toward saving the industry from the catastrophe which was previously feared. As this issue goes to press, details of payment are being worked out in Washington. Announcement of what these details will be is being anxiously awaited by growers of every area. In the meantime, bog activities are going ahead with renewed assurance.

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## **Washington Weed Conference**

A major conference on cranberry weeds was held in Washington last month at the Long Beach Cranberry Blueberry Experiment Station, with weed control authorities present from that state and Oregon. Growers attended from Washington, Oregon and British Columbia. There were several chemical company representatives present as well as staff members of Washington State University. Nolan Servoss, Extension Agent for Pacific County, Washington was chairman. There was a panel of growers.

Object of the meeting was to acquaint growers with requirements of the pesticide laws and of what the Universities are doing, and to give growers the opportunity to present their views.

A resume of the meeting follows:

Dr. T. A. Merrill: (Chairman, Dept. of Horticulture, Washington State University) said "I have recently attended the meeting of the Northwest Cannery and Freezers Association and pressure is being put on the industry. They are trying to establish contacts with the growers of processing crops to try to list the pesticides acceptable for use. They listed the pesticides acceptable for each crop. Each grower will be expected to sign a contract and follow the instructions to the letter".

Dr. Telford: (Chairman, Dept. of Entomology, W.S.U.) said, "the U.S.D.A. must register all pesticides used by growers; insecticides, herbicides, fungicides, and plant growth regulators and chemicals which control nematodes. The first law was passed in 1910. Any chemical company at that time could

sell a product and make almost any claim. Very little control of the standards of pesticide application was possible as a result the growers were using chemicals very injurious to the health. The government had to prove the case against the chemical. In 1947 the insecticide, rodenticide and fungicide act gave the consumer considerably more protection.

"The 1947 law put the burden of proof on the chemical industry. It was necessary to register first with the U.S.D.A. and there was considerably more standardization of chemicals and also a closer check. This concerns only those products that are shipped interstate. 1959 brought under the 1947 law a number of other chemicals. In obtaining a registration and a label there is a considerable amount of research necessary which must be in the back ground. The manufacturer has to present to the government this information and prove that the residue, if any, is not a health threat. 1966 were the first food and drug laws. Very similar to the 1910 Federal insecticide act.

"In 1938 responsibility was put on the food manufacturer and the farmer. The Miller bill in 1954 was an amendment of the 1938 law and covered only those chemicals which were used on raw crops, however, the 1938 law had a provision for getting a tolerance. The 1958 Food Additives bill established tolerances primarily for the processor. The important thing about the food additives bill for tolerances is they will not exceed the tolerances established by the Miller bill. This is carried into the field of animal feed. Dried fruits have had a bad time as the amount of residue increases with the drying. The bad thing about the Food Additives bill is the Delaney Cancer amendment. The U.S.D.A. ties in with Food & Drug Administration in that it shows the usefulness of the chemical to the grower."

Dr. Romeo Legault, Chairman, Dept. of Agriculture Chemistry, W.S.U. reported "the work of 30 years ago was devoted to organic phosphates. The growers were the ones who called attention to the change brought about by the Miller bill. We instituted a program in our Extension service that allowed for no recommendation being made unless the chemical industry tested the product and it was released by the U.S.D.A. To save time we are trying to integrate our work with that of central research at Washington State. We have centralized residue work for economic reasons to avoid duplication of

effort. The procedures in analysis for a tolerance are very different and very difficult to learn in all given cases. The equipment is costly, the cost is now about \$25,000 and with the increase in the number of chemicals it will increase to \$50,000. We have taken advantage of the fact that we have a good chemistry laboratory at the Western Washington Experiment Station at Puyallup. The magnitude of the problems have increased. We have several dozen chemicals and we have analyzed thousands of samples."

"Sometimes we come only as close as 65%. Together with a sample of the treated crop we require a control sample that has not been treated with the chemical at all. The amount of residue depends to some extent on how much time is put into making the analysis. Up to .03 and .04 ppm false positive response shows in all control samples. With the new methods a very small amount of amino triazole may be identified. How to establish a zero level of residue of the chemicals is the problem. The best we can do is try to do a thorough job. We are now armed with tracer atoms but it again is a costly process. Food and Drug will now require that kind of information to be used. It will be necessary to take samples from a much larger areas as there may be even some variation between bogs. We are faced with a demand for information. Millions are being spent on the search for disease control and as a consequence let us not think things will become any easier in the laboratory but undoubtedly will become more complex. It takes two years for toxicity trials on laboratory animals.

Question: Heston Weyrich: Grays Harbor Extension wanted an explanation of a zero tolerance.

John O'Hagan, Grayland grower read a statement about amitrol being found in broccoli naturally. Legault answered and stated that F.D.A. had refuted this statement in a chemical magazine.

Mr. Eichman, Representative of Stauffer Chemical Company and Northwest Representative of Western Chemical Association, said "The Western Chemical Association and the National Chemical Association have fostered these laws. The larger chemical companies have been following the procedures mentioned in these laws. The reason was to prevent the fly by night companies from coming in and doing things detrimental to your industry and to our industry. The Delaney amendment was approved by all inter-

ested parties in the closing moments of the session. Because they could not say they favored cancer for the consumer and no time was allowed for reorganizing the bill." Mr. Eichman then showed a film showing the chemical industry and it's effect on the average family.

Dr. Charles C. Doughty, Superintendent of Cranberry Blueberry Experiment Station. Dr. Freed (Assoc. Chemist, Dept. of Agr. Chem. Oregon State College, Corvallis, Ore.) had sent word that "application of amitrol post-harvest and not beyond Jan. 1st showed no residue over the unsprayed blocks. Applications after Jan. 1st showed increasing residues." No herbicides are cleared for use on cranberries at the present time except petroleum oils and dalapon. Dalapon has recently been granted a tolerance of 5 ppm on cranberries. No other herbicides are cleared as yet. The clearance on dalapon specifies a post-harvest application and the berries may not be used during the season in which the dalapon was applied.

"The only applications of dalapon here in Washington have been limited to wiping applications in which the material is wiped on the grass tips without being allowed to come in contact with the cranberry leaves. This technique has produced good results on bogs that have a grass problem where the grass protrudes above the vines. Fall applications of granular dalapon were applied post-harvest in 1959 on cranberry vines infested with perennial grasses. Clumps of the perennial grasses, which normally grow all year around in this region, appear to be dead at the present time. The rates of application were 10, 15 and 20 lbs. of actual chemical per acre. Several other granular herbicides were applied during November 1959. These included Zitron, Atrazine, Simazin, Falon, chloral IPC. Some of these materials have proven effective against the perennial grasses. Some other materials applied on October 10, 1959, 3 weeks prior to harvest on cranberries infested with loose strife, equisetum and a few other broad leaved weeds are: MCP, sodium salt; 2, 4-D PGBE esters; 2, 4-D Amine; Ipazine; Atrazine; Propazine and Trietazine. The MCP and 2, 4-D applications produced a good kill on both loose strife and equisetum with very little vine damage appearing to date. Herbicide applications during the 1959 season showed several chemicals which appear to be very promising, these were applied March 4th to 9th 1959; Sesone, at 1½ to 3 lbs. actual per acre, Sim-

azine 10% granular at 4 lbs. actual per acre, chloral IPC 10% granular at 10 lbs actual per acre, Falon emulsion 7¼ lbs actual per acre and 2,4-D 30% granular 4 lbs. actual per acre. These materials produced a fair to good control with very little reduction in yield. The materials were applied when the vines were still in a dormant condition and after the weeds had started growth. These materials will be tested again during the 1960 season, to get a more complete evaluation of their effect on the weeds and cranberry vines. Post-harvest applications of Amitrol have produced good control of equisetum. The residue left by the post-harvest application is being investigated at the present time but the results have not yet become available.

Growers Panel: Frank Glenn, Long Beach grower; Ray Bates, Oregon grower, Norman Brateng, Long Beach grower and moderator. Frank Glenn: "How important is amitrol to the company and to the profits." If it is a nonpatented product they will pass the buck to the colleges. He listed the chemicals that could be used at this time: Aldrin, Captan, Dalapon, D.D.T., Dieldrin, O,O-diethyl 0-(2-isopropyl - 4methyl-6-pyrimidinyl) phosphorothioate, Ferbam, Fluorine compounds, Lead arsenate, Malathion, Maneb, Methoxychlor, Nicotine-containing compounds, Parathion, Toxaphene, Zineb, and Ziram. At the present time the chemical companies are only applying for clearance and tolerances on patented chemicals they themselves produce. Chemicals which no longer carry patents, such as 2,-4D and 2,4,5-TP, are not being cleared as no one company feels they can afford to pay clearance and tolerance costs if all companies are going to benefit. All growers should put pressure on the companies to obtain clearance on all pesticides that can be used on cranberries.

Ray Bates: 1. Growers should cooperate with the Experiment Stations to speed up as much as possible the clearing of pesticide chemicals for use on cranberries. 2. All growers should make sure they follow directions on the labels and not apply pesticides on crops which are not listed. This is for their own benefit as well as the companies. 3. Science is important to the cranberry industry but is stymied by weed problems with not enough chemicals on the horizon to use. Norman Brateng: Necessary for each individual grower to write to state and national legislators and congress-

(Continued On Page Sixteen)

While the cranberry industry did not achieve the high hopes it had for complete indemnification for the 1959 crop market failure, it should be thankful it is to get partial Government redress. Assuredly, \$8.02 a barrel is better than nothing. This is better than letting the fruit rot, without any return other than that already received.

The industry is certainly grateful to the untiring efforts of the officials of the Cranberry Institute, who were delegated a most difficult job and attained a considerable measure of success. It is also appreciative of the efforts of those members of the House and Senate from all cranberry areas who worked to bring about the partial indemnification. These would include many, and perhaps especially Senator Leverett Saltonstall and Congressman Hastings Keith of Massachusetts as representing the largest growing area. Also from New Jersey, Senators Clifford Case and Harrison Williams, Jr. and Congressmen Frank Thompson, Jr., James Auchincloes and Milton Glenn. Mr. Thompson also served as secretary of the Congressional Cranberry Committee. In Wisconsin Governor Gaylord Nelson and Lt. Gov. Philleo Nash were especially active.

Also to others who might have not been expected to be helpful to cranberry growers is appreciation deserved. Orrin G. Colley, president of Cranberry Institute tells us there were "hundreds" of others who came forward to add their weight to the plea of the distressed growers. These would include those related to the food industry in general, who realized the great injustice which had been dealt to the vast majority of suffering and innocent cranberry growers. There were telegrams, letters, telephone calls from over the entire nation. There were the Farm Bureau Federation, the "White House Aides," and others, too many to mention.

It is suggested that it would be a splendid gesture of gratitude for growers

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to express their appreciation to their particular representatives who worked so hard to bring about this partial Government payment.

That all this effort was necessary to, in part counteract the statements of one branch of the Government on "Black Monday," November 9th last, seems almost impossible to believe. This indemnification, aside from the financial aspects, should go far to help restore the reputation cranberry growers in general had before the prolonged "scare," of "tainted" cranberries came about. That this was not warranted is entirely beside the point.



## Wash. Weed Conference

(Continued From Page Fourteen)

men about the need for changing the Delaney amendment and the pesticide laws to facilitate the

clearing of more pesticide chemicals.

Mr. Eichman stated that Simazin was worth going after but not 2,4-D or 2,4,5TP which are non-patented.

Dwight Peabody said it took at least 3 years to obtain data to support a tolerance application.

Dr. Clark proposed that every one make their views known on Amitrol. Also that a small committee should spearhead pressure to establish tolerances on herbicides that can be used on cranberries, Amitrol preferred as it is the most promising.

Norman Brateng felt that all things were going too slowly. Articles which are appearing in magazines and newspapers are not being answered loudly enough. The Advisory Board to the station should take more action in these matters to counteract the adverse statements and pictures drawn by such articles.

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## Fresh From The Fields

(Continued From Page Six)

days of winter and 4 days of late spring. The extended forecast for April is for cool temperatures and above normal rain-fall.

### Spring Plans

With an air of optimism growers are busy making plans for the coming growing season. Orders have been placed for fertilizer and other materials will be purchased later on. Weed control work will probably be curtailed somewhat especially in the use of solvent. Most work will probably consist of spot spraying with solvent and some dalapon swabbing. Insecticide use will probably be cut down as most marshes are in good insect control shape. Fertilizer purchases will probably be increased.



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