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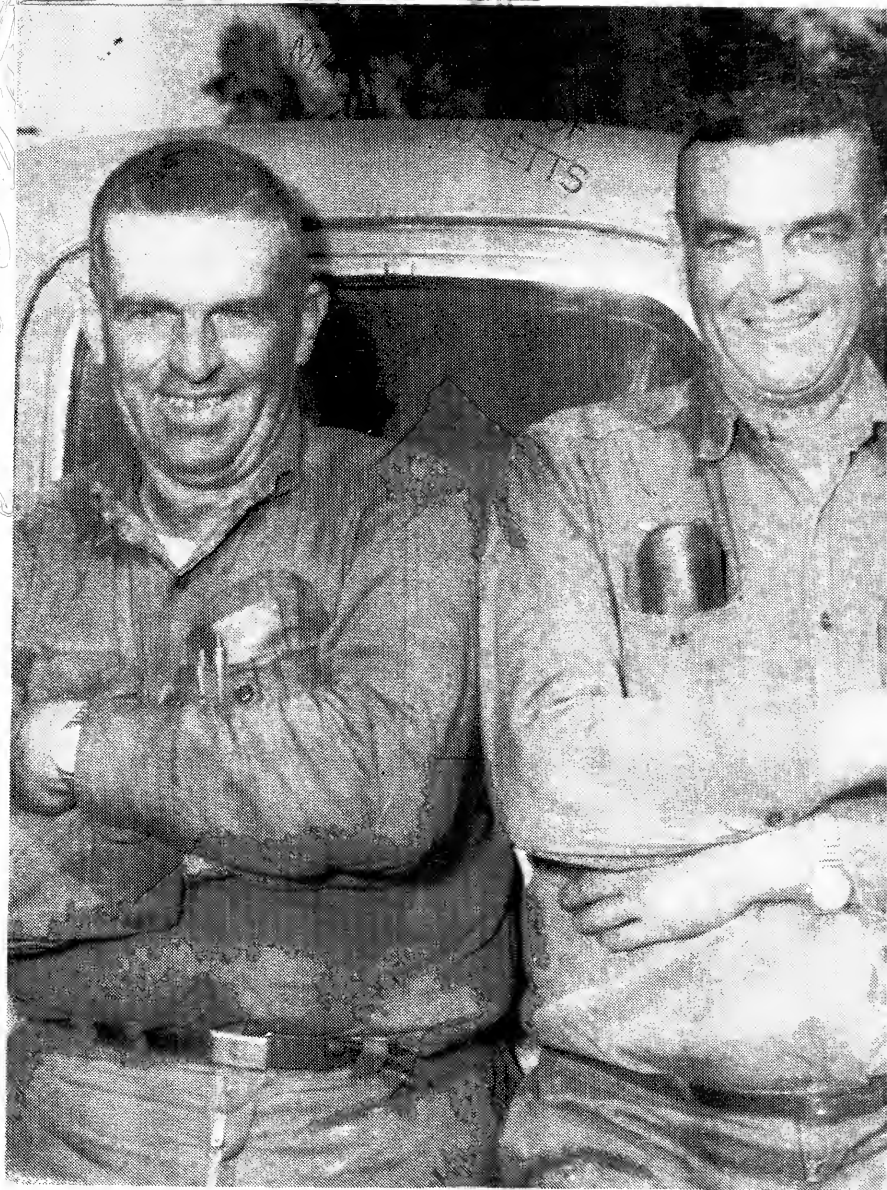
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MAY 2



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Institute Alloted Funds For Market Development

A Europe Will Include Dehydrated, Fresh and Canned Cranberries; G. T. Beaton, Delegation of One, Left May 9.

A delegation of one of Cranberry Institute left for Europe May 10. This was Gilbert T. Beaton, designated as export department, Ocean Spray. Institute president Orrin G. Colley had intended to make the trip also, but was unable to because of a project concerning dehydrated cranberries. These berries are to be furnished at the expense of the "Cooperator," in this case Cranberry Institute or Industry.

Mr. Colley has been notified the Institute has been alloted funds by Foreign Agricultural Service of SDA equivalent to \$50,000,000 to

make arrangements for the introduction, test marketing and utilization testing of dehydrated cranberries. Cranberries exported in this form, are, obviously less costly in shipping

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of a product and offer to the economy of the importing country, the advantages of adding to the employment through labor and equipment involved in this utilization.

Institute has also been notified that funds have been made available to the institute in the equivalent to \$30,000 to carry out work which has already been initiated in the United Kingdom and Europe for fresh and processed

berries.

Mr. Beaton was scheduled to leave Boston May 10 for London to spend ten days in London, Manchester Liverpool areas working with the trade on both fresh and processed cranberry importers, consulation with U.S. Agricultural Attache and staff at U.S. Trade Center in London, discussions with the Institut advertising agency on merchandising and promotional programs for both canned and fresh cranberries

The tripp will include visits to Brussels, Belgium to contact importers and to consult with the agricultural attache. At Rotterdam contact will be made with Holland's largest chain store, and also the Rotterdam office of the Poultry Institute of American and the agricultural attache.

At Hamburg he will work with the importer of canned cranberry sauce and attempt to develop sales promotion to the West German market

(Continued on Page 20)

Cranberry Growers DRIVE



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Mass. Cranberry Station and Field Notes

by CHESTER E. CROSS
Director

Weed-killing Progress

The work of Irving Demoranville is yielding fruit. Massachusetts cranberry growers this spring have four registered chemicals with which to combat weeds that have been increasing at an alarming rate since 1959. Fully registered are chloro-PC which is applied at rates of 50 to 100 pounds of 20% granular per acre, and Simazine 80W which is applied at 3- $\frac{3}{4}$ to 4 $\frac{1}{2}$ pounds in 300 gallons of water per acre. Under experimental label, with accompanying restriction in the amount that can be sold, are Casoron 4% granules, which is applied at 150 pounds per acre, and Alanap-3 used at the rate of 4 gallons in 300 gallons of water an acre.

All four of these weed-killers have special uses, all are helpful on early-water bogs in the spring of the year, and none of them should be used after "late-water." It is hoped that continued research we will find some compounds that can be used safely after "late-water" and possibly in the summer months.

Winter and Frost

Winterkilling of cranberry vines in Massachusetts is more widespread and severe than was suspected earlier. We guess the damage will reduce the '63 crop by 5%, but this is only a guess. The bogs in general look like a long hard winter. The fact that an unusually large acreage was damaged since the last harvest undoubtedly adds to this appearance.

On the other hand, the exposure to the winter has served to restrain the buds from swelling. Many are now breaking dormancy and some buds will soon be at the 2 millimeter, or 5° stage. But this has come slowly and frosts to date have done no damage and frost flooding and sprinkling have not been necessary.

One curious feature has been noted

— bogs that were fertilized late last summer or last fall appear to have been less severely injured by winter-kill than bogs that went into the winter unfertilized. Growers having observations on this point are requested to write them in to the Experiment Station.

Personal

Dr. Bert M. Zuckerman is back from his sabbatical leave in Israel. He had a busy and fruitful time there, is busy filing reports, and has already submitted a journal article for publication on research accomplished by him in Israel.

Marketing Committee Reviews Year's Work

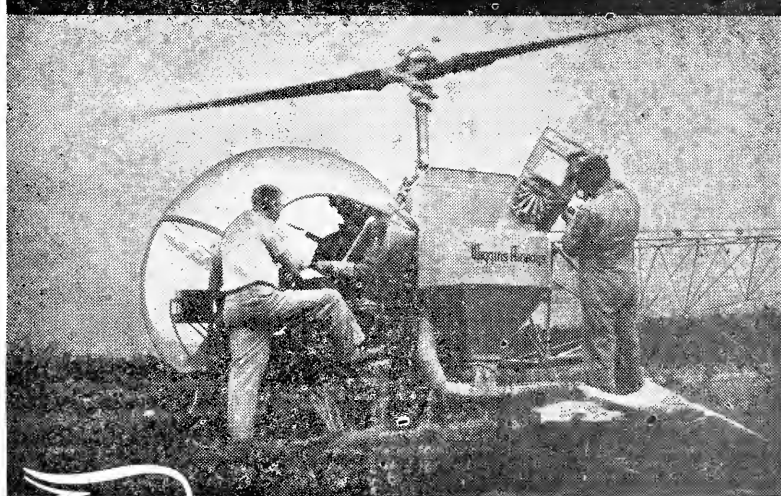
Cranberry Marketing Committee with all principals and all but one alternate present, held an all-day meeting at Holiday Inn, Haddonfield, New Jersey, May 7, discussing a review of the first year of the marketing order administration. The session was mostly constructive and objective, with a very minimum of debate.

By a 7 to 0 vote on motion of John C. Decas, of Wareham it was decided to return to all handlers, to, in turn, reimburse their growers to the amount of \$50,312.61, which will amount to approximately 4 $\frac{1}{2}$ cents a barrel for each grower. This was an amount collected by the committee to enable it to "buy back" berries from the restricted pool of 12 percent to place in the "free" pool, but which were not so purchased. Approval of the USDA is necessary before this may be done.

Figures released by Tony Briggs, marketing order manager showed that the final crop in barrels handled amounted to 1,301,423; of this 457,518 barrels were sold fresh and 295,142 in processed form; number of berries sold to the committee to replenish the free pool was 4,113 barrels.

The "set-aside" or reserve pool amounted to 143,615 and this was disposed of by destroying, exporting,

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Cranberry inventory of the industry was placed at 315,798 barrels remaining in the hands of handlers in frozen or processed form. In answer to a question by Mr. Decas, George C. P. Olsson, president of Ocean Spray and chairman of the committee said he was confident this "carry over" would be substantially reduced by sales between now and September first, the start of a new season, and the actual carry-over at that time would be considerably lower than it was last season.

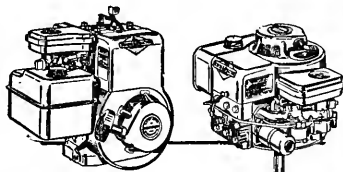
Present besides the committee alternates were three representatives of the USDA and Charles A. Doehrlert, marketing order "fieldman" for New Jersey. Meeting began at 9:30 a.m. and lasted until about three p.m.

Next meeting of the committee is to be in Wisconsin, in compliance with the committee plan to meet in different areas, this being at Wisconsin Rapids August 27, just prior to opening of the fall harvest. At the time the important decision of the "set-aside" for the 1963 crop will be made.

**BANDON FESTIVAL
 PLANS BEGUN**

Bandon (Oregon) Cranberry Festival Association has already held its first meeting in preparation of its annual fall harvest festival. First meeting was to elect officers.

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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of May 1963 - Vol. 28 No. 1

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

April Starts Warm

April began rather warm but with some cold days, particularly the 4th and 6th which were preceded by a freak gale of winter. First week ended about normal, but with conditions very dry with a high woodland burning index up to 130, which caused authorities to urge caution. There were as many or more than 100 brush fires burning in the state in a single day. This is unusually early for such extreme dryness.

Residents of the "Cranberry Corner" of Massachusetts were startled upon arising on the morning of April 8 to find there was a heavy snow flurrying in progress. This lasted only a short time.

"April-Showerless" April

The month continued extremely dry and generally rather windy, a tinder-box condition developed over all parts of New England, with southeastern Massachusetts no exception. On April 16th Mass Governor Deane issued a decree forbidding any incinerator and out-door burning. Acres of brush and woodland had been burned over, and in the week preceding the 16 it was estimated there were no less than 1000 fires in the six-state area. It was called the worst spring drought in many years.

Showers Help Slightly

On the night of the 17 there was some general rain the first such since March 22, not far from a

month, but this totalled only .36th of an inch as measured at Cranberry Station with slightly lesser and greater amounts at other places. Rain was accompanied by thunder and lighting. There had been a trace on March 27 and again on April 3, 19th of an inch.

No Crop Injury

Dr. Cross of the station said that to the date of the 17th there had been little if any injury to the potential crop, but there were indications there might be injury to lawns and shrubs, particularly the former. Temperatures for the month to the 19th were a plus 37 (Boston). The rain of the night of the 17th only alleviated conditions for a brief period, the ground being almost powder-dry.

Fires

Worst woods fire in the cranberry

area occurred in the afternoon of April 22, when a blaze started in the Myles Standish Reservation in Carver-Plymouth. This burned over a mile-front three miles deep. It was finally checked at the edge of the Barker cranberry bogs near half-way pond, but the bog or bog buildings were not damaged.

It was reported more than 1000 men fought the blaze, coming from 30 communities, including help from Otis Air Force Base on the Cape and the Barnstable County Patrol Plane. Blaze and smoke could be seen as far as Boston 35 miles away and a pall hung over the Cape.

Some Relief

An easterly wind came on the 23rd and brought several hours of most welcome rain, but again this was no "drought-ender," as only .26th of an inch fell as recorded at

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Box S, C, Cranberries Magazine,
Wareham, Mass.

Cranberry Station, with about the same at other points. It was welcome, but wasn't nearly what was needed. Rain brought an abrupt turn to colder weather.

Heavy Rain Last Day

April waited until the very last day to get a real rain and then 1.65 inches came down. This brought the total for the month to only 2.55, with the average 3.85 inches.

Growers had irrigated some during the month and many had also put on water again to hold late in the effort to improve quality fruit. There seemed much attention being paid to this. The rain also improved the water supply situation for the coming frost season, as reservoirs were getting low.

Although there were frosts about every night the latter half of the month there were no frosts with potential of doing damage to the bogs and no warnings were issued.

Month Warmer

Month was slightly warmer than normal, the total plus being 28 degrees. There was a remarkable succession of bright sunny days. Dr. Cross called the month in general a favorable one for crop prospects, and the dryness added to the factors favoring improving keeping quality, even though the temperatures did

not.

The season as a whole at end of April was about a week or ten days behind. Growers were unusually active in bog work, including the experimental application of the new herbicide Caseron and in installing sprinkler systems.

WASHINGTON

Crop Prospects Very Good

Dr. Charles C. Doughty, superintendent Long Beach Cranberry Experiment Station at end of April said crop prospects look very good. There was some cold weather injury during the winter but there were enough live buds to make a good crop, barring the usual hazards of sudden heavy frost or a poor pollinating season. In Washington bogs are not winter flooded but growers generally rely on sprinkler systems to control freeze injury, turning on the systems when the temperature falls to 34 degrees or lower and running them as long as the temperature is down.

Rainy and Chilly

Weather had been cloudy and rainy. In April there were only about half a dozen days in which there was not at least a trace of precipitation. Such a situation has

made the application of granular herbicides rather difficult. Minimum temperatures on the bogs were 23 on April 1, 29 April 9, and 30 on April 15, 31 April 19. Maximum temperatures had been above 55 only on 6 days. Rainfall totaled about 5 inches.

Bumble Bees

An attempt to develop artificial nests for one of the native bumble bees, which is the best pollinator in Washington are continuing. A number of nest boxes were set out in 1962 and there was fair success in getting bumble bees to use them. On the basis of last year's experience, Dr. Carl Johnson of the Department of Agriculture WSU is trying a number of different sites, best sizes, etc. Several early spring-blooming shrubs have been planted to aid the bumble bees in getting established. As of May first the bees had been in the area approximately three weeks and were establishing nests.

WISCONSIN

April Very Cold

April did not bring the flowers as temperatures and precipitation continued below normal. The month started out above normal in temperature with very little precipitation, but ended cold with a substantial snowfall the last week of the month. Temperatures were from two to three degrees below normal and precipitation was only half of normal. Coldest readings were nine degrees above on the 18th and 30th, while the warmest was 80 above in southern Wisconsin on the 17th. Heaviest precipitation occurred on the 22nd when up to 8 inches of snow fell in central Wisconsin and $\frac{1}{4}$ to $\frac{1}{2}$ inch of rain on the 28th. The cold readings the last day of the month set some all time records and most areas also reported snow showers during the night. The outlook for May is for normal precipitation and temperatures.

Ground Frost Goes

Frost disappeared over the southern half of the state by the end of the first week in April due to the lack of snow and above normal temperatures. Only six inches remained in the north and this disappeared by the middle of the month. Very

(Continued on Page 21)

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Four Weston Boys of Carver, Mass. All In Cranberry Growing, Bog Construction

Brothers are Third Generation Cranberry men — Operate Considerable Acreage — Do Construction other than Bog Work — Roger was Inspector for American Cranberry Exchange

It is rather unusual to have four brothers all take to the cranberry business as a way of life. And, it so happens these four Massachusetts men are third generation growers, and they came into cranberry bogs on both of their parents.

They are the Weston brothers of Carver. They not only operate considerable acreage of bog, but are in the heavy construction business, with probably the main portion of this being in cranberry bog building, rebuilding and making improvements.

They are: Homer F., born in 1911; Roger V. 1913; Winston A., born in 1915 and Myron T., born in 1923. They are the sons of the late Frank F. Weston, a well known grower. Incidentally, they were all born in an ancient structure on France Street at a place historically known as Pope's Point, where once was located a bog iron foundry. Carver in its earlier days had several such foundries or furnaces, and areas from which the bog ore came have in some instances since become cranberry bogs. This house was said to have been a rooming house. Here were, they recall in their very young days the bedrooms with rows of hooks for the workers to hang their clothing.

Although they have spent their life in Carver, the Weston boys were technically born in Middleboro, as this extreme edge of Carver was then a part of Middleboro. But, the town boundary lines were straightened and the area was made a part of Carver.

All went to grade schools in Carver and Homer went to Carver High School (at one time Carver had a high school) for his freshman year, the last year it was a school, and he says their mother was at the same school the first year it became a high school. Roger was graduated from Plymouth High, while the others went to Middleboro High, next adjoining town.

Grandfathers Both Growers

The first Weston grower was their grandfather, Seneca Thomas Weston. He had a bog of about 8-10 acres built for him. This was in the same Pope's Point area, but at that time the situation of the bog was Middleboro. The maternal grandfather was Theodore Thomas Vaughan, who also owned cranberry bogs. The father

of the Westons, Frank F. as well as being a cranberry grower was "highway surveyor," or superintendent of highways for the town of Carver. He died in 1945. Before his death he had acquired a little construction equipment, and had been doing some work along that line.

When the boys finished school it was perhaps only natural that they go into business begun by their grandfather and father and they became active in both cranberry grow-

ing and cranberry bog construction work and also highway construction. They built up both businesses.

Today they operate Weston Bros., Inc. doing construction, trucking, and contracting business and also growing cranberries. At first they operated as a partnership, but after a while incorporated. Winston is president, Homer is general manager and treasurer, clerk Myron secretary and all are directors.

The corporation owns and operates about 50 acres of bog, about 20 of these being in the Pope's Point area, either in Carver or Middleboro and 30 in Duxbury in two pieces. These are in West Duxbury and "Tinkhamtown." Production has ranged from 2000 to 4000 barrels a year.

The brothers, through their mother owned one-third of the T. T. Vaughan bogs, consisting of about 35 acres, scattered through the Carver Center area. They recently bought their uncle's (Herbert J. Vaughan) shares, giving them two-thirds of the



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T. T. Vaughan Bog Company. The other third belongs to the Lillian Atwood Estate. With this purchase, they took over the management of the company which had been handled by Mr. Vaughan since his father's death some 30 years ago.

All these holdings make the Vaughan brothers important in the Massachusetts production picture.

All Do Bog Work

The bogs are divided about equally between Early Blacks and Howes with a few McFarlins. Most of the bogs have good winter and frost flowage, although a small percentage must be classified as dry bogs. All four take part in bog management and in doing bog work. On frost nights they split up, as a rule, two going to Duxbury and two looking out for the Pope's Point area bogs.

As every cranberry grower knows the cranberry business has had lots of "downs," and so the Westons have built up their construction business as a necessary part of earning their living. They have a lot of heavy construction equipment; flat beds, shovels, bulldozers, trucks, front end loaders.

The Weston Construction Company has done highway work in Carver, some in Middleboro, some in Rochester and recently work on the Cape in Mashpee. They have also worked on highway jobs in private housing development. This highway work is important to them, but a little more so is the cranberry bog construction work.

Build And Rebuild

Most of this type of work has, in recent years been in Massachusetts in the rebuilding of bogs and in making improvements. They have, however, made bog from virgin swamp. This includes about three acres in Kingston for Stig Rosenberg and about the same amount for Seth Mallie in Carver. They rebuilt bog for the Fuller-Hammond Company in Norton and East Wareham and for Nathaniel Wing in Wareham. Frank Cole and Lawrence Cole in Carver and Lawrence Pink in Middleboro, relatively recent. They have also done a great deal of dike work.

The brothers design and manufacture and install their own prefabricated flumes, these being designed to county specifications. They

also do pump work.

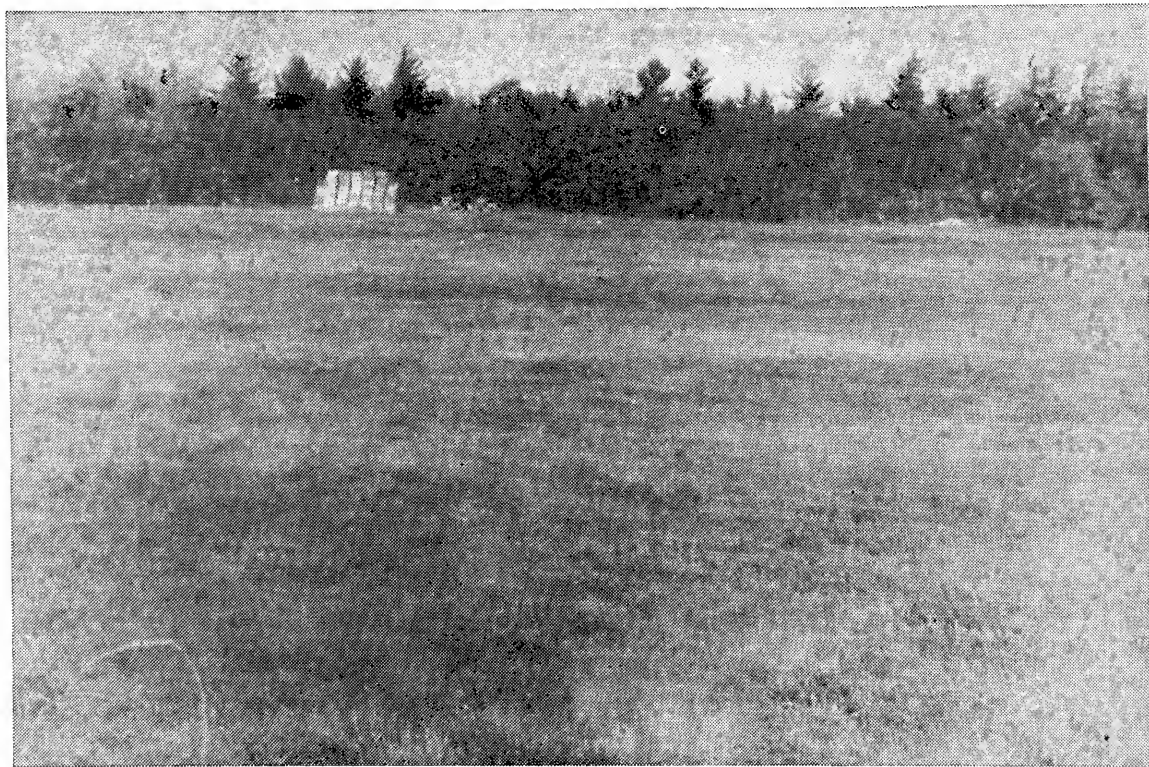
Sell Through Ocean Spray

At one time they sold their fruit through New England Cranberry Sales Company and the American Cranberry Exchange but when that went out of existence they "tried" independents. "This didn't work out to our complete satisfaction," says Homer. We joined Ocean Spray and are still with the cooperative.

Roger, after graduation from high school went to Burdett College in Boston and studied business administration. Then ten for years he worked for N. E. Cranberry Sales and for the American Cranberry Exchange. He was an inspector for about six years and his travels took him all over the country. For three years he conducted the Chicago store for Eatmor. For a time he visited Wisconsin about twice a year.

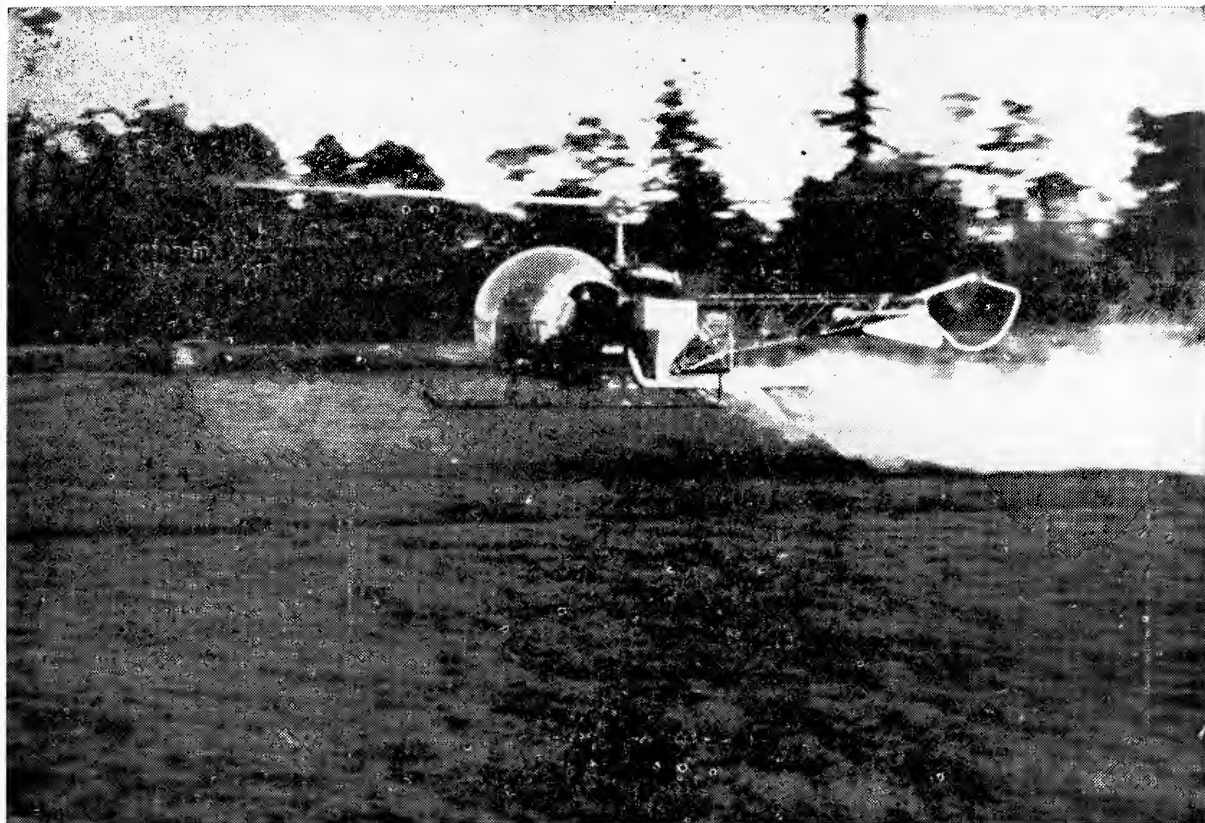
Both of these brothers are very enthusiastic about the abilities of the late A. U. and C. M. Chaney who in that order headed the Exchange. "A. U." says Roger, "was an extraordinary man. He had the ability to get along with the growers and also with the trade." He could

(Continued on Page 10)

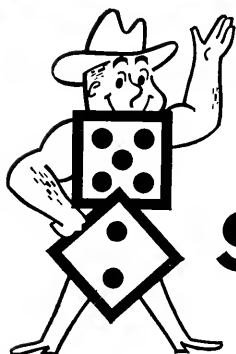


Weston Brothers' Thomas Bog, near Pope's Point.

(CRANBERRIES Photo)



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CHEMICALS**

Weston

(Continued from Page 8)

sell fresh cranberries." This checks with the recollections of all growers who were in business when the Exchange was in existence.

Incidentally, Roger in another cranberry tie-in married the daughter of a large cranberry grower, the late Eldred Mosher of Head-of-the-Bay in Bourne. The Westons have done a lot of rebuilding of the Mosher bogs, now owned by David Mann. The Roger Westons have one daughter, the Homers, two sons and a daughter, the Myrons two sons and the Winstons two sons and two daughters.

Myron saw service in the second World War being in the medical corps serving for three years, including duty under fire in the South Pacific. Winston was in the See Bees doing duty in Alaska.

Hold Town Positions

Homer is the Carver chief of the

Fire Department. Roger has been chairman of the Carver Finance Committee and is now co-chairman. The Westons are members of the Cape Cod Cranberry Growers Association and Roger a member of the Southeastern Cranberry Club which meets at Rochester. Roger is much interested in football and baseball and Homer goes hunting each fall, usually to the Berkshires.

In operating their bogs, they try to maintain a regular sanding program, seeing that each bog gets a sanding "every four years, at least." But this is sometimes difficult, Homer says, "in view of what cranberry prices have been the past few years." The brothers have built their own sand spreader and are planning to build another.

They keep after weeds "as much as possible," and have used kerosene and Stoddard and the new herbicides, "Whatever the Cranberry Station recommends," says Homer.

They believe in giving their bogs good drainage, and in general try to keep these properties as dry as is consistent with good bog management.

The insecticide work is done from the air by Ben Atwood of Hanson using straight wing. They rent bee colonies for pollination.

Are the Weston brothers of this old Massachusetts cranberry family discouraged at being cranberry growers?

Not Discouraged

"No" agree both Roger and Homer, "We are certainly not ready to throw in the sponge, if that is what you mean. "Maybe I shouldn't say this," declared Roger, "But I don't see how the business can get much worse, so I'm looking for it to get better."

Asked what they thought the effect of the Marketing Order will be they said that was something which will be determined as time goes on.

"Will there be a fourth generation of Weston growers?"

"That is also something which time will have to decide." It does happen that a son of Winston Frederick is working, now on cranberry equipment for the corporation.

The Westons harvest with five Westerns and do repair work on these for themselves and others as well as other cranberry equipment repair work.

They maintain a machine shop on France Street, next to the old house now tumbling down, in which they were born. All four brothers with their families, live in a close area of Route 58 in Carver at the head of Savory lane.

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Industry, Associates, Pay Tribute To Marcus L. Urann

The following are tributes to Marcus L. Urann from throughout the industry and elsewhere from those who worked with and knew the founder of Ocean Spray Cranberries, Inc., many over a long period of years.

It was not until his later years that I had the opportunity of making the acquaintance of Marcus L. Urann. I was continually impressed with his absorbing interest and complete grasp of any business or problems connected with cranberries. I can well imagine how this absorption and dedication of interest was intensified during the years he organized and built the business, now Ocean Spray Cranberries, Inc.

He was tireless in his efforts and drew no limitations when it came to the interest of cranberries and the people who grew them.

He was a man of vision and outstanding ability, one of a breed of men fast disappearing from the scene who are capable of making decisions, based on know-how and experience, without relying on the recommendations of groups of



Marcus L. Urann as a younger man

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There was also a gentle side to his nature, and his many kindnesses and considerations can be marked in the successful people today whose opportunity, encouragement and understanding came from Marcus L. Urann.

Right up to the moment of his death, he gave of himself.

GEORGE C. P. OLSSON

Plymouth, Mass.

President, Ocean Spray
Cranberries, Inc.

How does one choose what to say of a man about whom there is so much to say. As I groped for words, his own words kept coming to my mind. The principles and the philo-

sophy he lived by are revealed again and again in his letters, his writing his speeches. And so, this man who spoke so eloquently for himself, has written his own epitaph. The words, which he uttered so frequently, will have a familiar ring to those who heard them through the years.

"Our duty is to lift, not lean; build, not destroy. I am determined that all that is within me shall be given to cooperate with growers who will do all possible to explain what appears to me to be the economic principles upon which the industry can soundly grow and prosper. Others may accept or reject, but for me, I will have my self-respect well knowing that I have done

best for the good of the industry and those who compose it."

... June, 1930

upon the founding of

Cranberry Canners, Inc.

"No individual can materially improve his own position independent of others."

... June, 1940

"There are two classes of people: Lifters and Leaners."

"We have no right to unusual profit. 'The laborer is worthy of his hire.' To fulfill our duty in providing food, to make a legitimate profit, and to avoid speculation and gambling which may destroy the success of both, requires the utmost skill, judgment, and foresight of every cranberry grower."

... June, 1940

"That man is a failure whose hand is seen in his handiwork."

"Cooperation is a way of life, and those who believe in it should work together rather than working in individual groups, no one of which can be strong enough to do a real job."

... February, 1942

"Up to the neck every person is worth just about the same. It's what's above the neck that makes the difference."

"A house divided against itself will fall, and if cranberry growers are divided they will fail."

... February, 1941

"We reap what we sow. If we sow seeds of cooperation and unselfish devotion to the cause of mutual benefits to all our fellow growers, we share equally with them in the harvest; but if we sow seeds of personal gain and disregard our fellow growers, then sooner or later the hurricane strikes and we all go down."

... October, 1941

"A preacher can show a man the way to Heaven, but he can go to Hell if he wants to."

"Nearly everything we are in life comes from within. If we live right and think right, the emotions springing from our hearts are reflected in our happiness, our contributions to society, and therein lies the ecstasy of living."

MISS ELLEN STILLMAN,
Hanson, Mass.

Former Ocean Spray vice president in charge of advertising, for many years close co-worker of Mr. Urann and currently director and chairman of advertising committee.

I was grieved to learn of the death of Marcus L. Urann who during his lifetime probably contributed more than any other individual to the development of the cranberry industry. It has been my extreme good fortune to have known and have the opportunity to be associated with this outstanding man for more than 30 years.

Through this period I developed a great affection, a great respect, and a great admiration for him as a man and a leader. He devoted a great deal of time and effort to helping people and assisting them in their many and varied problems.

His work with cranberries was one of dedication. It was his main interest and actually his whole life.

Cranberry growers throughout the

land, colleagues, and those who knew him intimately will miss Marcus L. Urann. We will all miss him, his inspiration, his courage, his tremendous personality and his diligent efforts on behalf of the cranberry industry.

ORRIN G. COLLEY,

President, Cranberry Institute

A leader of the growers' cooperative now known as Ocean Spray Cranberries, Inc., and a former member of the Board of Directors of the Farm Credit Banks of Springfield, Mr. Marcus L. Urann was convinced that through the unity of cooperative marketing farmers could achieve a better living than would be available to them if their marketing efforts were divided. He was a dynamic force in promoting cooperative marketing in the cranberry industry. No salesman has ever been more convinced of the goodness of his product. No salesman has ever been more determined

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E. S. Service Center	Brockton	Tel. Juniper 6-4055
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Eastern States Farmers Exchange

Headquarters: West Springfield, Massachusetts

that there should be 100 % market absorption of his product.

J. ROBERTS DOE,
Executive Vice President
Springfield Bank for
Cooperatives

Over the years I knew and worked with Mr. Urann, I found he was a man of great vision and understanding — always planning ahead for the future of the cranberry industry and for the best interests of every grower.

FRANK P. CRANDON,
Acushnet, Mass.

Past President, Ocean Spray Cranberries, Inc. and now a director.

It is with deep regret that we heard of the death of M. L. Urann, a colorful figure in the cranberry world, he was well known for his single-mindedness of purpose and devotion to the cause of the cranberry grower.

Although semi-retired of late years, it was largely his vision and foresight that established the basis of our cranberry industry as it is today.

PHILIP H. GIBBS
West Wareham, Mass.
President, Cape Cod
Cranberry Growers Association

It is seldom in an industry that a leader comes along possessing the

ideals, the foresight, the capabilities and the courage of Marcus Urann. Long before the days of the super-market he was aware of the need for the prepackaging of perishable farm products. Once convinced of its application to the cranberry industry he dedicated himself to the creation of our marketing cooperative. This insured the growers the service and profits of their own organization and gave to the American public cranberry products of a high quality and excellent variety. There can be no greater commemoration of his efforts than the living institution that bears the label — Ocean Spray Cranberries, Inc.

EDWARD V. LIPMAN
Ocean Spray,
New Jersey

"The cranberry industry has suffered an irreparable loss in the passing of Marcus L. Urann, who was the father of the cranberry processing in the United States, as well as being a leader in the promotion of fresh fruit through his long years with the association with the American Cranberry Exchange and later, of course, with the National Cranberry Association, or Ocean Spray. His knowledge and foresight is largely responsible for the development of the cranberry industry in the United States to its present high state of intensive development.

His advise and help will be missed by the entire cranberry industry and certainly no one will be able to take his place or have his knowledge and foresight which has benefited all of us."

VERNON GOLDSWORTHY
President Cranberry
Products, Inc.
Eagle River, Wisconsin

The short time that I knew M. L. Urann and the few times I had the opportunity of visiting and counseling with him I can only say that I enjoyed him immensely. He was a man of great vision and certainly plenty of energy.

With me being new to the cranberry industry he was always very kind to me and on the few occasions when I did meet him at conventions he did remark he liked the energy I was putting into my work and of course this was exactly his character as he was always very early in the morning working either with his brokers or the trade and know he put in many a long hour. The cranberry industry will miss him.

BEHREND G. PANINKUK,
Wisconsin Rapids, Wisc.
President Wisconsin State
Cranberry Growers
Association and President
of Indian Trail, Inc.

It has been said that any major accomplishment is the lengthening shadow of a man and it has been in the development of the cranberry industry. Here we have seen the repeated occurrence of the influence of this remarkable man, Marcus Urann.

To have welded together in

(Continued on Page 16)

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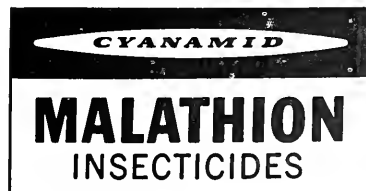
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common undertaking for the good of all, such a group of rugged individuals as the cranberry growers from all parts of the country is an accomplishment which must have seemed to be at the start impossible.

This undertaking in which Marcus Urann and John Makepeace played leading roles, represent an accomplishment for which every cranberry growers has reason to be grateful.

I am glad to add my small voice to those of Mr. Urann's friends in tribute to his business genius and personal drive which have resulted in still-accuring benefits to all of us engaged in the cranberry industry.

ALDEN C. BRETT,

Belmont, Mass.

Trustee of University
of Massachusetts and
cranberry grower

I have been a close acquaintance and friend of Mr. M. L. Urann for the past 40 years. I cannot but marvel at his accomplishments in building up the cranberry business and his life-long work — Ocean Spray.

Starting at zero, through hard work and intensive promotion he brought the consumption of canned cranberry sauce up to more than five million cases before he retired a few years ago.

We, in the cranberry-growing business, should be eternally grateful for his long life of untiring effort in our behalf.

GUY N. POTTER,

Wisconsin Rapids, Wisc.

former director of

Ocean Spray and grower

Mr. Urann had a vivid imagination and the courage and strength to use it for the cranberry industry

that he loved so much.

DAVID PRYDE,

Grayland, Washington

Ocean Spray director

With the passing of Marcus Urann, the curtain falls on an epoch in the cranberry industry. Those of us who witnessed the early days of processing and marketing cranberry sauce are fully aware of the tremendous role played by Mr. Urann. In spite of many failures and countless discouragements his persistent efforts were finally rewarded and we have seen the processing outlet become the predominant factor in the sale of our crops.

CHARLES L. LEWIS,

Shell Lake, Wisconsin

Former Ocean Spray

vice president and grower

Without question the late M. L. Urann was one of the most controversial figures in the industry, but nevertheless his plans and policies the past two decades had pronounced effect on each and every cranberry grower in the country. In his passing the industry has lost a pioneer leader and builder.

L. A. SORENSEN

Wisconsin Rapids, Wisconsin

Cranberry consultant and

manager, former Midwest

Cranberry Cooperative

The death of Mr. Urann serves to remind the entire Cranberry Industry of his pioneering spirit devoted to the manufacture and distribution of cranberries in processed form through the medium of a grower cooperative — Ocean Spray. His foresight, enthusiasm and tireless efforts resulted in major contributions towards the welfare of a cranberry growers — for he was first a grower. For the dedication himself to a great purpose he will long be remembered and cherished by many.

RUSSELL MAKEPEACE

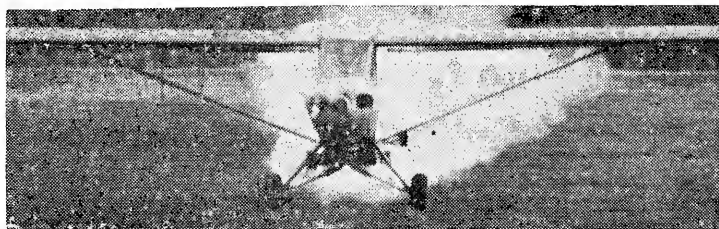
Marion, Mass.

Pres. of A. D. Makepeace Co.

As President of the American Cranberry Growers' Association, would like to express the condolence of this organization to Mr. Urann family on the passing of Mr. Marcus L. Urann. We feel that Mr. Urann contributed much to the development and progress of the cranberry industry.

Personally I would like to say that although my father Theodore Budd was President of the American Cranberry Exchange and sometimes was in bitter opposition to its policies, upon learning of Mr. Urann's passing, he expressed to me a feeling that Mr. Urann had the type

(Continued on Page 18)



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ARNOLD
Manager

Young Manitowish Water Cranberry Grower Is Director Of Wisconsin State Growers Association

"Dick" Indermuehle Is Active In Program to get broader Cranberry Research by University of Wisconsin.

Richard "Dick" Indermuehle of the newest of Wisconsin cranberry development areas, Manitowish Waters, is one of the directors this year of Wisconsin State Cranberry Growers Association. And as such is one of the younger growers of that state who is becoming active in general cranberry affairs.

He and his father, Herbert, operate Alder Lake Cranberry Marsh in family partnership, having about 100 acres in vines, there being about 1/2 in regular MacFarlands, 3 of select or "Bain" MacFarlands and the remainder in Searles Jumbo. The marsh was started in 1946, and was expanded for four years until the last bed was planted. At the moment there are no new beds under development, but it is hoped to put in another area of about 8 acres.

The marsh is completely flooded by pumps, of which there are four, water coming from and being returned to Little Trout Lake. Harvest has been by machines and the harvest boats for the past three years. Last summer a 40 x 80 foot addition was placed on the warehouse, which gives badly needed storage room; the sorting room is in the process of being rebuilt and a third mill will be added to the present two.

"For the past few years we have been averaging a little over 300 barrels to the acre," Dick says, "but we hope to get this up from now on. We have been having some losses, a little hail damage and last year, of course, there were very adverse weather growing conditions in Wisconsin."

While "Dick" gives his average production as only a little more than 100, individual acres have exceeded 300 barrels to the acre. A regular sanding program is carried out, fertilizer is used, and the Indermuehles keep their own colonies of bees.



Dick Indermuehle

Before going into the cranberry business the elder Mr. Indermuehle was in the dairy business at Plainfield, Wisconsin, producing as much as 27,000 pounds of milk and was one of the largest dairymen in the state.

After being graduated from high school Dick attended the University of Wisconsin for two and a half years. He was in the U. S. Army for three years and then returned to the university for the last year and a half. In 1955 he received a B.S. degree from the College of Agriculture, with a major in horticulture. Since then he has been engaged full time at the marsh.

He is married and has two children, Susan, 5 and Richard, 4. Mrs. Indermuehle is a registered nurse, obtaining her training at the University School of Nursing in Madison. The Indermuehles live at the marsh side and so does his father.

Dick is a member of Minocqua Lodge No. 330, A.F. & A.M. His wife and he are members of the Community Church (Presbyterian) of Manitowish Waters and at present he is serving as president of the board of trustees.

He is a member of the committee of the state growers association which is working toward getting more research and experimental work done on cranberry production by the University of Wisconsin. He feels it is very important for the University to develop a broader program for research on the different phases of cranberry growing in Wisconsin.

Young Indermuehle expects to delve more deeply into this aspect of Wisconsin cranberry progress at a little later date, with material for publication in *Cranberries*.

The Alder Lake Cranberry Marsh production is handled through Vernon Goldsworthy at near-by Eagle River.

TOUGH WINTER ON HONEYBEES

F. R. Shaw, Dept. Entomology, College of Agriculture, UMass, writing in "Fruit Notes," in reference to winter of 1962-63 as concerns honey bees says it is considered one of the most severe in many a year. In Vermont heavy winter loss was anticipated and data from Massachusetts indicate losses will be above average. One bee keeper reports a 5 per cent loss, and the writer may anticipate a loss of from 10 to 30 percent above normal winter loss.

Problem is made worse by the lateness of the spring, and colony build up may be slower than normal and that colonies may dwindle in strength if they cannot replace the old bees that have overwintered.

"It would seem advisable for fruit growers who depend on rented bees for pollination, to control beekeepers in order that sufficient bees for pollination may be available. Those that keep their own colonies would do well to check colony conditions. If colonies appear to be light in weight, they can be fed. For complete directions on spring care of bees, Mass. Extension Service Leaflet 148, "Beekeeping is available."

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TRIBUTES

(Continued from Page 16)

of qualities which were necessary to promote the cranberry industry and that he made many worthwhile contributions.

C. E. BUDD, President
Mt. Holly, New Jersey

The news of the passing of M. L. Urann was received by me with much regret. Back in 1922 when cranberry canning was still in its infancy, it was my privilege to visit his home cannery, accompanied by H. F. Bain and the late Doctors H. J. Franklin and Neil E. Stevens. He had just installed a belt, as I recall, was in overalls and working hard. Even then he was thinking of terms of mechanization for greater efficiency. Franklin, Stevens, Bain and I spent about two hours or more in the small plant but I am sure that none of us dreamed that some day a large part of the cranberry crop would be marketed in cans. That was too much for us. It proved Mr. Urann a man of great vision.

He made a great contribution to the cranberry industry.

D. J. CROWLEY,
Long Beach, Washington
Former director, Cranberry
Blueberry Experiment
Station, Washington

Even as the name of Thomas Edison is associated with the electric industry and Henry Ford with automobiles, so the name of Marcus L. Urann is almost synonymous with the cranberry industry. He did not invent cranberries, or even first discover their flavor. His is not the only great name in cranberry history. But no other one man has played so large a part in the development and promotion of the industry.

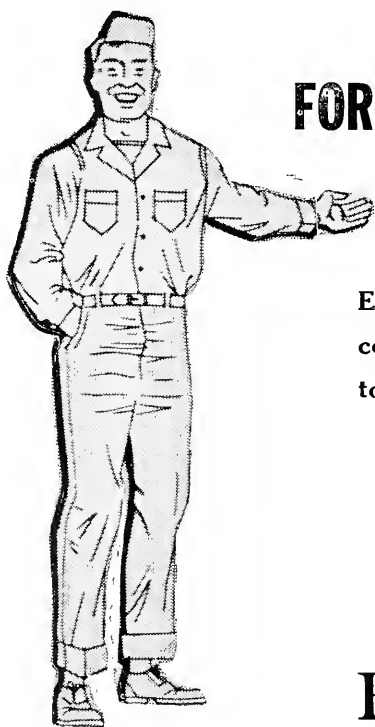
There were many elements in his makeup which contributed to his accomplishments. His influence and power are explained in various ways by different people. He was able, thorough, imaginative, shrewd, energetic, determined, tireless. But the thing about him which was absolutely unique and probably contributed most to his success was his singleness of purpose and relentless pur-

suit of that purpose. He cared nothing for money except as a source of power. He played the game for its own sake, not for the prize. He lived, thought and dreamed cranberries, eighteen hours a day, seven days a week, fifty-two weeks a year.

He knew no diversion or relaxation of effort. Obstacles and roadblocks merely stimulated his efforts to find other and better ways. In prolonged negotiations, when others took evenings off for entertainment, he held conferences with his close advisors on plans and strategy. When finally persuaded to take a brief vacation trip, he spent the time developing new ideas for extending the markets for cranberries. His proudest pronouncement was that (to use his own words) "The lowly cranberry has entered the realm of big business."

In a word, cranberries were his life, and the present nationally important status of the cranberry industry is his monument.

John R. Quarles
Boston, Mass.
Attorney



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FARMERS' EXCHANGE



Name New Manager For Ocean Spray

He is Edward Gelsthorpe, now with Colgate-Palmolive. The position vacated at Ocean Spray by the termination of service by Ambrose E. Stevens in March has been filled, President George P. Olsson announces. Edward Gelsthorpe has been named executive president and chief executive. He is currently with Colgate-Palmolive as vice president and general manager of toilet articles division. He will take over Ocean Spray management about June 1.

Born in Winchester, Mass., he was graduated from high school in Pleasantville, N. Y., and received a B.S. degree from Hamilton College. He served in the navy as executive officer aboard a destroyer

escort in the Pacific in World War II. In his ten years with Bristol-Myers he moved up from assistant director of new products to vice president, director of marketing. He went with Colgate-Palmolive in 1961. His experience includes many phases of business, advertising, promotion and sales.

Ocean Spray Notes

Ocean Spray is making another payment of \$1.00 May first on the 1962 pool and is issuing the usual 4 percent dividend on common stock in the amount of \$1.00 per share about June 15.

At the director's meeting in mid-April, it was announced that the new cocktail press at the North Chicago plant will shortly be in operation, relieving the hard-pushed press at Hanson. It is reported that juice cocktail sales are well above the quota set, by about 200,000 cases,

but the sale of sauce, including the Easter market now the third largest of the year, while above last year did not reach the quota set.

Director's at the meeting stood in tribute to the memory of Marcus I. Urann, and it was voted a resolution be spread on the company record, this to be prepared by Miss Ellen Stillman, Frank Crandon and Alvin Reid.

CRANBERRIES AT WASHINGTON CHERRY BLOSSOM FESTIVAL

During the Cherry Blossom Festival in Washington, D. C. last month, the Cherry Blossom Princess from Massachusetts, was Miss Helen H. Keith, daughter of Congressman Hastings Keith of West Bridgewater. His district comprises the largest cranberry producing area in the country.

Massachusetts food, including clams, lobsters, and scallops was flown from Massachusetts to Washington. The problem was to get cranberries into a cherry festival. It was solved by making a desert of "mock Cherry Pie," a dish of many years' standing. There was a jumbo pie 24 inches in diameter. Also served was punch with cranberry juice combined with ginger ale to make a Mock Pink Champagne.

Miss Betty Buchan of Ocean Spray plotted the entries for the entire Massachusetts food contribution.

ALANAP-3 EXPERIMENTAL

Mass. county agents sent out notices to growers that on May 2, the USDA had extended the experimental label on the herbicide ALANAP-3 for weed control on cranberries with permission to sell 2,000 gallons in Massachusetts. Cranberry Experiment Station recommendation was to use until May 10 for nutgrass, warty panic grass, spike rush, corn grass, mudrush and horsetail, 4 gallons of the material in 300 gallons of water per acre.

Caution was that; serious crop reduction may occur when using Alanap-3; we are not certain of the cause. This chemical should be used only where the bog can be protected from temperatures of 32.F. and lower or on areas where the expected

crop is small or negligible. It should be sprayed when the bog surface is moist or wet. Alnap-3 should be sprayed before May 10 and dosage should not exceed 4 gals. per acre.

Extension Service Names Hotel Agent

Board of Trustees of Cape Cod Extension Service has named the so-called "hotel agent," of Cape Cod Extension Service as being Arnold C. Lane of Osterville, well known in the cranberry industry. Mr. Lane will have the responsibility, it is reported, of working with the Cape Cod hotel, motel and restaurant industries in the fields of food science, record-keeping, general management, landscaping, turf management and public health. The new job will be under the provision of County Agent-Manager Oscar S. Johnson.

Mr. Lane, it is expected will receive orientation and training in the food service department at the University of Massachusetts, prior to assuming his duties. Mass officials have also announced they will support a training period with the Michigan Extension Service, where a similar program has been in operation for some time.

"Red" Lane has worked with Extension Service as acting county

agent, and has been associated for several years with the Harwich plant of Ocean Spray. He has also operated an agricultural supply business on the Cape and previously was a fertilizer plant manager in Missouri.

He has a bachelor of science degree from the University of Maine given in 1940 and a master of science degree in agricultural economics from Pennsylvania State College in 1942. He has served as an officer in the U. S. Navy.

MASS FROST WARNINGS

The Cape Cod Cranberry Growers Association is again this year sponsoring the telephone frost warning service to subscribing growers with the telephone answering service, in addition to the regular subscriber frost warning system and the radio stations. Answering service number is CYpress 5-2696 (Wareham).

The radio stations are WEEI, Boston, 2 o'clock in the afternoon and 9 in the evening; WBZ, Boston 2:30 and 9 p.m.; WPLM, Plymouth, 2:30 and 9:30 p.m.; WOCB, West Yarmouth, 3 and 9:30 p.m. and WBSM, New Bedford, 3:30 and 9 p.m.

GETTING AROUND

A LITTLE

Cranberries Magazine is now going to Calcutta, India to an agricultural

society there, the most distant point we have yet circulated as far as we are aware. We do have a considerable number of subscribers in Canada, have several in Europe and one in Peru. The magazine has also been read, we know from correspondence in Australia, Nigeria, North Africa and was to go to China, when the Communists took over. Also once we received a "Royal Command" from the library of Mussuloni to send a subscription, to Rome but that blew up, too.

For a very modest publication, we do get around a little, somehow.

Institute

(Continued from Page 2)
and also the office of Poultry Institute and to Bonn to contact the agricultural attache.

In Zurich, "Gibby" will again be working with importers and to discuss with agricultural attache and also visit Geneva. A visit may be made to Paris to contact office of agricultural attache to possibilities of cranberry juice in France and then to London for a check of developments, to Dublin and return to Boston, June 10.

Institute has pointed out that it believes it is timely to have this trip made at this time as increasing interest is developing in the countries mentioned for both canned and fresh cranberries. The prime marketing development will be during the fall months.

"This foreign market development," Colley says, "isn't a fairy tale as some seem to think. American products must have foreign markets, and development should go along with efforts to increase domestic consumption." He pointed to the raisin industry which invested considerable money and several years to introduce American raisins into Japan, a major use in that country being a new product to the Japanese raisin bread. He said the foreign market is now bringing greater returns to the raisin industry than their domestic sales. "The Japanese," he added "as we know are very astute businessmen. I find there is a buck to be made they find a way.

"For all we know they might develop a saki wine from cran

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berries." He said he had been in personal contact with a Japanese agricultural attache in Washington. He emphasized again that a foreign development cannot be expected to be built up "overnight," but that the cranberry industry would be remiss if it did not go along with other American producers in attempting to develop one.

Fresh From The Fields

(Continued from Page 6)
little runoff was noted as snow cover was light and much of the

water soaked in the ground.

Vines Over-Wintering Excellent

Growers in the southern part of the state started removing their winter floods as early as the 10th of the month. By the middle of the month most marshes in the state had their water off. Considerable frost remained in the heavier soil beds but this was expected to be removed with reflows in early May. Vines appeared to have come thru the winter in excellent shape. Very little winter killing or leaf drop was noted. Growers were busy applying

fertilizer and busy with other marsh work the last half of the month. Vines were being mowed for planting and it appeared about 150 new acres would be planted this year or about average. Varieties being planted were Searles Jumbo, Ben Lear, McFarlins and Stevens.

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"REST IS RUST"

In the passing of Marcus Libby Urann in his 90th year the cranberry industry lost the last of its "giant" figures, others who come to mind being A. U. Chaney, John C. Makepeace and before him his father, Abel D. Makepeace, often widely known as "the Cranberry King," in the marketing field, Dr. Henry J. Franklin in the field of cranberry research, and perhaps a little earlier, Judge John J. Gaynor of Wisconsin and J. J. White and his daughter Elizabeth of New Jersey. They towered above others.

Mr. Urann's place in the hall of fame is chiefly of course, as founder of the national cooperative Ocean Spray Cranberries, Inc., and his early vision in seeing the opportunity to sell cranberries in cans, thus led in expanding the market from a short seasonal one to a year-round. Under his foresight in 1912 he adopted the slogan "ready to serve," cranberry sauce and today Ocean Spray has risen to a place of eminence in the food industry. But he was also honored in other fields, in the law, in the national canning field, in the field of cooperatives. He was a football player, founded Phi Kappa Phi, national fraternity; in his youth was a choir boy.

Of him it has been written; "Descriptions of Mr. Urann will vary depending on who is doing the describing . . . "In business he had down-East Yankee shrewdness, but also great generosity. He helped many a young person get started in the cranberry business, backing character, not dollars."

Also, "To Mr. Urann, the cranberry business was the most interesting the most challenging, the most fascinating thing in the world. It was his recreation as well as his life's work. When he was president of Ocean Spray, evenings, holidays and Sunday mornings were spent calling the ranch managers in New Jersey, Wisconsin, Washington and Oregon to get first hand reports." His former attorney, John Quarles of Boston has said that when the telephone rang at an unearthly hour such as 6:30 a.m. he would pick up the receiver and say "Yes, Marcus."

Although dominant and unmovable in that he was attempting to achieve, Mr. Urann shunned personal publicity, although he would talk for hours about cranberries, cooperatives and marketing. He

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East Wareham, Mass.

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

said, "A man's hand should not be seen in his handiwork." He claimed he was not a "good mixer" yet in his home, "The Hermitage," beds in guest room were always freshly made and in the summer he had so many guests that he hired a special cook, for "lobster cook-outs."

Mr. Urann's personal life-long motto was "Rest is Rust." With his burning interest in canning and cooperatives — he was one of the organizers of American Cranberry Exchange in 1907, fresh fruit — he has been called a "Man Right too soon." Certainly in his dominant activities he left his indelable mark on the cranberry industry; he never spared himself, was kind to his associates and employes and was beloved by many from coast to coast.

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eo. C. P. Olsson aped For Broadcast

Ocean Spray President George C. Olsson attended the meeting of the Board of Directors of National Canners Association, Washington, D. C. May 23 and 24.

While attending the meetings, he was interviewed for radio tape by Washington broadcaster, John Battelder. Ocean Spray is one of 600 processors who hold membership in National Canners and Mr. Olsson is active member of the Board.

"FRISKY SOUR"

A joint promotion by Campbell Soup Company and Sunkist Growers features "Frisky Sour," a new drink combining beef broth and fresh lemon juice. The production will be merchandized through the entire 1963 season, since the drink can be served hot during the winter months and iced during the summer.

(American Fruit Grower)

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APPLE DAIQUIRI

Processed Apple Institute is in there "Punching." They're preparing a mixologer's guide to assist bartenders in using apple juice as a mixer for bar drinks. Apple daiquiri has already been developed; others are in the planning stage.

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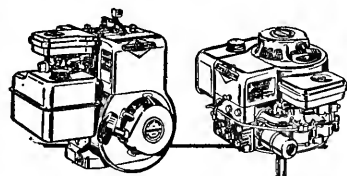
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Mass. Cranberry Station and Field Notes

by CHESTER E. CROSS
Director

Students Return for Summer

Mr. Alan Pierce, son of Mr. Robert Pierce of West Wareham, has returned to the Cranberry Station and to his work of the past few summers on the number and distribution of nematodes on Massachusetts cranberry bogs. He is working under Dr. Zuckerman on this project.

Mr. George Bither, now a senior at the University of Massachusetts and a resident of Elm Street in Wareham, has joined the staff of the Cranberry Station for summer work. He will be working as assistant to Dr. Chandler on the cranberry breeding project and to Mr. Demoranville on the weed control project.

Weather

The frosts which came on successive nights from May 23 to May 27 have left scars on several bogs. Late-water bogs drained prior to May 20th appear hardest hit, but unsanded early-water dry bogs also suffered serious losses. Because the overall water supply situation was good, and because a considerable acreage of formerly dry bogs now are equipped with sprinklers, the total frost damage in the state is estimated at only 1-3%. While conditions the first week in June have been dry, the rainfall of over 5 inches in May assured that bogs to date are moist enough for optimum growth. The season which started so slowly is now thought to be about normal. New growth in Massachusetts appears vigorous and healthy, and crop prospects are good, though of course not equal to last year's large crop.

The keeping quality prospect in Massachusetts is very poor. Because of this we are recommending extensive fungicide applications this year to curtail the development of fungus spots. With considerable acreage held late and a wide use of fungicides on early-water bogs, a large percentage of Massachusetts cranberries should make top quality grades. It is essen-

tial that large supplies of excellent fruit be available if the selling agents are to market a higher percentage of our total crop.

Olsson On The Sugar Situation

Ocean Spray President Contacts Congressmen, Sec. of Agriculture, Concerning the Drastic Increase In This Necessary Ingredient of Processed Cranberries, and Summarizes.

With the most recent announcement of a price increase in the cost of sugar, the price of sugar is now in excess of \$16.00 per cwt. This compares with a cost of approximately \$9.00 per cwt. a year ago. This is the highest price sugar has reached since cranberries have been processed in any great volume. Since sugar is a very important ingredient of cranberry sauce, this increased cost has a very important effect on the future of all those who are engaged in manufacturing cranberry sauce. The increased manufacturing cost per barrel of cranberries is

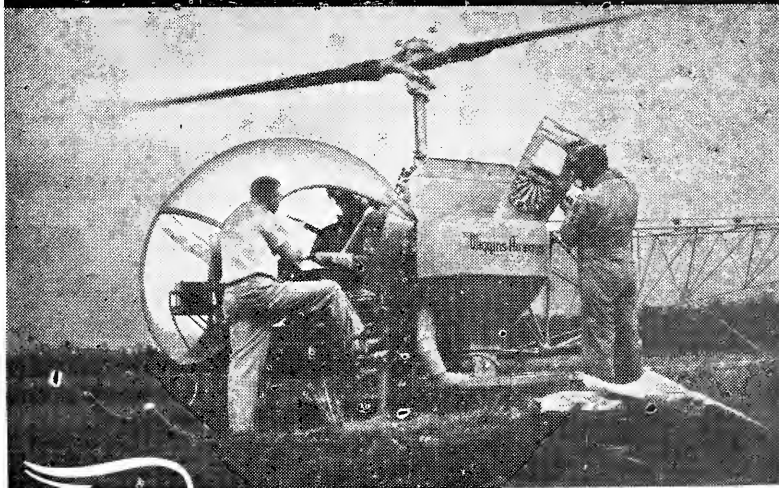
now over \$3.00 higher than a year ago.

I have written to the members of Congress from the cranberry growing areas and the Secretary of Agriculture asking them to advise us on the outlook for the future. I have received replies from practically all of our congressional be summarized in this fashion. The increased cost of sugar is due principally to two factors:

1. The so-called new Sugar Act which was approved last year, which replaced the old legislation providing for a country quota program, which had been in existence for 30 years. The new legislation provided for a global quota and, under this global apparently no one is going to sell sugar to the United States at less than the world price.

2. Another reason for the increased pricing of sugar is due to a world-wide shortage of this commodity, and the Cuban situation plays an important part in the whole picture. Cuba is actually producing three million tons less than she formally produced. Although we do not buy sugar direct from Cuba, this shortage is reflected in total supplies and hence in total world

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price. The conclusion reached by members of the Department of Agriculture and responsible members of the Agricultural Committees in Congress is that there is not much hope for any immediate change in this situation.

There has been legislation passed which encourages the increased production of domestic sugar and provides allocation to encourage the establishment of new beet sugar markets and although there may be some relief this fall where the beet sugar crop is harvested, it is the opinion of the experts that this will only be temporary relief, and that we will be faced with high sugar prices for a number of years to come.

There is no question that this sugar situation will probably affect the prices of many products using sugar.

**OCEAN SPRAY
AND PACKAGING**

The picture of an Ocean Spray whole berry sauce can is pictured on a recent cover of the "Cooperative Digest," along with several other packaged products, and a lead article tells of the great concern of today to produce attractive packaging. The notice concerning the cover says: "The Ocean Spray can is probably the most familiar of all packaged products from the national cranberry cooperative. But the organization also bottles, cartons and polyethylene bags. The two newest containers — a bottle (cocktail) and a multi-pack — are shown elsewhere in this month's issue." These are illustrated on page 12.

The article says that not too many years back, packaging was a minor concern, but this is all part of the past. "Today, with thousands of different products and varieties merchandising, packaging materials are a major concern. The entire realm of packaging is a very carefully planned and executed program."

BIG APPLE

Would you believe it that 29 eastern apple growers sell about 10 million bushels of the 60 million bushel fresh apple crop in the U.S. With a good portion of the total crop going to local markets, the 29 growers represent about 50 percent of the crop that is shipped from the area (American Fruit Grower).

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of June 1963 — Vol. 28 No. 2

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Second Class Postage Paid at Wareham, Massachusetts Post Office.

Subscriptions \$3.50 per year.

FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

May Starts Well

May began a trifle chilly and with heavy rain again on the second. Then came beautiful May days, temperatures being about normal, with a high of 8 for the first five days.

First Frost Warnings

First frost warnings went out on the afternoon and evening of May 1. The third warning was for the night of May 6, with 21-22 forecast. There was some frost around but cloud cover developed in the small hours and average reached was around 20 degrees. A number of growers depended on or used sprinklers.

Maybe More Winter Damage

By the week of the 6th bogs were beginning to open up a little and it began to appear there may have been more winter damage than was earlier anticipated. A number of the growers informed did not expect, at that time, a Mass. crop near comparable to last year's second largest of record, 770,000 barrels.

Weed Control

Included in spring work was the application of considerable amounts of herbicides, including the new experimental Caseron and Alanap-3. In most Massachusetts bogs badly needing a weed clean-up.

First Dangerous Frost

First really troublesome frost of the season occurred on the night and morning of May 12, when temperatures as low as 21, 22, 23 were reached, mostly in Plymouth County. A warning also went out the night before that there was cloud and rain in some areas most of the night. It was a sudden cold, raw snap, which brought snow to some parts of New England. There was an abrupt drop from temperatures in

the high 80's on the 9th to the 40's on the 10th. Bogs on both nights were generally well protected.

Looking Up

Temperature to middle of the month was a plus 22. There had been no, or practically no frost damage and crop prospects were then looking up.

Much May Rain

May was a considerably wet month than normal the total precipitation for the month as measured at Cranberry Station was 6.28 inches. Average is 3.18. Highest temperatures were 76 on the 9th and the 31st. Lowest was 36 on the 13th.

Final Keeping Quality Forecast

On June 7th the following notice was sent out: **Final Keeping Quality Forecast:** Weather conditions to June first show only 2 factors of a possible 16 which favor good keeping quality in the Massachusetts cran-

berry crop of this year. The prospect, therefore, is **very poor** for our crop's keeping quality. Marked increases in the use of fungicides (Maneb and Ferbam) will be needed this year to give our selling agents good fruit with which to increase sales.

Frost Damage

Several widespread frosts occurred on the bogs May 23 and 27. Damage was estimated by the Cranberry Station at 2-3 percent. The telephone answering service at the station was terminated June 10.

Fungicides Used

As this issue goes to press (June 20) Dr. Cross reported that a very considerable quantity of fungicides were being applied by growers quite generally to improve the quality.

June Slightly Cooler

As of the date of the 20th the month of June had been on the cool

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side, about half a degree a day cooler than normal. Rainfall for the month was a little light.

Bloom Ahead

The bloom on both Blacks and Howes was running ahead of schedule. It was estimated bogs would be in full bloom by July first which is ahead of normal.

Girdler Millers Thick

Girdler millers were thick but spotty on many bogs and causing considerable concern. The infestation was rather unusual and in fact had not been noted for a number of years. One reason ascribed to this was the fact that little DDT has been used in recent years. This material seemed to keep this pest under control, and it may be recommended in the insect chart for next year.

WISCONSIN

Month of Extremes

May was another month of extremes in weather for most of the cranberry areas of the state. The month started and ended well above normal in temperature, but in the middle several snowstorms were recorded along with some temperature readings in the teens. Most of the marshes were reflowed for the first cold snap, but found it necessary to

reflow again for a shorter period during the third week of the month. Heavy snow showers were quite prevalent the third weekend. Highest readings were on May 8th when 88 was reported and again on the 30th and 31st. Low readings were 15 on the 5th and 17 on the 19th. Near records were set in the high and lows. Rainfall and snowfall was above normal in the north and central and much below normal in the south. All cranberry areas were wasting water most of the month. Overall averages for the month was normal, temperature and rainfall slightly below normal.

The extended forecast for June calls for temperatures to be 3 to 4 degrees above normal with precipitation to total about normal to above normal.

Planting New Beds

Growers were busy planting new beds the end of the month and all planting was expected to be completed in the north by the end of the first week in June.

Fireworms Appearing

Fertilizing was completed by the middle of the month and the first fireworms were observed the last of the month. Warmer weather was expected to bring out the worms in early June. Compared to last year the worms are about a week late due

to the cold weather the latter part of May. They are not expected to be troublesome.

Testing Wind Machines

The C & H Cranberry Company located near City Point is testing two single prop wind machines for summer frost protection this year with installation of the machines expected to be completed in early June. Much interest is in evidence regarding the testing of these machines.

NEW JERSEY

Weather Report For May

May was a chilly and dry month. Frequent frosty nights made it feel at times more like March. Frost calls were issued on thirteen nights. On May 23 one of the most severe late spring frosts on record occurred. At least a million-dollar loss to the blueberry crop resulted in Burlington County and there was some damage to cranberries. Temperatures were so low, 18 without water running, and 22 to 24 over water, on cranberries that only a full head of H₂O could give complete protection. The shortage of water made it impossible to do this on all bogs and, as a result, there was some damage caused on high portions of bogs. Two "snap frosts," unpredicted by the Weather Bureau, occurred on May 26 and these added to the damage. Low recorded on these nights were 26 and 27½.

The loss sustained on blueberries is very great but the cranberry damage is not considered to be more than slight. The blueberry crop, already hurt by the severe winter 1962-63 and by unusually poor pollinating conditions, was further reduced by temperatures which ranged from 21 to 26 on the night of May 26.

(Continued on Page 20)

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A Small Grower Is An Essential Part Of The Cranberry Industry As Well As The Large

It is not alone the big grower that makes up the strength of the cranberry industry. Important, too, is the relatively "small fellow," who keeps his bog up, tries every trick in the trade to get good production and is interested in all cranberry developments as they come along.

Such a grower is Phillip G. Brackett of High Street, Cotuit, on the Cape. Brackett, himself a relative newcomer in one sense to cranberry growing carrying on in the tradition of his father and grandfather in cranberry cultivation. The Bracketts have operated their "Chopchague Bog," since about 1910. Phillip's father, Clarence E. passed away January, 1930 at the age of 84. He was a well-known Cape cranberry man, and also a carpenter.

by Clarence J. Hall

Since 1910

It was Clarence's father, James who started the Brackett cranberry growing. He came from Maine and about 1910 became interested in his "Chopchague Bog," which is located on the shores of beautiful Santuit Lake in the neighboring town of Mashpee. It is not believed that the first Brackett cranberry grower built this bog, but that he bought it and made it larger.

"Chopchague" is still a small bog only one of about six acres. But it is one of the handsomest and better-kept bogs on the Cape. It is kept fairly clean of weeds, the bays are clean.

It produces better than the Massachusetts average of production, which is about 50, as this consis-

tently averages about 500 barrels and has gone as high as 950 barrels.

This is in spite of the fact that it is a cold bog. Brackett says it runs consistently lower on frost nights than does the state or other warm bogs. He ought to know. He is there every frost night, putting the water on, when necessary and taking it off.

Although he did not take over actual management and ownership of the bog until after his father's death, he has given his father much assistance on the bog for years. His work there increased as his father "got along in years."

Is Auto Mechanic

Brackett does not put in his full time at the bog. He is a automobile mechanic employed in a garage at

Hyannis. But he does put in all his spare time, taking care of the property, which shows the result of this effort. He says he used to hunt a lot, but has given this up for the bog. He still, occasionally, goes fishing, but his hobby now is really the bog.

He does his own harvest, with one man helping him. He rents one Western and one Darlington. The bog is set to later, and he gets time off in middle or late September to do his harvest.

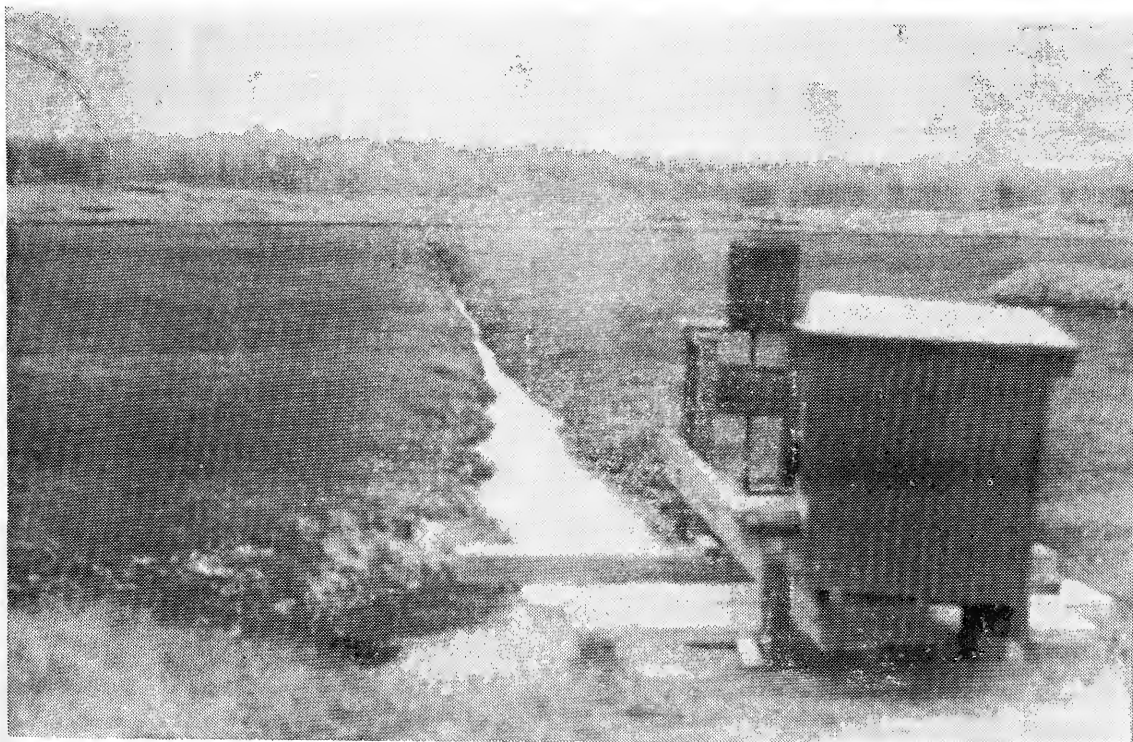
On Santuit Pond

There are two pumps on the property, both gasoline operated. One is for use to get water off, when the level of Santuit Pond rises too high. He does not run his bog too wet. The other is for frost flooding. The drain off is by gravity, back into the pond. He has the right to take this water, as do several others, who have bogs along the border of Santuit.

He has his own bogs sand from pits along the shore which he puts on in a regular sanding program, using planks and wheelbarrow.

Invites Birds

In season he rents bees for pollination. Around the bog, which is in one large piece and one smaller section there are birdhouses, which invite a



Brackett Bog Showing one of the Two Pumps.

(CRANBERRIES Photo)

bird population to help with the insect problem.

He used to fertilize with hand equipment, using a pelletized fertilizer, but now has a Hayden fertilizer spreader. His insect work, formerly done by bog sprayers is now by airplane, using the Wiggins helicopter service.

He has a mowing machine and his shores are well cleaned back for good ventilation and to keep weeds from spreading on the bog. He owns about ten acres and he keeps all the upland cleared away.

For weeds he has used Stoddard's Solvent and this past season tried the weedicide Simazine. From all this it is apparent he does about everything a grower can do to get a good crop average every year.

Brackett was born in a hospital in Hyannis, while his parents lived in Cotuit. He has been a life long resident of Cotuit with the exception of about ten years away. Then he worked for the Pratt & Whitney Company at Hartford, Conn., including the war years in making experimental tests on airplane motors.

He was graduated from Barnstable High School, in 1935, Cotuit being a village of the town of Barnstable. He also went to the Diesel Engi-

neering School at Allston, near Boston for two years and received a diploma.

He is married to the former Alma Westberg, who was born in Switzerland and is now manager of a school cafeteria at Cotuit. He has two daughters, Joyce, who is studying mathematics at the University of Massachusetts, at Amherst, and Cheryl, 17, who is a student at Barnstable High School.

Tried Lingonberries in Europe

In the summer of 1961 the whole family went to Sweden for the summer. While there they saw and ate the native Lingonberry, which is the specie of cranberry, smaller in size and more bitter than the American cranberry and very much used in the northern countries of Europe. The Bracketts say the sauce is more bitter than that made from the American cranberry but good.

Incidentally, Mrs. Brackett sometimes finds time to assist her husband on the bog, particularly in weeding and is interested in helping to keep it look neat.

Mr. Brackett is a member of the Hyannis Lodge of Masons, and also a member of the Cape Cod Cranberry Club and Cape Cod Cranberry Growers Association. He visits the

state bog at times for information and attends the weed and insect clinics which are held at Barnstable.

"The cranberry industry has its troubles, but I am not discouraged by the outlook. I'm going to give the business all the whirl I can," he says. So here is a small Cape Cod grower, with a beautifully-kept bog intent on carrying on the work of his father and grandfather in the best traditions of cranberry growing.

OREGON FARM LABOR FIGURES

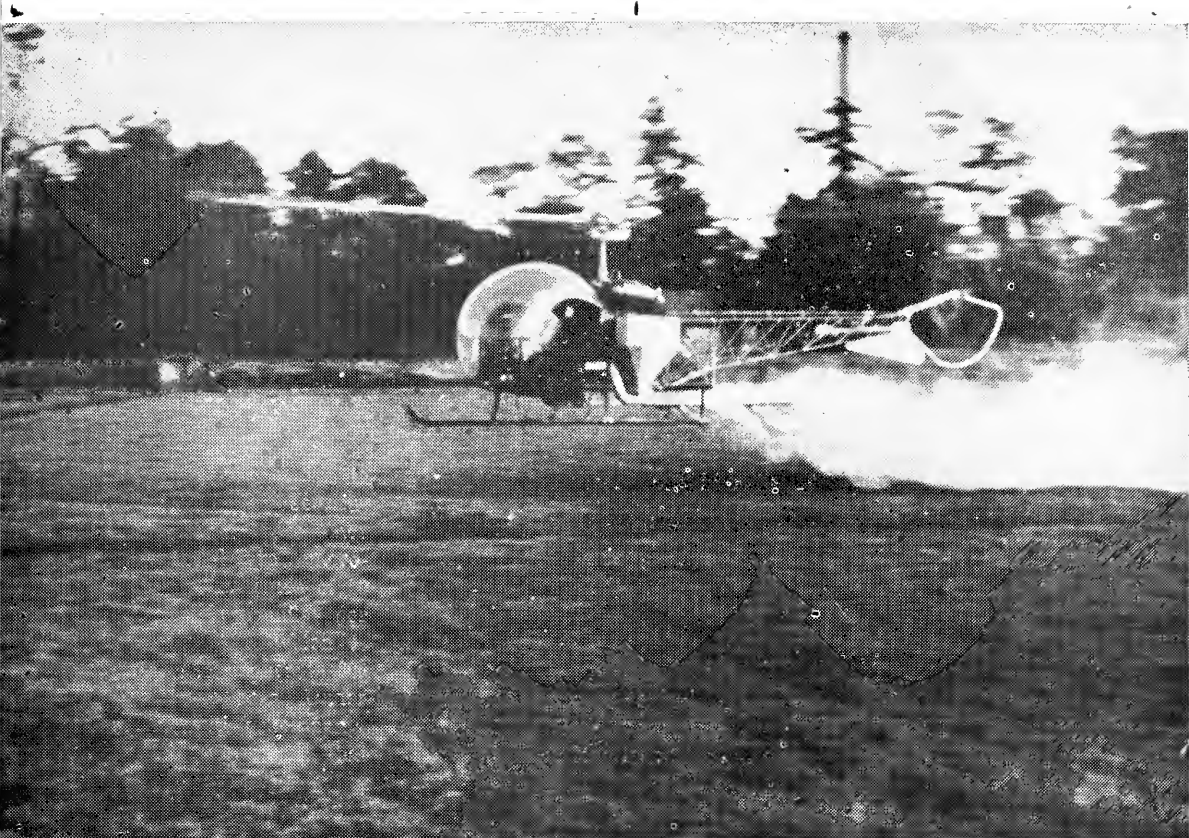
Oregon hired farm workers in 1962 received the third highest wages in the country, exceeded only by wages paid in Washington and California in a report from Oregon State University Extension.

The Pacific Coast tops all others in the nation followed by Connecticut, Massachusetts and Rhode Island tied for fifth place. Oregon's average wage rate came to \$1.22 an hour, up 2 cents from 1961. National rate at the start of this year were 94 cents. Family labor made up almost 70 percent of Oregon's total farm labor force. Farm labor along the Pacific Coast was most in demand in September.

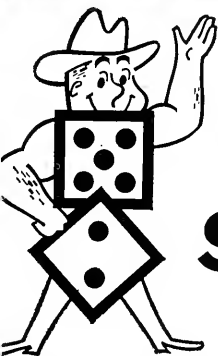


Another view of the Brackett Bog looking toward Santuit Pond.

(CRANBERRIES Photo



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Charles H. Lewis, Shell Lake, Wisc. Active In Cranberry Matters

Charles H. Lewis of Shell Lake, Wisconsin, a third generation grower and son of the prominent Charles Lewis, is one of the younger growers of the Badger state who is taking an active part in cranberry affairs, as a director of Wisconsin State Cranberry Growers' Association. "Chuck" says that, "my interest in cranberries dates back to when I was a child running around the Badger Marsh and falling into ditches in the 20's.

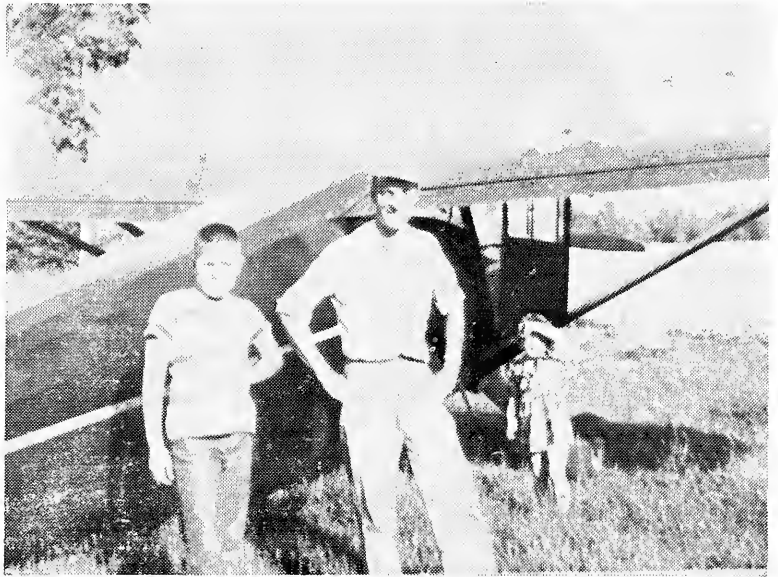
He is vice president and manager of the Badger Cranberry Company, Inc., a property of about 65 acres, which Charles L. Lewis, Sr., his father, is treasurer and his brother, W. Lewis, secretary. After being graduated from the University of Minnesota in 1940, his father being the operator of the Badger Marsh, "Chuck" became associated with the operation of that property.

"Most of the cranberry knowledge I have, I gained from my father and men such as the late Dr. Neal Stevens, Dr. H. F. Bergman of Massachusetts and especially from Henry F. Bain, now retired," he says. "These men have made it possible for men to handle and solve most of the pathological and water problems which we have encountered. Now with the help of Mac Dana, Jr. Malcolm N. Dana of the University of Wisconsin) I hope we can attack the weed problem.

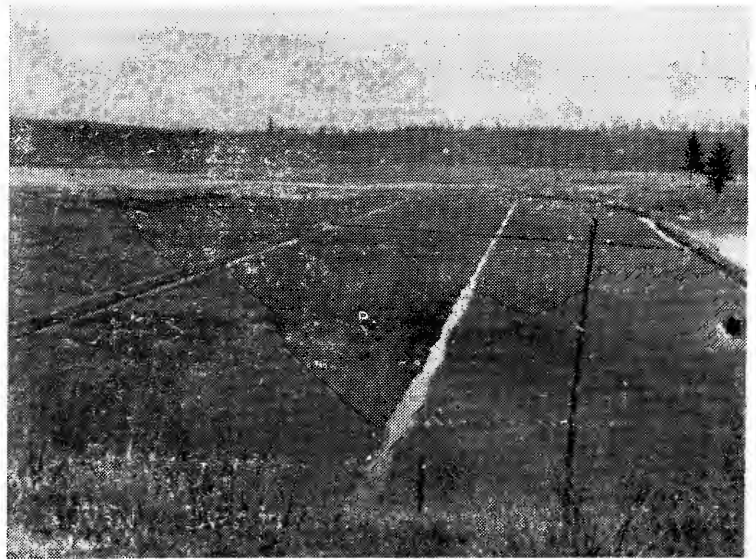
The Lewis property in northern Wisconsin, considerably distant from the main cranberry center around Oshkosh and Wisconsin Rapids has long been troubled with an alkaline water problem. Such water tends to produce rather thin vines and hence reduced yields.

About half the acreage at Badger is now in a state of rebuilding, or rejuvenation and has been for the last few years and will continue to be a while before it is gotten back to full production. However, the Lewises have always been fortunate in having good keeping quality berries and the average is better than 80 percent going to the fresh fruit market.

Crops are sold through Ocean Spray and a few years ago Charlie Lewis, Sr., was a director and a vice president of that cooperative,



"Chuck" Lewis with two of his children beside his Stimson Voyager.



View of Badger Marsh from bluff.

taking an active part in policy and often visiting the East. He is still active and manages the Midwest Cranberry Company at Shell Lake another Lewis property of about 75 acres in vines. Midwest was begun in 1916 by the McKensy Lake Cranberry Company. Mr. Lewis harvests, nearly half, but not quite, of the Midwest crop with the water reel picker, being, believed to be the only such operation in Wisconsin, at the present time, the balance of the marsh is harvested with Getsingers. A good many of the sections at Mid-

west are small and well suited to this method. At Badger the Getsinger is used only, of which there are 7. The beds are larger and more suited to this harvest method.

Mr. Lewis, Sr., is well known throughout the industry and especially in Massachusetts. In 1908 he became interested in cranberry growing as his father, who was a justice of the Minnesota State Supreme Court, together with an uncle acquired a cranberry bog near Minong in northern Wisconsin. He investigated the possibilities of cranberry

growing and while an undergraduate at the University of Minnesota, he worked summers at the then Wisconsin Cranberry Experiment Station, and following this spent a year in Massachusetts. At Minnesota University he met the late Dr. Herny J. Franklin and later asked Dr. Franklin for a job at the Massachusetts Cranberry Experiment Station, which he eventually obtained. He also worked in forestry in Massachusetts and in 1911 returned to Wisconsin and organized the Badger Cranberry Company. In Massachusetts he also worked on the bog of the late Paul Thompson at Middleboro.

He was at one time a director of Wisconsin Cranberry Sales Company the fresh fruit division of American Cranberry Exchange. Mr. Lewis was one of three who brought Mr. Bain to Wisconsin, from the United States Department of Agriculture to study cranberry growing in Wisconsin. He was a traveling inspector for the

exchange for a number of years, and was ever an ardent advocate of "orderly marketing." It was he who introduced the Isaac Harrison (New Jersey) grass cutter to Wisconsin which greatly changed marsh management in Wisconsin.

"Chuck" studied Technical Agriculture at college to fit himself better to become a cranberry grower.

The small town of Shell Lake had only a single industry and that was and is the Shell Lake Boat Company, with a factory building boats. This was recently "on the rocks," and according to a feature article in the Milwaukee Sentinel, Mr. Lewis helped organize a citizen's group, which "picked up the pieces," and got the Washburn County plant to working again, making fiber glass models. He is president of the company and Chuck is treasurer. The company now employs 50. The company was originally organized in 1904 on the shores of Shell Lake, a beautiful

spot (which the editor has visited some years ago).

Mr. Lewis was perhaps the real moving spirit in this venture to save a community enterprise, and it is now producing 12 models, eight runabouts, three fishing boats and canoe. "We are making a concerted effort to maintain this vit manufacturing plant in this community," the leaders say.

"Chucks" other activities as president of Board of Education Shell Lake Schools, Scoutmaster Shell Lake for 12 years, a member of the Lions Club, Elks and Shell Lake Chamber of Commerce.

His hobby, but also used in business is flying and he owns and flies as he says "a good old reliable Stimson Voyager." He does all the flying time permits.

He was married in May of 1941 to the former Virginia Greseke Spencer, Iowa, whom he met at the University of Minnesota, and says her, she, "made this my lucky day when she said "Yes."

The couple has four children: Catherine 20, in her second year at the University of Wisconsin; Joan C., 18, high school senior; JoAnne 16, high school sophomore; Stephen 5, not yet in school. "Fortunately" says Lewis, "they take after their mother and are good students (oldest three, anyway). Cathy graduated at the top of high school class, taking medical technology. JoAnne is also on honor roll and Jim is graduating at the top of his class and is planning to go into medicine. So, there seem to be no future generations of cranberry growing unless Stephen comes across."

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Is Sanding Necessary? Drainage, Varieties And Soil PH

(Editor's Note: The following is a talk by Dr. F. B. Chandler at the Massachusetts Club Cranberry Meetings).

Tonight I would like to start off by telling you that my training was in horticulture and I learned about cranberries from the literature — the cranberry is a horticultural plant — this has given me a different outlook than learning by following what has been done by cranberry growers — you can not lift yourself by your boot straps. You have to look to the culture of another fruit, grapes, apples, peaches or something else for large increases in yield. This gives you a little idea why I have the attitude I have.

Varieties

Most of you know that Mr. Demoranville and I work together on the varieties. In 1961 we asked the U.S.D.A. to name three. Neither the cranberry Station nor the U.S.D.A. have vines of these to distribute, but Bergman may be purchased from J. J. Beaton, Fuller-Hammond, George Rounsville, and the United Cape Cod Co. Franklin may be purchased from Carleton Barrows, J. J. Beaton, Howard Hanelt, Francis Kendrick, A.D. Makepeace Co., Stanley Merry, Pratt, The United Cape Cod Co., and Nathaniel Wing. Pilgrim may be purchased from Stanley Merry, George Rounsville, The United Cape Cod Co. or Nathaniel Wing. These names are the growers who had a square rod or more of the variety. At some localities the vines may have become mixed.

We are interested in three new selections, CN, 35 and AJ, which we have tested in a number of locations in Massachusetts and this year we will send a few vines to Wisconsin, as the next variety named will probably be for Mr. Bain, one of the original breeders, and he did most of his work in Wisconsin.

Pruning

When Director Sievers hired me, he asked me to get rid of sanding and said it was an expensive method not used for any other crop. In 1951 I started studying what sanding did. These studies revealed that horticulturally it was pruning, it decreased the number of uprights per square

foot, it removed the dead wood, it left the vines more open to permit sprays to penetrate to cover lower leaves and let in more light. Remember a close relative of the cranberry is the high bush blueberry and this is pruned very heavily, one third of the oldest wood is removed every year. Another close relative is the low bush blueberry and it is burned to the ground every 2 or 3 years. I talked with Tom Darlington, who besides being an inventor has a lot of high bush blueberries and cranberries, and suggested a pruner that would remove one third of cranberry uprights every year. Mr. Darlington could not develop the type of pruner to remove one third each year but he developed a pruner and he has pruned very hard on his cranberry bogs ever since.

In 1959 plots were set up at a number of locations on Early Black and other on Howes. At each location there were four plots of light pruning (cut with the "lay" of the vines), four plots of heavy pruning (cut with the "lay" of the vines and perpendicular to this), four plots "cut all" (all the vines were cut off, to know the weight of vines per acre and the percentage of vines remind by the above pruning methods) and four plots of check (the checks were sanded every three years.) From the "cut all" plots it appears that from two tons of vines to thirty tons were produced per acre and the heavy pruning removed one ton to seven tons while the light pruning removed from a ton to five and half tons per acre.

We harvested Early Blacks at four locations (four plots at each) and Howes at three locations (four plots at each). For Early Black at three locations we had four years data, at the other one we had three years (sixty yield figures). At harvest the entire plot was harvested or a strip thru them, the four plots treated alike were averaged and computed to the yield per acre. At one bog, set to Early Black, we had only three years results, let us call this bog 1 with light pruning the yield was best one year out of three, "cut all" was best one year out of three and the third year the yield of the heavy

pruning was tied with the yield of sanding. On the Early Black bog at a location we will call 2, light pruning was tied with sanding one year, heavy pruning was never best, one year out of four "cut all" was best yield, and two years out of four sanding had the greatest yield. At the Early Black bog that we will call 3, one year out of 4 the light pruning was the best, never was the heavy pruning or the "cut all" best, three years out of four the sanded plots were best. At a bog we will call 4, neither the "cut all" nor the sanded plots were in any year ever yielded as much as the plots which were pruned.

Howes were a little different than Early Black, the light pruning was never better. At the location we called 1, one of three years the heavy pruning yielded the most, "cut all" never yielded the most, sanding was better two years out of three. At location 2, the pruning plots never yielded the best, the sanded plots were better three years out of four. At location 5 we had 5 years results, two of the five were best with heavy pruning, one year was best with sand and one year the cut all and sand were tied.

The "cut all" plots had no yield the year they were cut the next year it was small, the third year it was much better and the fourth year it was very good, in one location at the rate of 308 barrels, per acre.

These bogs were reasonably good bogs, the best yields with light pruning on Early Black at each location was 125, 62, 119, and 127 barrels per acre. The best yield with heavy pruning on the Howes was 163, 139 and 281 barrels per acre. The best plot at the 5 location yielded at the rate of 320 barrels per acre, however, with the variation between plots and between years, it is very doubtful if the difference between sanding and pruning is significant. Certainly it does not appear to justify the added cost of sanding over pruning.

This experiment also showed that on the bogs used Howes yielded larger crops than Early Black. As there was considerable variation at each location from year to year and as there was a lot of variation be-

tween locations, it would be well for each grower to conduct an experiment on his own bog of sanding and pruning. When pruning at least a half a ton of vines per acre should be removed from Early Blacks and at least a ton of vines from Howes.

These experiments will be continued using longer plots with less replicates and this time more study will be made of the berries and their keeping quality.

Drainage

I do not think you can move the roots of cranberries down much by lowering the water table in an old bog. If you want the roots down you must get the water table down when the bog is set. Last year I reported at the summer meeting about the cranberries I set in tiles with over six feet of drainage.

Here the roots went down over thirty-two inches. These plants had been well cared for at the time of setting but were never watered after that and it did not suffer from drought. This winter I completed some greenhouse experiments in which vines of Bergman, Early Black, Franklin, and Howes were

used. The roots and the tops were better with the least watering also the nematodes were less abundant with the least watering. The next bog you build or rebuild I would suggest you get the drainage down and keep it down.

PH

This project I have Mr. Demoranville's assistance on. So far we have not altered the weed flora on any of the plots by changing the pH. We have found out how to change the pH in the top two inches of soil and slightly influence it at other levels. This has not altered the yield. Sulfur makes soil more acid, lowers the pH, and has shown some vine injury. Lime makes the soil less acid, raises the pH, and so far has not done any damage.

Ocean Spray Cocktail Now In 3 Locations

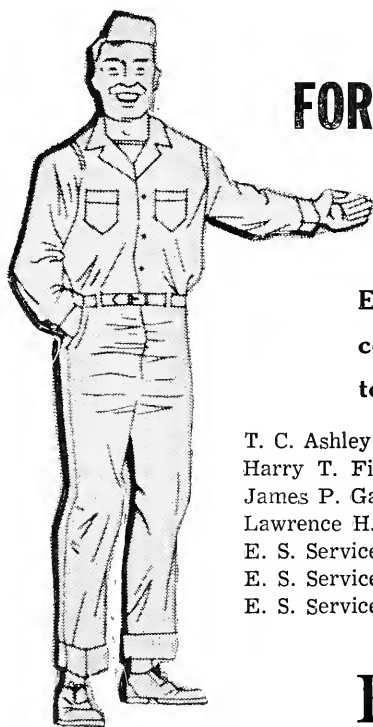
**North Chicago Plant Opened
in Addition to Those at
Markham and Hanson.**

Ocean Spray last month began the

production of cranberry juice cocktail at its processing plant at North Chicago, President George C. P. Olsson has announced. The addition of a juice plant there, culminates the \$3,000,000 plant betterment program.

"Just ten years ago, distribution of cranberry juice cocktail was concentrated on the Eastern seaboard, and the complete supply was pressed and packed at Hanson, Mass.," Mr. Olsson points out. "In 1958 we added a juice plant at Markham, Washington, so we now have three strategic locations for processing and shipping cranberry cocktail. The million-barrel crops are now providing more select, vine-ripened berries required for juice and this is permitting nationwide distribution." He added that cranberry cocktail has now been introduced in Hawaii, now making it available, in at least some quantity, in 50 states.

The North Chicago plant also has a capacity for storing 48,000 barrels of berries, part of the building providing temperature controlled storage for fresh. There is also storage space for 150,000 cases of finished goods. The North Chicago plant pri



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Improvements have also been made at Markham, Bordentown, New Jersey and in Massachusetts. Improvements at Hanson permit the simultaneous manufacture of cockle in pints, quarts and gallons.

Letters To The Editor

(Editor's Note: The following communication is from Russell A. Truitt, well known Mass. grower, engineer, consultant on water problems, pumps, flumes, etc. for many years.)
Editor, Cranberries Magazine:

We have had the assistance of the Soil Conservation Service long enough to get a pretty good idea of its value (or lack of value) to us. My own main interest is in prefabricated flumes, so I will confine my remarks to that field. My customers have often protested the high cost of SCS-designed prefabricated flumes as compared to the standard model which I design and sell. There is good cause for this. The design is inherently more expensive, yet does not require anywhere near as good quality as my standard.

The SCS design sheet I happen to have is dated Oct. 1958 and may be obsolete. If so, some of my remarks may now be unwarranted. To begin with, the gauge (thickness) of the corrugated metal is not specified anywhere. The only mention of galvanizing is on bolts for the anti-seep collar. No re-galvanizing treatment or welds is specified. The usual thickness of riser paving is but 6". Since this concrete is often placed under water, its quality is usually poor, and a full foot of it is an inexpensive precaution.

They recommend legs under the user for poor foundations. I would much prefer to have the flume settle with the dike so as to avoid development of a leak under the flume. The watertight couplings and seep-wall connections are unwarranted unless significant reverse heads are expected. Normally, any leaks here are self-sealing. The flashboard-channel legs are not dimensioned. I find a long back leg very helpful in handling the boards. The riser crossbars are one-half inch unspecified stock; use one-inch plain bars since gal-

vanized stock is not readily obtainable.

The prescribed seep-wall is needlessly expensive. It need not be watertight since it only lengthens the seepage path by four feet or less. Its fit on the pipe may be somewhat loose. My idea of leak-development is that first the crawfish open a path thru the dike; the eels follow and enlarge it a bit. This produces leakage enough for the muskrats to open up a real leak. If the seep-wall fit is good enough to stop this process anywhere along the line, you will not get excessive leakage. No washouts.

To sum up, under the SCS you may get a paper-thin flume with expensive details. That brings us to the most touchy (to me) feature of the design: the relation between size of pipe and size of header. The SCS design has the header diameter practically double the pipe diameter in the commonest sizes. My own design has the header diameter twelve inches greater than the pipe diameter, or one foot less than SCS for the common 24" pipe flume. The reason, I was told, was that the SCS could not make a standard flume completely fill the outlet pipe. Let us consider this.

Hydraulic theory teaches that no pipe will run full except under special conditions. These are that (a) the outlet of the pipe is under water,

or (b) that the quantity of water carried is more than 3.7 times the five-halves power of the pipe diameter. Note that these conditions are regardless of the header, if any. Also note that a pipe flowing 0.82 full has the same capacity as the same pipe

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flowing full. This is due to the increased friction at the top of the pipe as the pipe fills. In other words, filling the top four inches of a 24" pipe will not add to its capacity, because you lose as much from increased friction as you gain from increased area. Refer to the November 1962 Journal of the Hydraulics Division of the AM. Soc. Civil Engineers, Pages 125 on.

This feature of the SCS design seems to be based on the theory that the outlet pipe is the bottleneck of a flume, and that the maximum amount of water possible must be forced thru this pipe to attain efficiency. That means the highest possible outlet velocity. Now, no cranberry grower wants the highest possible outlet velocity. That means trouble below the outlet. I, and many other growers, have spent hundred of dollars to reduce outlet velocity, or to combat its effects. I regard the flashboards as the bottleneck, and try to pipe the water away in a harmless manner.

If the idea of the wide header is solely to increase capacity, it is a case of the tail wagging the dog if I ever saw one. The outlet pipe is the cheapest part of a flume, costing perhaps half what the header costs. So enlarging the header increases the cost much more than enlarging the outlet pipe. Rather than add perhaps \$35 by widening the header, why not add three inches to the outlet pipe diameter at a cost of \$15 to \$20, and at the same time increase the capacity by 30% or so, or decrease the outlet velocity?

I never knew of two students of hydraulics being in complete agreement, and I allow for that. But I claim that one night spent pulling flashboards in a race with the thermometer will teach any man more about cranberry bog hydraulics than a week's study of textbooks.

Russell A. Trufant
North Carver, Mass.

Mr. Clarence J. Hall
Cranberries Magazine
Wareham, Massachusetts

Dear Mr. Hall:

In recent issues of your magazine, you have published the opinions of various growers and handlers. I think it is a fine idea to keep the

subject alive in the columns of your magazine, so that when there is another vote on the marketing order all growers will have a better idea as to how it works, and the results that can be expected. Hoping that you will continue to publish the views of cranberry growers, I present mine.

I am one of the few Ocean Spray growers who voted against the marketing order. I have never argued that the marketing order would have no success whatever, but have always conceded that there might be a few years of success. However, I believe that whatever success the order does have can do nothing but lead to its ultimate failure. The reason the order will fail is that it does not attack the main problem; underconsumption.

To beat the order, many growers are in the process of increasing their acreage or improving their cultural practices to make up for the berries that are dumped. Some growers are increasing their acreage or improving their cultural practices to take advantage of the higher prices they think will follow the adoption of the order. Other growers are increasing their acreage to beat that acreage allotment plans that many believe must eventually be made. Whatever their reasons may be, the net result

of the growers actions will be to increase production. We need no incentives to increase production, we need to spend all our efforts to increase sales. When cranberry sales are increased, we will have ample time to increase production. When sales are increased and returns to the growers increase, there will be enough growers increasing their production to supply the needed berries.

Some management men say they realize that the marketing order can only be a prop to carry over until sales of cranberries increase. The order has already had the effect of inducing some growers to increase their production and thereby further increasing the sales problem. The rate of increase in sales must be greater than the rate of increase in production if our problem of low prices is to be solved and yet only noted action to date is a marketing order that indirectly provides an incentive to increasing production.

Very truly yours,

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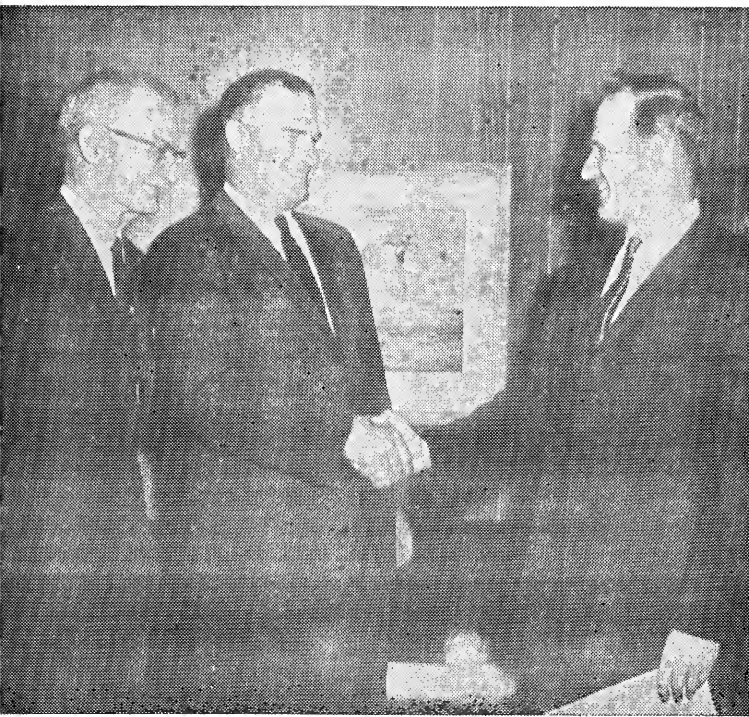
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Haines Made Member Of Water Supply Council

William Haines (center), of New Gretna Road, Chatsworth, N.J., receives congratulations from Robert Roe, Commissioner of the New Jersey Department of Conservation and Economic Development after his hearing in as a member of the Water Policy and Supply Council of the Department. George R. Shanklin, Director of the Division of Water Policy and Supply was also present at the ceremony.

Mr. Haines was born and reared in Vincentown and received his college training at Rutgers the State University. He is part owner of Haines Haines, cranberry and blueberry growers and shippers. He is also a Director of the cranberry processing firm known as Ocean Spray and a Director of the Tru-Blue blueberry processing enterprise. In addition he serves as chairman of the Planning Board of Washington Township and is director of the Burlington County Farmers' Cooperative.

He and his wife, the former Sara Jennings, are the parents of four children.

The Division of Water Policy and Supply is responsible for the plan-

ning, development, equitable allocation of surface and subsurface water resources of the State, alleviation of flood damage, and the construction of storage reservoirs, when so authorized, to assure the availability of adequate supplies of water.

The Water Policy and Supply Council is a nine-member body, serving without salary. Members are appointed by the Governor with the consent of the Senate.

The Council as trustee for the water resources of the State, through public hearings, makes just and equitable allocation of the water resources for public and private purposes and for adjudication of regulatory controls in the matters of flood control and flood hazard delinquency.

Water Policy & Supply Council members are: Kenneth H. Murray, Califon, Wm. Haines, Chatsworth, August C. Shultes, Woodbury, Lillian M. Schwartz, Highland Park, Wm. G. Bank, Colts Neck, I. Ralph Fox, Rumson, Thomas J. Mullen, Whitehouse, David I. Stepacoff, Pearth Amboy and Herman Klenner, Rahway.

This matter of water supply is very important to the cranberry growers of South Jersey. Since the founding of this group the Jersey cranberry men have been represent-

ed, first by Joseph Palmer of New Gretna and then by the late Vinton N. Thompson of Vincentown. "Bill" Haines succeeds the latter.

Cape Co-op Elects 1963 Officers

Paid '62 Pool of \$11.33 a Barrel Screened on 88% of Members' Crop.

At the annual meeting of the Cape Cod Cranberry Cooperative, Inc. in South Duxbury, Mass., May 21, 1963 the following directors were elected:

R. Bruce Arthur and Harold A. C. Bumpus of Plymouth, Orrin G. Colley of Duxbury, Jacob W. Laurila and Charles E. Pratt of Carver.

Officers elected were: R. Bruce Arthur President, Harold A. C. Bumpus, Vice President and Orin G. Colley, Treasurer-Clerk.

A report was made of the marketing of the 1962 crop operating under the Cranberry Marketing Agreement and Order. Closing of the 1962 crop pool and payment in full to members has been made at \$11.33 per barrel screened basis or \$10.73 per barrel unscreened on 88% of the member's crop.

The present inventory of the cranberry industry as recently released by the Cranberry Marketing Committee was reviewed. Prospects for the 1963 crop and future years were discussed. The meeting was told that additional cranberry tonnage could be handled to advantage by the Cooperative and new grower-members would be solicited.

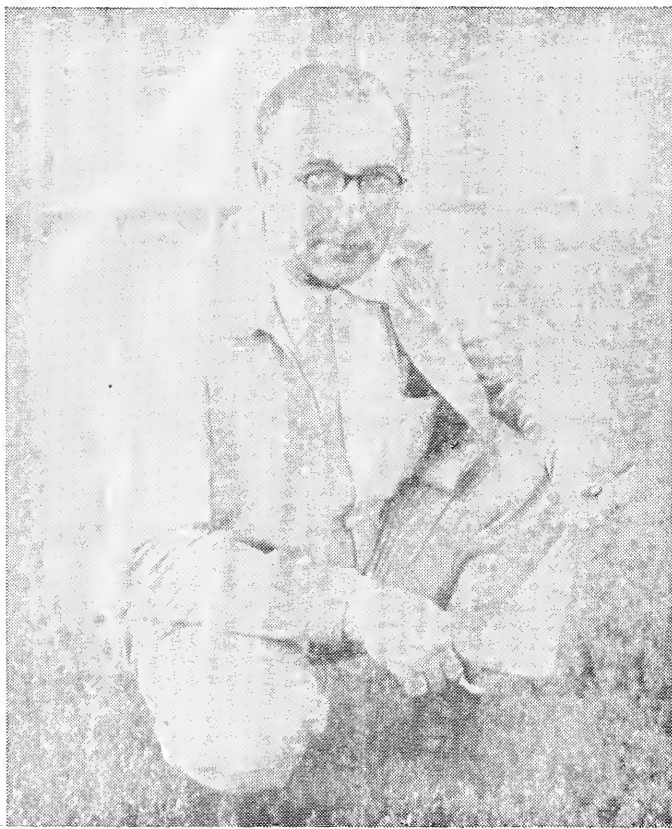
CRANBERRIES IN MEDICINE AGAIN

U. S. Rep. Carlton Sickles (D-Md.) is perhaps the only Congressman who brings his lunch to work every day and eats alone.

But that is understandable, Mr. Sickles is trying to tract down a food allergy. His doctor has him on a diet of only these foods. Pigeon, quail, coconut milk, fig jijuice, cranberry juice, dates and currents.

(News Item)

Some men try so hard to make the most of everything they find it necessary to lead a double life.



CLARENCE A. SEARLES of Wisconsin Rapids has been named a director of Cranberry Institute. This was in accordance with a vote at the annual Institute meeting in January that an additional director from Wisconsin should be chosen. Mr. Searles, is a prominent grower, a member of Ocean Spray and is not a handler or distributor. At one time he was a director of the former American Cranberry Exchange, later Eatmor Cranberries, Inc. and he is the Wisconsin alternate on the Cranberry Marketing Committee. Photo was taken on his marsh near the Rapids a few years ago. Other directors are; Orrin G. Colley, Massachusetts; Leon April, New Jersey; Marcus M. Urann, Massachusetts; George C. P. Olsson, Massachusetts; Behrend G. Pannkuk, Wisconsin. (CRANBERRIES Photo)

First Year Results With Simazine In Massachusetts

A year ago, the cranberry growers of Cape Cod used Simazine for the first time on a large scale. What, in general, were the results of this first season's use? Have recommendations for use been changed? Will growers continue the use of Simazine or has their attitude changed? Such questions are normal with the introduction of new compounds, and answers can prove both interesting and helpful.

For most growers the treatments made in 1962 were the first Simazine applications ever made by them and some treated over half their acreage. The recommendations of the Cranberry Experiment Station called for

use of 1¼ lbs. of Simazine 80W in 100 gals. of water to be sprayed at the rate of 300 gals. per acre. The same station had warned growers that overdoses could cause injury on cranberry bogs that were newly planted or on portions of bogs where the stand of vines was thin or weak. Partly because of understandable timidity in first-use treatments, and partly because of cautionary advice against overdoses, growers rather generally "sprayed light." Volumes of Simazine spray which should have been spread over three acres were stretched to four acres. Thus, in many cases the applications were lighter than recommended. The weather also played a part year work with Simazine on Cape Cod. From May to October last year rainfall was consistently light averaging

about 2 inches per month instead of 3.5. In wet seasons, Simazine works quickly and effectively on certain weed species, in dry seasons its effectiveness is delayed a matter of weeks and its action is more selective.

Following the widespread use of Simazine in April and early May, 1962, growers brought complaints to the station that they could see little effect from their sprays. We urged them against premature judgements, and asked for a "wait and see" attitude. Before the season was over, opinions had undergone an about-face. In every instance to come to our attention, Simazine had given complete control of the perennial summer grass (*Agrostis scabra*), and it had done what we claimed it would in control of the widespread rice cutgrass (*Leersia oryzoides*). With this fearsome weed, Simazine (applied pre-emergence) stunts the green shoots of a height of a few inches as they develop from the perennial rhizomes. The stunting is accompanied by color changes in the grass — it often takes on a sickly yellow color, and many of these yellow shoots fail to recover to make subsequent growth. Late in July and in August new green shoots of the cutgrass come up from the rhizomes but the stand or population of grass stems in treated areas remain small and thin in comparison with untreated areas.

At harvest time in September the significance of these events became generally apparent. By stunting the new early season growth of cutgrass the cranberry flowers bloomed above the level of the grass, bees could and did service these flowers and good crops were set. Untreated areas of thick cutgrass bore so few cranberries it was uneconomical to harvest them.

The only areas not conforming to the above description were low poorly-drained patches where the water table remained a few inches below the surface. Simazine did not provide commercial control of cutgrass under such conditions, and is doubtful if anything else would function under these conditions.

Surely one of the reasons for the large crop in Massachusetts in 1962 (the second largest of record

(Continued on Page 20)

MALATHION COMBINES SAFETY-IN-USE WITH PROVEN INSECT CONTROL

*Malathion kills major cranberry insects
without hazard to you or your workers;
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Years of experience in bogs across the country have demonstrated malathion's superior control of fireworms, leafhoppers, fruit worms and other destructive cranberry insects.

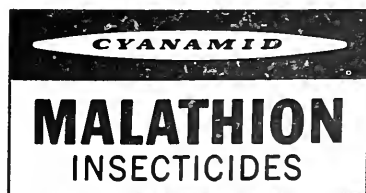
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SIMAZINE

(Continued from Page 18)

775,000 hundredweight) and for the generally good keeping quality of that crop was the widespread use of Simazine, the resultant cropping of cutgrass areas, and the fact the berries were matured in air and sunshine rather than buried in weedy grasses.

Simazine has given growers numerous fringe benefits, for treatments made to control cutgrass and summergrass have also curtailed the growth of several annual grasses. Timely, uniform applications have demonstrated the value of Simazine in cranberry weed control.

The label recommendation is 2½ lbs. of Simazine 80W per acre as a broadcast spray in spring prior to weed emergence. In Massachusetts, up to 5 lbs. of Simazine 80W per acre prior to weed emergence broadcast in the spring prior to cranberry new growth or in the fall after harvest.

It is thought by the Cranberry Station that second-year applications of Simazine will bring about a further thinning of cutgrass stands. The general absence of cranberry vine injury in 1962 has led the station to recommend 1½ lbs. of Simazine in 100 gals. of water, for the 1963 season. This rate is still below the authorized dosage*, and especially when used with improved drainage, should give improved grass control, larger better quality crops, and without injurious effect to the crop plant.

Ocean Spray Onset (Mass.), Museum Has 2 Early Separators

Only Institution Of Its Kind Again Open For Cape Summer Tourists.

Memorial Day weekend marked the summer opening of Ocean Spray's Cranberry Museum and movie theatre. at the processing plant on Cranberry Highway, Onset, Mass. The theatre is open weekends from 9 to 5:30, during the month of June, and daily 9:30 to 6 during July and August. The museum will be open from Memorial Day through Labor Day from 9:30 to 5:30. There is no admission charge for the

museum or theatre.

Robert Rich, curator of the museum, announces that several pieces of antique equipment have been acquired for the museum since last summer. Of special interest is a hand-operated separator, or bounce machine, dating back to 1900 or before. This is the gift of Berton Benjamin, trustee of the Estate of W. W. Benjamin.

The separator is of wooden construction, about the size of an upright piano, and is hand-driven by means of a crank. According to Mr. Benjamin's records, this equipment was used on the premises of W. W. Benjamin Company, fruit and produce merchants, at their business address on Mercantile Street in Boston. Cranberries in chaff were trucked to Boston and put through this separator before ready for sale. Similar to the power-driven separators used today, it operated on the same principle that a good firm berry will bounce and a soft one will not. Thus, back in 1900 as now, cranberries had to prove they had bounce before they could go to market.

A second machine, one of the first Bailey separators, was acquired from Rudy Nummi of Hanson and this also dates back to the early 1900's.

The Onset Museum is the only one of its kind devoted to the cause of preserving for posterity the unique equipment used on cranberry bogs.

Scoops, special stilt shoes, cranberry barrels, screening tables, are all on display, some of them one of a kind, designed and built by cranberry growers with an eye to producing cranberry crops more efficiently.

Playing continuously at the Cranberry Theatre is the half-hour cranberry movie, HERITAGE OF FLAVOR. The story of how cranberries grow, are harvested, packaged and processed is told in natural color for visitors to Cranberryland. This film is also available to clubs and schools upon request at no charge.

SOME CONFIRMATION

Not long ago, we editorially ventured our own thought that tariff walls in Europe might not be raised

against American cranberry imports, since cranberries are not grown there. Now we read some confirmation of this thought in "The Morgan Guaranty Survey" a monthly publication. It says the "common agricultural policy which the European Economic Community, which is the proper name for which we have given the name of the Common Market is working out threatening rules which make it more difficult for farmers of the U. S. to increase sales of their products there.

But, "not all U. S. agricultural exports to EEC are threatened, in fact more than half of the \$700 million of the annual total consist of goods which the Common Market does not produce, or only in small volume . . . these include "some fruits and vegetables, which look fairly safe." Vulnerable products are those such as wheat of which France is a large producer. Commodities affected already include poultry, but we ventured the assertion cranberries would taste just as good with European poultry as with American.

Fresh From The Fields

(Continued from Page 6)

In some areas, oak and sassafras leaves 20 ft. high were "burnt." Some fields have so few surviving berries of early varieties that it may not be practical to get them harvested. In general, mid-season berries are considerably less severely damaged and late ones only moderately hurt. The over-all loss is estimated to be considerably more than 50 % of the potential in Burlington County. Ocean County is even more seriously hurt but Atlantic County got by with very light damage. However, in the latter County, prospects on early varieties are poor because of extremely severe winter killing of canes and the very poor pollenating weather.

For blueberry growers this is the third year in succession of destructive weather conditions. In 1961 it was winter kill, in 1962 on May 10 frost was ruinous. Many of the blueberry growers are also cranberry producers and they now are counting on the cranberries to tide them over hard times. During the days of the "cranberry depression" it was offer-

the blueberries which "carried" the cranberries. Some blueberry growers who do not have cranberries recognize the need for diversity and are beginning to try small acreages of strawberries.

Good Bud Set

The cranberry potential is still considered good. There was a very good bud set on most bogs; 1962 tipworm damage was light on most of the larger properties and oxygen deficiency was not a problem during the winter. Most growers who usually start early (in April) were hesitant

to do so this year because of extremely dry conditions, the forest fires which caused great losses in New Jersey and the extremely bad frost conditions. During the winter a good deal of cranberry acreage was prepared for water harvesting. The majority of the acreage in New Jersey will employ this method in 1963.

Colder Than Normal

May averaged 58.65°F., which is 4.15° colder than normal. It was the coldest May in the 34-year weather recording history at the Cranberry

and Blueberry Laboratory. It was only very slightly colder than May 1956, which averaged 58.7 and which also had a very destructive blueberry frost, on May 26.

The spring drought continued as there was only 1.90 inches of rain, or only about half of normal.

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In the January 1962 issues of *Cranberries*, Dr. Bert M. Zuckerman (Massachusetts Cranberry Experiment Station) states that on the basis of six years of fungicide trials, "maneb is the best fungicide among those currently recommended" for cranberries. In addition, maneb "gave superior disease control," while berries from untreated plots showed

an average of 27.3% rot after six weeks of storage.

Du Pont "Manzate" maneb is a wettable powder that's safe and easy to use. It won't clog nozzles or corrode equipment. Tough on diseases but mild on plants, "Manzate" won't stunt growth or cause foliage yellowing.

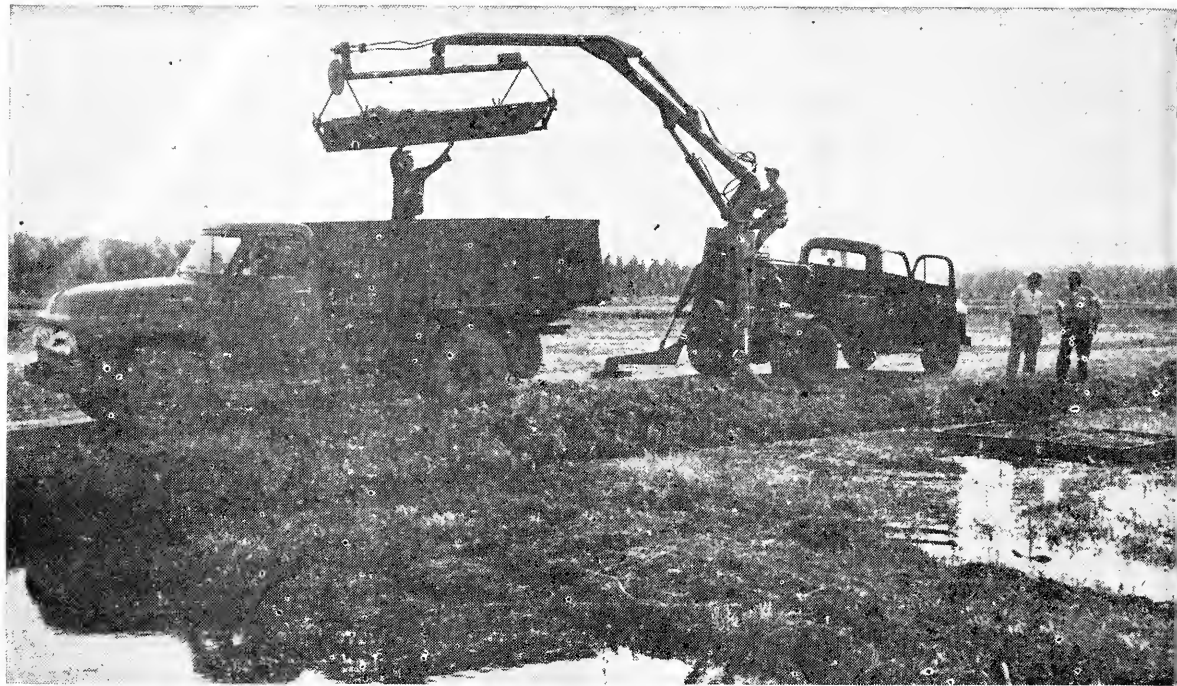
This year, for more effective control of cranberry diseases, spray "Manzate" at regular intervals. Get better spray coverage by adding Du Pont Spreader-Sticker to the mixture. For full information on "Manzate" for powerful disease protection, write:

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OUR PACIFIC COAST NEIGHBORS

We have just returned from our third cranberry trip" to the cranberry areas of the West Coast. As previously we found our distant colleagues, warm-hearted, friendly, progressive. This was our first visit, however, to Vancouver, British Columbia, where the "Three Yanks from Carver," Norm Holmes, Fritz Shaw and Jimmy Thomas have made good in cranberry growing at Lulu Island.

We found many things different in cranberry growing, yet many the same — growers were worrying about frosts, weeds, insects and how to get top crops.

We learned much and hope to impart some of this information to growers in the other areas, as we believe this becoming better acquainted is one of the better ways for better understanding and cohesion within our industry, which after all is flung from "Shining Sea to Shining Sea," as Dr. Chandler entitled an account of his after sojourn there.

We of the East have seashore, but they of the Coast have both seashore and high mountains. The Long Beach Peninsula in Washington is a miniature Cape Cod, the best beach in the world, but the Cape has no such towering heights in the background. Washington has been aptly described as having more variety than any other place on earth. Where else than in the Olympic Peninsula, the last U.S. mountain wilderness, between the bogs of Grayland and that at Challam Bay on the Strait of Juan DeFuca can you find glaciers and moist tropical rain forest side by side? Here are the towering forests of Douglas fir in southern Oregon, the magnificent Redwood Empire, a few miles south of cranberry bogs at Bandon, Cape Blanco, named by the Spaniards hundreds of years ago with its most western most bog and this being the most western point of the U.S. except for Cape Alava in Washington, the fantastic rock formations, with lions playing and down along route 1, one of the most spectacular drives in the world, to the thrill of a ride on the cable cars and the Golden Gate of San Francisco.

A visit to the Pacific northwest is one of the most inspiring of trips to be made.

CLARENCE J. HALL
Editor and Publisher

EDITH S. HALL—Associate Editor
Wareham, Massachusetts

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CORRESPONDENTS—ADVISORS

Wisconsin

LEO A. SORENSON
Cranberry Consultant
Wisconsin Rapids
Wisconsin

Washington

Dr. CHARLES C. DOUGHTY
Cranberry Specialist
Long Beach, Wash.

Oregon

FRED HAGELSTEIN
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Director Mass. Cranberry Experiment Station
East Wareham, Mass.

New Jersey

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

IS SANDING A WASTE?

Dr. F. B. Chandler in an article in this issue has raised an issue, which will undoubtedly startle most cranberry growers, certainly the older ones. The use of sand dates from the very first cultivated bog on Cape Cod. Dr. Chandler for years has been working on the theory that sanding is mostly beneficial in that it is a pruning method, and that pruning can be done in better and cheaper ways than by sanding.

He has stressed this theory before. In this day when cost cutting is vital, it would seem if this startling theory is correct it might be given serious study by growers.

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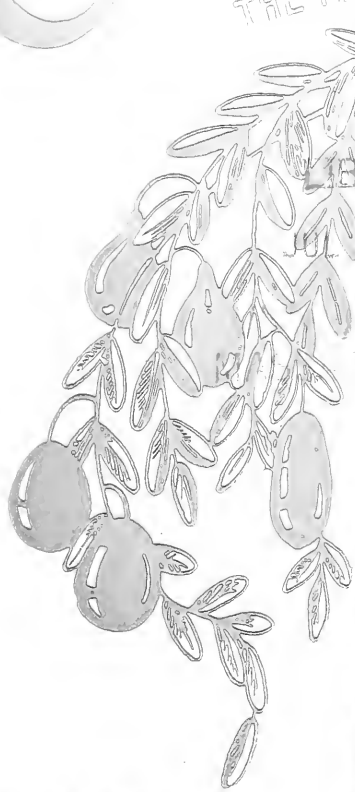
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MRS MYRTLE VOSE — Had not intended to be, but is successful grower.

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Cape Growers Meet Aug. 29

Extremely Interesting and Informative Session Scheduled.

Plans were completed July 10 by directors of the Cape Cod Cranberry Growers Association for the annual meeting and election of officers at the Experiment Station as is the custom. This all-day meeting, one of the most important of growers' get-togethers will be later than usual, Thursday, August 29.

There will not be the usual highlight of the USDA preliminary forecast of the coming crop, which is ordinarily released in Washington and at this meeting simultaneously, which will be given out to the press a week before.

A feature speaker will be Edward Clithorpe, new executive and general manager of Ocean Spray, which will give most growers their chance to meet him. Cranberry Institute will also be featured, with a report on the possibilities of a European market for cranberries which is now being developed by the Institute in cooperation with Foreign Agricultural Service of the USDA. This report will be made by Gilbert T. Bolton, fresh sales and export department of Ocean Spray. He returned last month after spending a month in Western Europe and the United Kingdom.

As usual there will be a display of cranberry equipment by various manufacturers and agents, and there will be short technical reports on cranberry growing by the research members of the Station staff.

Also Tony Briggs, manager of the Cranberry Marketing Committee is expected to make a report of the results of the vital pre-harvest meetings of the seven principals and 7 alternates, which is to be held at Wisconsin Rapids, Wisconsin, August 7. It is anticipated that at that meeting the matter of the percent of the "set-aside" of the crop will be decided, these restricted berries not to be released on the open market. In a year the restricted pool consisted of 12 percent of the total crop.

Oregon Soil Tests Show That Standardized Method May Be Needed To Be Established

Bogs May Need Several Split Fertilizer Applications

Data collected from soil tests on 25 cranberry bogs in the Southwest Oregon production area provided much significant information for an industry-wide Soils Workshop held in Bandon recently.

County Extension Agent Fred Haggelstein and Oregon State University Soils Specialist Arthur S. King reviewed with growers the status of soil fertility levels on bogs as revealed by a "Testing Tells" mass soil testing program held last fall. Because of little previous soil fertility work on local cranberry soils this session was particularly fruitful in providing leads to better soil fertility management practices.

Need Standard Method

Discovered as a result of the in-

tensive soil testing, and of major significance, is the technique of taking the soil test sample. It was found that the normal method of sampling to a 5 to 6 inch depth yield soil test information with as much as 100% difference compared to limiting the soil sample depth just to the crop residue layer of decaying cranberry vines. The reason for the extreme difference of test results stems from the practice of periodic sanding of Southwest Oregon bogs and the extreme low plant nutrient levels found in this sand layer.

A standardized method of sampling will be developed for taking samples from this specialized crop. Since the bulk of the cranberry roots in these local bogs is found in the top organic layer, future soil test

(Continued on Page 16)

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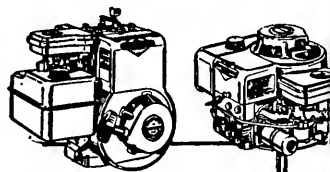
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Mass. Cranberry Station and Field Notes

by CHESTER E. CROSS
Director

The weather in the cranberry area southeastern Massachusetts has varied considerably from town to town since June 1, but in general it has been warm, sunny and dry. At East Wareham we measured less than two inches of rain in June, and in July to date (17th) we have exactly one-half inch. Since late June bogs in general have needed irrigation waters. Those with sprinklers have been applying $\frac{1}{2}$ to $\frac{3}{4}$ inch of water once a week, others are keeping ditches filled and still others have been using small pumps and fire hose or plastic tubing to pour 20 to 50 gallons a minute onto high edges and the centers of sections with "open ended" tubes. A few growers, especially away from the coast, found the cranberry new growth wilted and were forced to "flash flood" their bogs while in bloom. This rather drastic procedure is recommended by the Cranberry Station only as a last resort and even it is necessary to protect the cranberry vines from death. In the past, such flash flooding has usually resulted in a market decline in the keeping quality of the berries.

A small amount of sun-burning of blossoms occurred during the heat waves of late June and early July. In these cases, bog temperatures probably exceeded 100 F., the air was very dry and winds moderate to strong. It is felt that this caused rapid transpiration of moisture

from the cranberry flowers and new growth generally, that was greater than the capacity of the roots and stems to replace.

As of this date crop prospects in Massachusetts are declining, more in some areas than in others because of the local nature of showers in some places. How much of a decline is too hard to estimate, but there are now many bogs showing dry weather injury of varying degree.

Personals

Dr. Zuckerman was hospitalized for over a week with an obscure glandular infection. I'm happy to report he is recovering nicely and will soon be back at his accustomed post.

Prof. Norton attended the annual meeting of the National Society of Agricultural Engineers in Florida. Following the meeting he and his family have been vacationing in that state.

Mr. Milton Paine has returned to his engineering work following a prolonged absence caused by a stroke.

The experiment station hopes to have much of interest to show growers on their annual meeting August 29, 1963.

Sugar "Crisis" Not Helping The Market Prospects

Especially, In Regard To Fresh Fruit Sales This Fall

The shortage, and critical situation of the sugar situation which developed last month, did little to help the cranberry industry to continue to improve from the 1959 debacle.

Ocean Spray has increased its charge for #300 cans of sauce to 20 cents a case. Cocktail has advanced 10 cents on the case. There are the "key" figures of this slight increase, other items have been raised according.

This was a decision for the new general manager, Edward Gels thorpe to make, and not the directors. This price is subject to fluctuations of the market.

How this small increase will affect sales is, of course, at the present uncertain. But certain it is that all processors, who use sugar, and particularly the candy manufacturers are in the same "fix," more or less, as well as the other processors of cranberry products.

Also there is no telling at the

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moment how this probably increase in the sugar price to the housewife will affect the sale of fresh cranberries next fall when the 1963 crop comes in and goes on the market. It is hoped this increase in total cost may not be sufficient to deter her from buying the fresh fruit.

Most or all independent canners have also made price adjustments.

Ways To Attain Cranberry Quality

by

William M. Atwood

(A. D. Makepeace Company)

Quality should be the first thought in the growers mind for the coming season. The grower should remember that, even though there is no direct incentive payment plan in operation, he will benefit because the better quality will mean more sales over a longer period.

Every grower should ask himself, what can I do to improve the quality of my fruit? I would like to mention a few of the growing practices which will effect the quality. Most of these will not be new to you but it is well to review them at this time. I have grouped them into four categories; water management, harvest and handling methods, ferti-

lizer practices and fungicide applications.

Early and late water holding. Our experience with late water (holding until May 25th) is that the quality is better but the crop is usually about 10% less than early drawn water bogs. There are other advantages which tend to offset this reduction in crop. There is less chance of spring frost damage and less insect activity especially fruitworm.

Spring frost control. The more times a grower has to flood for frost and the holding over from day to day of this frost water has an adverse effect on the quality. These factors should influence his subsequent control program. Last spring when the winter water was drawn off in February due to ice and snow conditions, many bogs were thus able to withstand much lower temperatures in April and May. This meant that less water was required.

General water management. Ample drainage should be maintained throughout the spring. During the warmer months, care should be taken not to over irrigate. This is especially true of flash flooding. Excess moisture results in ideal conditions for organizations to form and spread vines that suffer from oxygen deficiency usually produce smaller berries.

The use of picking machines have resulted in some problems which effect the quality. Growers are more apt to pick when the vines are damp or even wet. The machines do not complain about the wet conditions as the scoopers did. Improperly operated machines result in more bruising. A machine in good working condition, operated at a slow speed is best. Harvested berries should not be left uncovered in the hot sun for any length of time. They should be left out overnight to reduce the field heat before storage. Care should be taken when covering the piles, especially with plastic materials. It is best to put empty boxes on the pile first, as the berries tend to wet up under the plastic. Ditch berries and poor berries should be kept separated for ease of screening.

Fertilizer. We have collected quality data from hundreds of fertilizer plots over a five year period. Fertilizer materials as such do not cause fruit rots directly but there is a relationship between the amount and type of fertilizer used and the resulting fruit rot both at harvest and after storage.

There was no significant differences in the rot when different ratios of fertilizers (1-1-1, 1-2-1, 1-1-1 or 1-3-1) were used. However an increase in the rate of application of these materials resulted in an increase in both the field and storage rot. Some years the total rot reached 50% when the fertilizer applied was 400 lbs per acre of 10-10-10 or better. In most cases 50% of the rot appeared at harvest time and the remainder after six weeks storage.

The type of nitrogen has an effect on the quality also. Urea-formaldehyde and nitrate of soda did not result in increased rot at rates up to 80 lbs per acre of actual nitrogen. Materials such as ammonium nitrate, sulfate of ammonia and urea, even at rates of 20 lbs per acre of nitrogen, resulted in significant increases in rot. Minor elements such as zinc, copper, iron and manganese had little or no effect on rot.

Field observations indicate that heavy vine growth and the conditions which favor the development

(Continued on Page 16)

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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of July 1963 — Vol. 28 No. 3

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FRESH FROM THE FIELDS

Compiled by C. J. H

MASSACHUSETTS

June Very Dry

June, until the last week was a favorable month for the prospective crop. Temperatures for the 30 days were slightly more than $1\frac{1}{2}$ degrees on the plus side. Rainfall totalled only 1.85 inches, below average. May, it may be recalled had not so far from twice the average precipitation. June rain to the 29th was only 1.65 inches, normal 2.89.

Heat Wave

On June 23 there began a heat wave unprecedented for so early in the summer as June. Readings in the shelter at the State bog were in the top 80's and into the 90's. Temperatures in the sun and on bogs had even in the shade ran up to 100. Dr. Cross of the Cranberry Station called this, in general favorable. The hot weather forced the bud to open rapidly, and it was indicated bogs would be in full bloom almost as much as a week ahead of most years. All kinds of bees were extremely abundant and were "working like mad."

However, the heat had begun to do damage on some bogs on high spots with thin vines. Growers were keeping water high in the ditches and those who had any sort of

sprinkler systems were using these. Damage was done, extensive on some properties.

Slight Rain

On the 28th clouds gathered and there was a little rain, which continued through the 29th. This was only enough to bring the month's total to the 1.85 figure.

Insects had not been bad, but there had been some girdler activity and there was a higher-than-desired fruitworm count.

Bloom Forced

On July first bogs were practically in full bloom and the bloom was developing as very heavy. On that same day Cross declared the drought and heat condition had become "critical." On that day the temperature in the State Bog shelter reached 89 and there was extremely high humidity.

One more possible advantage of

the dry June, in the opinion of Cross was that it might tend to improve the rather poor keeping quality outlook.

This heat wave was general to the entire East. Water supplies for bogs and for towns and cities in Massachusetts were becoming short. Wareham ordered the sprinkling of lawns only during limited hours, starting July 1.

Relief Comes

Relief came on July 3, after temperatures of 90 on the first and 83 on the second, in shelter at State Bog, with a 97 being recorded in Boston on the second, breaking a 95 year record. Dr. Cross said the best estimate of damage was that it was not extensive, as the cooling came almost exactly at the moment the situation really became critical.

Fruitworm infestation at that time

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was causing some concern, the warm nights were not helping matters, also there were girdler millers.

Woods Fires Again

July Fourth was at least 20 degrees cooler, with high winds, almost early fall like in atmosphere. The long dryness for the second time this year, brought critical woodland conditions and there were more than 1000 wood fires in the state on the holiday.

July Starts Dry

Weather continued extremely cool for a week or ten days, rainfall for the first half of July was light, only .39 to the 11, normal for July, 3.21. Despite the torrid first week of July by the 11th temperatures to that date were a minus 4.

Heavy Set

Despite these factors reports from all sources seem to indicate the set was to be heavy.

NEW JERSEY

June Not Hot

Although there was blistering hot and dry weather the last week in June, average temperature for the month was still below normal. The average was 69 for June, which is 2.2 below normal. The four 97 days in the last week of June failed to

bring the average up as we had several nights in the thirties and forties on the upland and as low as 28 on cranberry bogs.

Severe Drought

There has been a very severe drought in the cranberry area in New Jersey. Rainfall in June was only 2 inches, or 1.85 below normal. For the spring months of April, May and June the total rainfall was only 4.57 inches, only about one-third of normal.

WISCONSIN

Wisconsin Meetings

The summer meeting of Wisconsin State Cranberry Growers Association is to be held August 7th at the marsh of the Cutler Cranberry Company, Camp Douglas.

Area meetings have been held on herbicides at the Badger Cranberry Company, Spooner, June 25, and at Manitowish Waters, June 27. Speakers were Dr. M. N. Dana and Dr. Klingbeil of the University. A similar herbicide meeting was to be held for southern growers at a later date.

Unfavorable Pollination

The heat and the extremely dry conditions, which came at the time that cranberries began to blossom, have created conditions which are

apparently unfavorable to the pollinating insects. Several growers are much concerned about the lack of activity of bees in the cranberry blossoms. Apparently the nectar flow is too poor to attract the pollinators. Recent thunderstorms may improve this situation on some properties. Blossom is very prolific on most bogs. Tipworm is considerably less abundant than normal but sparganothis populations appear to be extremely heavy.

Excessive June Frosts

June was another month of sharp contrasts in temperature and precipitation throughout the state. Seasonal lows along with a scattering of very high readings, brought an average of about 3.5 degrees above normal for the month. Six readings in excess of 90 degrees were recorded or more than all combined for the entire summer period last year. The record breaking lows occurred the end of the third week in June with successive frost on the 19 thru the 22nd. This broke all records for consecutive frost nites this late in the month and resulted in much damage to agricultural crops in the state. The night of the 20th was the most severe with readings as low as 24 degrees.

Good Growing Month

Rainfall was about normal in the central part of the state to about normal in the north and way below in the south. At month's end irrigation was needed on new plantings. Mowed vines and solvanted berries. Reservoirs were dropping but supply appeared adequate in most areas. All the month could be classed as good growing June for cranberries. The outlook for July is for above normal temperatures and below normal precipitation.

Frost Loss 3-5 %

Frost loss to cranberries in the state the end of the 3rd week of June are estimated at between 3-5 % roughly 15-20,000 bbls. Losses were great in certain marshes the night of the 20th when temperatures dropped as much as 12 degrees in an hour. Unless water was brought over the surface of the beds loss was quite high, with the new growth burnt off. Loss was also greatest on the late

(Continued on Page 17)

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Mass. Woman Successfully Accepted The Challenge" To Be A Cranberry Grower When Illness Struck Her Husband

he is Mrs. Myrtle Vose, Widow of Chester A. Vose, prominent Grower — She operates 30 Acres, Does own Frosting, and Harvesting — Is Most Appreciative of Help and Advice Received.

by
Clarence J. Hall

Mrs. Myrtle Vose of County Road, Marion, Massachusetts didn't intend to be a cranberry grower. But she is, and is now recognized as a good one. Her husband, the late Chester A. Vose, who had long been prominent in the Massachusetts industry became fatally stricken in May of 1945.

She was forced to take over operation of the Vose bogs. Mr. Vose had been a president of the Cape Cod Cranberry Growers' Association, long a chairman of the important frost committee of that organization and interested in getting frost warnings to growers on a "business-like" basis. He had also been otherwise active in the industry. He passed away in June of 1960 after the long illness had incapacitated him.

30 Acres Of Bog

He owned a total property of 150 acres located near his home which is situated at a point where the towns of Marion, Rochester and Wareham intersect. The bogs, 30 acres in all, are located in Rochester, with the exception of one small piece in Marion.

The bogs had been owned by his father, Benjamin F. Vose, before and some had been built by a

Mr. Perry. The bogs date back as far as the 1880's. The elder Mr. Vose had developed nine acres, and was also engaged in general farming, and at first he and "Chet" sold produce, kept cows and horses. The father in his day was known as a successful strawberry grower, as well as grower of cranberries. All but the cranberry business had been given up before Mrs. Vose took over. It was the late "Chet" Vose who

built the bogs to their present acreage.

"Taking Over" Difficult for a Woman

Taking over the operation of 30 acres of cranberry bog, including everything, even the frost supervision was an undertaking of considerable difficulty for a woman, who did not ever expect to assume the management. But she tackled the job and the bogs continued to produce.

Mrs. Vose had shown an interest in the business. She had spent many a night going around with her husband while he had put on and taken off a frost flow. She had thought at the time she had been half asleep and had not absorbed much knowledge. However, when it came to the test, she found that she hadn't been as much asleep as she thought she had and found she understood the process.

Since his illness she has had complete charge of the decisions as to frost flowing and has put in planks and taken them out as required. There was gravity flow for about 24 acres and six had to be pumped. She had an employe who worked for the Voses most of the year around and



The attractive century and a quarter old home of Mrs. Vose.



(CRANBERRIES Photo)

It is a very fine view of the tower.

8 motor while she handled the heavy work.

He Had Kept Records

Mr. Vose had been interested with his father since 1907 and had always kept meticulous records of his bog work. These records proved invaluable as a guide in telling her what to do when she took over. Also, she says, she found much assistance from the research staff at the Massachusetts Cranberry Station. One of their jobs is to help out growers with sound advice and she says they always responded and were of tremendous help to her.

Production on the Vose bogs has generally been better than most Massachusetts bogs, both before Mr. Vose became ill and after, Mrs. Vose took over. There had been crops as high as 1100 barrels, with many around 1900 and the top crop was 22 in 1951. "We find it is hard to do much better than 60 barrels to the acre," she says, but that is above the general Massachusetts average. The Voses are independent in selling the crop, formerly selling through J. J. Beaton Distributing Agency,

Wareham, which became inactive last fall. At one time the Vose crop was sold through the now defunct New England Cranberry Sales Company. For several years a portion of the crop was sold through Ocean Spray. Fruit is now sold through PALS Peter A. LeSage and Robert T. Hiller.

Did Own Screening

Until the illness of Mr. Vose, screening was done on the property, there being a large screenhouse, which was one of the "prides" of the Voses. Now screening is done by a friendly and neighboring grower, Howard and Robert Hiller of Rochester.

The bogs are flowed from Mary's Pond in Rochester. This is a state-owned pond with cottages around it and a bathing beach. Usually there is ample water, but this is a spring-fed pond and occasionally the water gets uncomfortably low. The Voses have a permit to take water from this public source.

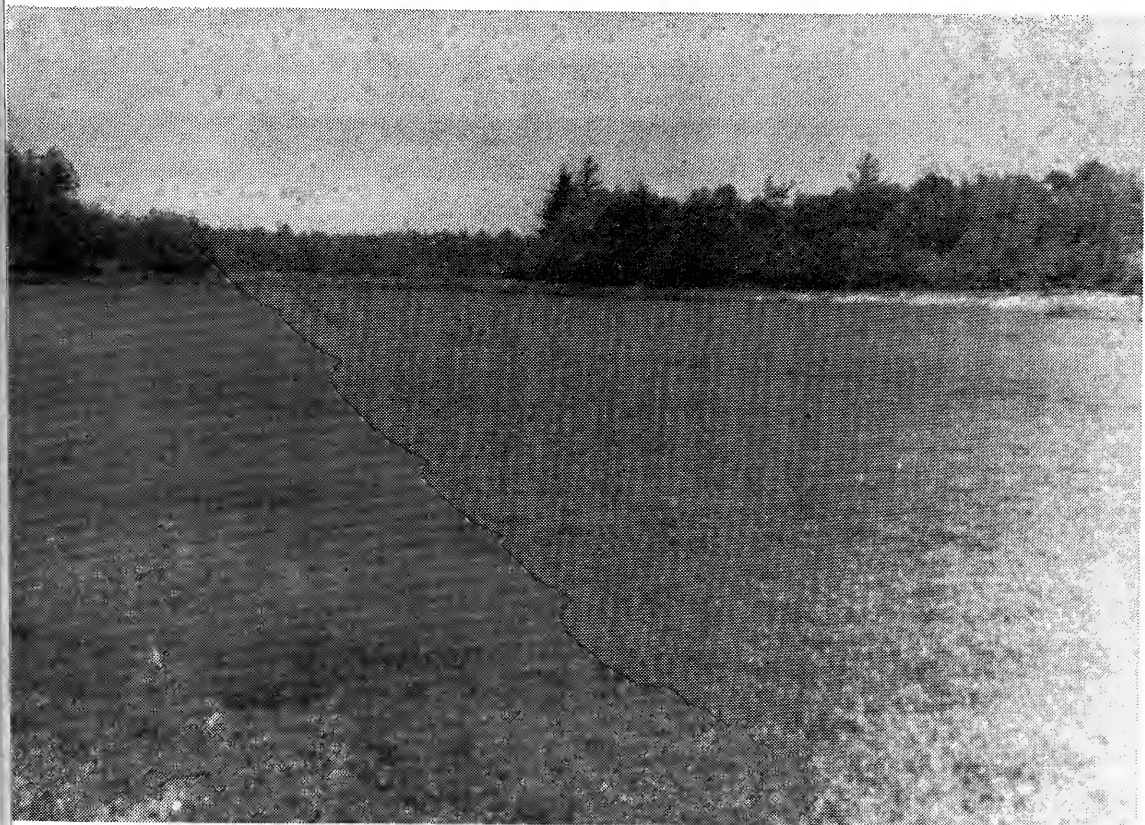
Bogs are built on a muck and peat bottom. Chief varieties are Late Howes and Early Blacks, but there are some odd varieties. These in-

clude "Carver Reds," "Perry Reds," and a variety called "Vose's Pride." It is pear shaped, medium early and a rather heavy producer.

One thing stood Mrs. Vose in good stead when she took over, and that was that she had been familiar with cranberries all her life.

Mrs. Vose was born in Fairhaven, Mass., not far from Marion, as Florence Myrtle Henderson, but has been known most of her life by her middle name Myrtle. She was brought to Marion when she was three and lived in the Rocky Nook or "Sparrows Mills" section. She attended public school and is a graduate of Tabor Academy. There is a big bog in that section of Marion and she picked cranberries there as a child. Those were the days when the bog was lined off by white string into rows; each picker being carefully watched by the foreman to see that not one berry was left behind. She learned the value of picking clean. She had been brought to Marion by her step-father David H. Bowman, a retired whaling captain.

When older she screened cranberries. For a time she did office work



One of the many well-kept Vose bogs in Rochester.

(CRANBERRIES Photo)

for I. E. Hiller Company in Marion and also was secretary at Marion Town Hall, when three boards conducted town affairs. Her early familiarity with cranberries came in handy when she was forced to take over her husband's operations. Of great assistance and value to her was help and advice from Howard Hiller, and later his son, "Bob," now engaged in the distributing end of the industry as well as being a grower.

As a matter of fact the Hiller bogs all but "surround" the Vose bogs, and the Hillers were and still are, on hand to give her assistance when needed. On frost nights she does not find it lonely. "Bob" Hiller and the late "Lew" Hiller, who was also interested in the Hiller bogs were taking care of things on their property and the three often got together to discuss the weather outlook and to decide what to do with flowing.

Kenny Beaton of Wareham was hired to do the netting for insect control. Mrs. Vose hires the Wiggins Airways, Inc. for application of insect controls. Sanding is also done

by Beaton with a cub tractor and trailer trucks.

Her Own Foreman

She has one man who has worked for the Voses for 30 years and in season she has two or three others to help out. They help weed and other hard work. There is no foreman. Mrs. Vose is her own.

Until 1961 she, like her neighbors, the Hillers did a lot of scooping. The Early Blacks were scooped and also the Howes. Ray H. Morse of West Wareham did the machine harvesting, at first using a Western Picker, as he believed this trained the vines more than did a Darlington. Lately Darlingtons have been used. The "Vose's Prides," of which there is quite a bit of acreage have very long runners.

This past season of 1962, Mrs. Vose decided to try it "on her own," picking entirely by Westerns. She claims she was literally "launched" on a new career having picked in so much water, it being remembered that the fall of 1962 was one of the rainiest ever with much flooding for frost.

The bogs are not as free from

weeds as she would like them to be but in general they are well kept up. She has access roads around all the pieces and tries to keep the upland well trimmed. She considers this important.

Ancient House on Property

Incidentally and rather interesting is the fact that on the Vose bog property there is a very ancient wooden frame house. This bears the date over the door of 1699, which is a near the building time as research can place it. It is one of the oldest houses in Rochester, which is a very early-settled town.

This structure is known as the "O Haskell House," and at one time its location was on the main stagecoach road which wove around the shore of Mary's Pond, going from Acushnet to Plymouth. Now, this is a wooded, isolated spot, with only the remains of the sandy, narrow road.

Mrs. Vose makes her home in big house which was the birthplace of her husband. This house may date back to about 1825. Mr. and Mrs. Vose were fond of antiques and there are many valuable pieces in the house.

Mrs. Vose is especially fond of old and she knows the "history" of each piece, which she says makes the ownership of antiques much more interesting. Many of the pieces were in the Vose family, and she knows the "story" of each as well as a few others she has acquired.

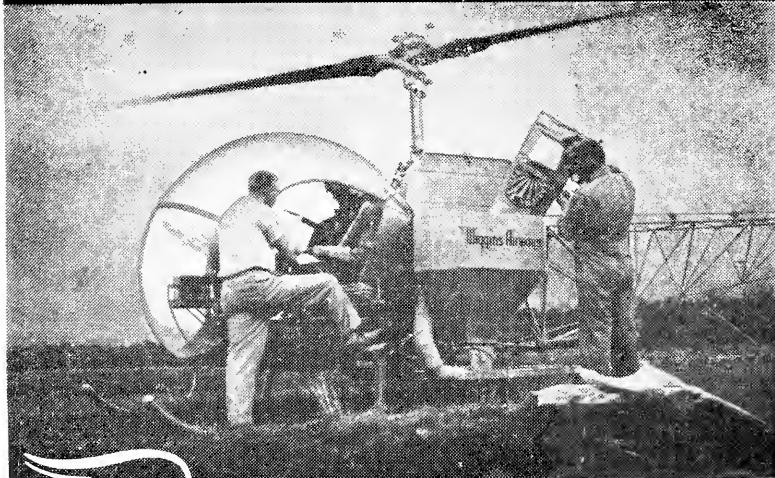
Hobby — Restoring Antiques

As a matter of fact her present hobby is the restoring of these antique pieces and this she does with loving care and skill whenever she is able to find the time.

At one time she was much interested in the growing of the high-bush cultivated blueberries and made considerable business of this. There were some 900 bushes. However, she did not find this business profitable enough for the time and effort consumed and she now has only a few bushes, growing enough fruit for own use and that of friends, which she permits to come in and pick themselves.

Mrs. Vose is an ardent member and attendant of both the Southern Cranberry Club which meets

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Announcement Made By Chemagro, The Manufacturer.

Wisconsin cranberry growers can now use Dyrene foliage fungicide to control berry spot, the black rot, and rot and Phomopsis rot to within two weeks of harvest.

In making this announcement, the manufacturer, Chemagro Corporation of Kansas City, Missouri, also stated that the Food & Drug Administration has established a tolerance of 10.0 ppm for Dyrene residues on cranberries.

Dyrene applications should begin, the company states, before the diseases appear and continued throughout the growing season. They should be applied as needed, usually even to 10 days, except in cold, wet weather, when four to five day schedules are advisable.

LOOK MAGAZINE, AND CRANBERRIES

Cranberries got a puff in the July issue of "LOOK magazine, with a color shot of two berries among lines, one red and one yellow. This was in a color photo story of Cape Cod with the title, "A Walk with Thoreau . . . Cape Cod revisited." Henry David Thoreau walked the Cape in 1849, and his book "Cape Cod" remains one of the classics.

The caption beside cranberry photo reads, "Fruit of the sunken bogs," whatever that may mean, and goes on to say, "wild and unattended when Thoreau got Cape Cod sand his shoes . . ."

Now, cranberries have been cultivated on the Cape since 1816 or possibly 1812, so although the berry grew wild on the Cape at that time was not "unattended," and yellow not the color of a desirable American cranberry of commerce. But his photo story is at least cranberry publicity."



Charles Laramie, Director Wisconsin State Association Part Owner Copper River Marsh Property at Merrill, Efficiently Operated and an Excellent Producer — Markets through Indian Trail, Inc.

Charles Laramie, a native of Wisconsin Rapids, and part owner of the Copper River Development Company, Merrill, Wisconsin, is a director of the Wisconsin State Cranberry Growers' Association and has been associated with the cranberry industry for the past 14 years. Copper River is one of the finest producing properties in Wisconsin. It consists of 65 acres.

Copper River Development Company marsh is comparatively new and is laid out and engineered in such a manner that it lends itself to efficient operations. There is an ample water supply from the Copper River and the property is equipped with two large pumps so that, if necessary, the water after use can be pumped back in the water reserve.

Most of the beds are set to Jumbo Searles; however, this past season 10 acres have been added, planted to the new Stevens hybrid.

Foreman at Copper River is, Jere Westfall, a capable young man, with a good background in managing cranberry operations. He has been there since September, 1962.

In 1956 Laramie and his associates built a new cement block, two-level warehouse and added on a 60 foot, two-story addition in 1962. Packing operations were enlarged and a great amount of new equipment

purchased. All packing is now done on the lower level. This makes it very convenient, as the berries are fed in from the top level floor into the hoppers, which makes an effective and modern packing operation.

Mr. Laramie is very much interested in the cranberry industry. He is always looking for new and better methods of producing quality fruit, and takes great pride in putting out a quality pack, both for the fresh market and for processing.

He is married and has a son and a daughter, the son being Dr. James Laramie of Whitewater, Wisconsin and his daughter is Mrs. Joan Johnson, who makes her home in New York.

His wife, Gladys is also extremely concerned with the cranberry industry and keeps up to date by attending all the meetings held. She is interested in new growing methods and vitally interested in any new marketing ideas. She is a real booster for all cranberry products and is a good judge of quality.

The cranberry industry is very fortunate in having a woman, as attractive as she, out "boosting" for more use of cranberries by the general consumer.

Laramie is an independent grower, marketing his crop through Indian Trail, Inc., of Wisconsin Rapids.

**READ
CRANBERRIES
MAGAZINE**

Wisconsin Is Divided Into Frost Areas

Wisconsin cranberry area has been divided into three districts for frost warning service, Warren Wallis, the forecaster announced according to a letter sent to growers from the Department of Horticulture, University of Wisconsin, the changes becoming effective June 3. Northern bogs are north of a line from Wausau to Eau Claire; southwestern bogs, only the marshes in Black River valley, southwestern bogs, all marshes south of the Eau Claire-Wausau line, (except Black River area).

Growers near the dividing line have been cautioned to use the top of the low forecast temperature range and the bottom of the high forecast temperature range. "Example; The forecast bog minimum are '26-30 north and 30-34 south.'" A grower near the northwest dividing line should use 28-32 as his forecast minimum temperature.

It is explained that the term "Caution Advised" is used in forecasts when there is a definite possibility that bog temperatures may fall well below the forecast range, and example being: "the center of the cold air mass has passed to the east of Wisconsin, but there is a possibility that the air mass will back up during the night."

Letter was signed by Dr. G. K. Klingbiel.

Pannkuk Urges Growers' Funds: Wis. Research

As previously reported at the January meeting of the Wisconsin State Cranberry Growers Association a committee of 4 to investigate the possibility of initiating a State Marketing Order for the purpose of collecting funds to support research on cranberries was appointed. It was stated the cranberry industry represents a 4 to 5 million dollar gross income to the growers who spend very little as a group toward support of research in weed control,

quality and keeping quality, insect control; long-range research studies for improvement in cranberry culture and product development. At that meeting WSCGA members favored such an action on a voluntary assessment basis.

A resolution was voted that "The cranberry growers through the Wisconsin State Cranberry Growers Association provide \$4,000 annually for research at the Agricultural Experiment Station. The 1963 fund to be raised by a voluntary assessment of one and one-third cents per barrel of the 1962 crop. If the fund is not raised by July 1, 1963, the committee is to take the necessary action to establish a state marketing order for the purpose of collecting such money."

Directors of the association met at Wisconsin Rapids, May 13, and in anticipation of wide acceptance and support of this endeavor appointed a committee of four to plan with Wisconsin Agricultural Experiment Station a program for the most effective use of the funds collected and to keep in touch with the staff of the college in the development of this program.

Members of the committee are Charles Lewis, Jr., Donald Duckart, Richard Indermuehle, Richard Brazeau and Leo Sorenson.

Association President Behrend G. Pannkuk has recently urged members to "put your best foot forward and send in your remittance early, in order to get the program off to a good start."

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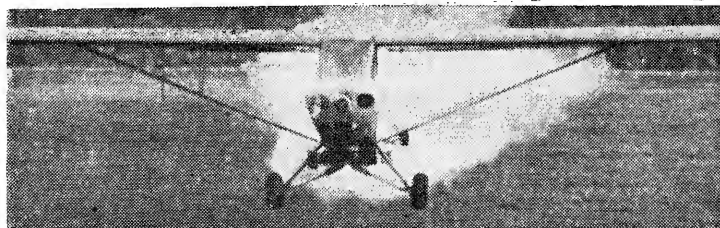
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Institute Continuing European Market Development Program, Plus Other Activities

Hope for Another Year of School Lunch. G. T. Beaton Reports on Visit to Continent and United Kingdom.

Cranberry Institute is continuing a number of activities designed to aid the industry, one being the recent sending to Europe of another delegate to continue the project, in conjunction with Foreign Agricultural Service of the USDA, to build up a market for American cranberry products. He is Gilbert T. Beaton, fresh sales and export representative of Ocean Spray Cranberries, Inc. who spent about a month on the Continent and in the United Kingdom, returning in June. He filed a 27-page progress report with the Institute and this will be taken up later in this issue.

Perhaps the Institute project of most immediate vital interest is that representatives have been in Washington, striving to obtain another Federal school lunch program for cranberries. Last year the school lunch program utilized approximately 100,000 barrels or approximately ten percent of the total crop, this single sale to the Government returning the industry about \$1,300,000. All handlers in the industry were invited to bid on the entire amount or any part of it, but only bid, or at least any appreciable amount came from Ocean Spray.

If this government purchase for this purpose is not forthcoming in future years, the Institute is also at work attempting, through the Master School Lunch program of the USDA to include cranberries for school lunches at the State or local level. Erwin Colley, Institute president firmly believes now, that since cranberries have been served to school children for the past two years or more these students, are familiar with cranberries and where they become adult may become consumers of cranberry products in their homes. To ship cranberries abroad in some condensed form especially dehydrated, the Institute is continuing its research into this field. One research firm in New Jersey is now working on an order which it is expected will produce 200 pounds of dehydrates, which can be sent as samples to

Europe or other foreign markets and there private processors can, it is hoped, develop various cranberry products and eventually build up the foreign cranberry market. Cranberries in this form, obviously are less bulky and expense of shipment is less, and also there are no tariffs on sugar as in a canned product.

Also working, through the efforts of the Institute on various drying techniques for cranberries are the Eastern Utilization and Research Development Laboratories, at Philadelphia and its counterpart, the Western laboratory at Albany, California. These are government research institutions. Such research is necessary to establish costs of these cranberry products, their practicability and their acceptance to foreign manufacturers and consumers, also flavor "stability," color "stability."

Institute is working on other forms of dehydration of cranberries, such as a "vacuum" pack (for juice). Mr. Colley has also been in contact with the radiation of products project now being carried on by the U.S. Quartermasters Department at Natick, Mass. This project has created great interest, as through the use of radium active materials it has been found that a number of foods can be kept perfectly fresh and with retained flavor for years, without refrigeration. A key figure in this is Dr. Dale Seiling, former Dean of Massachusetts Agricultural College, UMass., who, of course, is familiar with cranberries. (A comprehensive article on this project appeared in "The New Englander," publication of the New England Council in the May, 1963 issue.

The Institute, in another project is also continuing its association with the Poultry Institute, as it is felt the affinity which has now been developed between poultry and cranberries will be of benefit in foreign markets.

Members of the Institute have attended the annual meeting of the National Fruit Export Council, of which the Institute is a member; institute members also attended a session at the White House with Trade Information Committee, Christian Herter of Massachusetts being chairman of this committee

devoted to building up American exports in Europe. Private meetings have also been held with members of Congress, particularly Senators who are on agricultural or foreign trade committees and are interested in promoting such matters.

BEATON REPORT

Beaton's first stop was England, where he contacted J. O. Sims, Ltd., importer of fresh cranberries since 1950 and also, since 1962, Institute representative. The handling and shipping of fresh fruit cranberries for this coming season was discussed. Also contacted was Dr. Paul J. Findlen, assistant Agricultural Attache at United States Trade Center, and also Malcolm Sheriff, trade promotion specialist, who is planning a trip to the U.S. in August and arrangements were made for him to visit cranberry plants, bogs and growers.

Mr. Sheriff was of the opinion that a considerable period of time be spent by Mrs. Janet Taylor, Ocean Spray home economist, in England, contacting home economists there and introducing the uses of fresh and processed cranberries, and it was felt she should be the next Institute delegate to England.

Arrangements were also made to have the Turkey Federation in England contacted for sales this fall. This is to be through "Jim" Pollard who operates public relations in England for the Institute. G. Street & Co., Ltd. who perform advertising and publicity matters for the Institute was also contacted.

Mr. Sims reported that shipments this fall will be 50 percent window boxes and 50 percent bulk. Sims would like to sell fresh fruit at 2 shillings, 2 pence per pound which would equal U.S. 30 cents a pound at retail. It was suggested that a half-pound window box should be developed as this small package seems to be in greatest demand by English housewives.

At another point Mr. Beaton discussed ways and means of promoting cranberries in Great Britain. Safeway stores were also contacted as this organization has purchased a controlling interest in Garden Stores

(Continued on Page 17)

Quality Cranberries For The Consumer

by

Dr. George L. Peltier

Wisconsin Cranberry Consultant

For the past decade the writer has been interested in the production of a quality pack that would appeal to the ultimate consumer. An assist in this program was the USDA Standard for fresh cranberries made effective August 7, 1956. Through an intensive educational program and with the cooperation of associated growers, almost 95% of the fresh fruit shipments are now meeting the minimum standard of USDA Grade A.

To produce a good quality of cranberries, one must have efficient management of the bogs during the growing season, primarily in the correct usage of water in all of its aspects, the growing of high yielding varieties, the effective control of disease and insect pests, a continual warfare against weeds and the judicious use of fertilizers. All are important factors needed to produce moderate size, proper color, and per-

fectly sound berries, with good keeping qualities for the storage period and subsequent shipment to various parts of the country.

It is really astounding how cranberries can stand the abuse they receive from harvest until they reach the ultimate consumer. If one examines 100 berries under a magnifier, at least 95 of them will show mechanical bruises of one sort or another. True, many cannot be detected with the naked eye, yet they are present and, in many instances, they serve as portals of entrance for fungal invaders.

Such bruises are incurred during raking and hauling from the bogs to the mechanical driers, during the filling of the crates, stacking for storage, hauling and dumping of the berries into the hoppers, over the graders to the mills, where in order for a sound berry to pass over the jumps they must have sufficient bounce to clear these hurdles, on conveyors to the sorting table, on conveyors to the packaging machines

and finally into the shipping cases. I know of no commercial fruit that involves as much handling during the harvest, storage, and packaging as cranberries. Really it is marvelous when one reflects on the many and diverse ways cranberries can be bruised and still remain sound.

Yet, this is only the beginning since up to 1200 cases can be stored into a large van, and transported for hundreds, even thousands of miles, under variable weather conditions, over highways far from smooth.

After the berries are unloaded at a terminal warehouse in a distant center, the cases are exposed to great extremes of temperature and humidity. Many times the cases are handled and trucked at least half-dozen times, before they are finally picked up by the consumer. Without question, the proper handling of cranberries from harvest to consumer would materially reduce the incidence of unsound berries. The situation can be improved only by the good management of the bog during the growing season, and the



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- Platform Area: 48 x 78 inches.

Portable, 16 ft. long, 6 ft. wide ramp, one-man operation. \$100.00

Engine — 3 h.p. Briggs & Stratton with Reduction Unit. **Tires** — 800-6-1000 lbs. capacity each tire. 8 inches wide - 18 inches diameter. **Frame** — 2¼" square tubing ⅜" wall thickness. **Axles** — 1" round cold roll. **Tiller** — operated tricycle arrangement for ease of reversing and to minimize scuffing.

This unit has been used for 5 yrs. on our bogs. Ideal for wheeling off berries, cleaning inside ditches, carrying fertilizer and sanding. We carry 1½ yds. per load which is double our rated capacity.

See Our Exhibit at C.C.C.G.A. Meeting, State Bog, August 29

proper handling of the berries from harvest to shipment. As has been pointed out, this part of the program has been met in good measure by the grower, who strives to maintain a high quality pack, well beyond the minimum standards set up by the USDA.

The big problem now facing us is the proper methods of shipping and the treatment of the berries until they find their outlet to the trade. This period can be called "secondary storage." Greater losses do occur in this period, because not only are costs of the berries included, but also those of harvesting, grading, milling, inspection, packaging, shipment, and storage.

The two principal causes of storage spoilage are fungal rots and/or sterile breakdown. Storage rots may be caused by one, or more of some half-dozen distinct species of fungi. The incidence of the fungi fluctuates from season to season, varying with the geographical location, the variety of cranberry, plus the lack of a good control program during the growing season, methods of harvesting and finally, the prevailing weather conditions in the field and storage.

The field and storage rots of the cranberry are peculiar, in that infection usually takes place while the berries are quite young and the mycelia can remain dormant for rather long periods, without producing any visible signs of rot until the berries are stored. The six most important types of rots are commonly known as black, bitter, early, fruit and end rot, each caused by a specific fungus. In general, they can all be classified as early rots. Perhaps the greatest loss in storage is end rot to which the Searles variety is especially susceptible.

During the process of grading, milling, and sorting, all unsound berries present are removed. When packed according to U. S. Grade A, the maximum tolerance of unsound berries is 3% (3 berries per 100) which includes not only rots, but also, bruised, and other defects, which may mark their appearance and quality. Thus, when packed and shipped very few unsound berries should be present.

Conditions during the "secondary

storage" period, have the greatest effect on the keeping quality of cranberries, yet, to date, this is the most neglected phase of holding and merchandising. During this holding period, temperatures are the most important factor involved, in the rate and degree of fungal spoilage of cranberries. In general, the fungi causing rots in storage make very little progress below 40° F., while with progressively high temperatures, they develop more rapidly with each 5 degree rise. The ideal storage temperature for cranberries is 35-36° F. At this temperature, fungal activity is slower down to a minimum and at the same time, color retention and appearance of the fruit is at its maximum. Storage temperatures near 32° F. cause what is known in the trade, as "low temperature breakdown."

Ventilation (air exchange) also is an important factor in the keeping quality of cranberries, since it prevents the pile-up of carbon dioxide and other toxic gases released by the respiring fruit. On the other hand, relative humidity is not too important, except when it becomes high enough to produce condensation on the surface of the berries. An ideal relative humidity for storage is about 65 to 70 percent. By holding cranberries during the sec-

ondary storage period, fungal rots can be inhibited by proper temperatures, good ventilation and ideal relative humidities.

The second most important cause of storage spoilage is known as sterile breakdown. This is simply the self-destruction of the fruit, through its own living processes, which involves complex chemical reactions within the berry, with an exchange of gasses and other by-products, resulting from respiration. The elimination of these by-products, is essential to any stored fruit. If allowed to build up within the fruit, they would eventually curtail respiration to such a degree that the fruit would ultimately die. This is just one of the involved factors that result in a decrease of the storage and shelf life of a fruit through what is called "sterile breakdown." With proper temperatures and good ventilation, the rate and degree of self breakdown can be held down to a minimum, as in the case of the rots.

While other causes contribute to the spoilage in transit and secondary storage, the two most important have been discussed. At any rate, when growers put in extra efforts to pack a high class product, the dealer should also be obligated to take the proper steps to maintain quality, until the berries reach the consumer.

FROST CONTROL

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Atwood

(Continued from Page 4)

Fungicides. Fungicides have become more important and more widely used by the Massachusetts growers in recent years. This year the "State Bog" is recommending two materials on the chart. Tests show that Manzate is the best material for controlling cranberry fruit rots, but may tend to slow the coloring of the fruit. Manzate treated berries will color in storage (early blacks good, Howes not so good) and usually make an excellent product for the Thanksgiving fresh fruit market. Fermate is a cheaper product but does not always give as good control as Manzate. However it does produce a glossy well colored berry. Therefore the grower has a choice of materials to fit his own particular needs. A bog with an extremely poor record or in years when the Keeping Quality Forecast is poor might justify the use of Manzate and the opposite conditions might indicate that Fermate would do the job. In 1962 the costs of these materials applied twice by helicopter were \$27.30 per acre for Fermate and \$35.10 per acre for Manzate or about an \$8.00 spread. The second application can usually be combined with the first fruitworm spray on early water and thus reduce this cost factor. It has been our experience that the repeated use of fungicides on the same piece of bog, increases the quality of the fruit produced.

In 1958 and 1959 a study was conducted to determine the effect on yield and rot when both fertilizers and fungicides were used. The following table summarizes the findings.

In this experiment the fertilizer used was 300 lbs per acre of 10-10-10 and the fungicide was Zineb.

In most cases a grower does not fully realize how much rot he really has. He checks the fruit in the box after harvest but does not consider the poor berries which

were left on the bog. Most growers do not screen their own berries and therefore they do not know how they stand up in storage.

Plans Progressing For Bandon Berry Festival

Plans are progressing for the Bandon Cranberry Festival, Sept. 20, 21 and 22, and it is hoped this will be one of the best with the cooperation of the Bandon community.

The Festival Court has been completed; the princesses being: Diane Chaig, Mary Hargrove, Donna Tucker, Laurie Made and Dixie Van Leuven.

Festival theme will be "Do You Remember?"

The program will include as usual, parade, ball, coronation, sporting events and a barbeque.

Bandon is the only cranberry area which continues to hold an annual cranberry harvest festival.

WISCONSIN MEETINGS

The summer meeting of Wisconsin State Cranberry Growers Association is to be held August 7th at the marsh of the Cutler Cranberry Company, Camp Douglas.

Area meetings have been held on herbicides at the Badger Cranberry Company, Spooner, June 25, and at Manitowish Water, June 27. Speakers were Dr. M. N. Dana and Dr. Klingbeil of the University. A similar herbicide meeting was also held for southern growers at a later date.

NEW VARIETIES IN WISCONSIN

Vernon Goldsworthy of Eagle River, Wisconsin this spring is planting two acres the new variety, Beckwith, which he thinks has a lot of possibilities for Wisconsin. Considerable of the new Stevens are also being planted and some Ben Lears, even though most of the new

planting is going into Searls Jumbo. Many Wisconsin growers are also using a large amount of fertilizer this spring to increase crop output.

Oregon Tests

(Continued from Page 1)

samples will probably be limited this depth.

Phosphate levels of the samples ran much higher than expected these very acid soils ranging pH from 4.5 to 5.0. It was felt that past heavy annual applications of phosphorus were resulting in the higher-than-expected levels. Potassium levels in most cases indicated continued needed attention to maintaining adequate potash supplies.

Might Need More Potassium

Most growers in the area are using complete fertilizers with a 1 to 1 phosphorus - potassium ratio. Because of these lower potassium levels it was suggested that growers might wish to focus closer attention on the feasibility of increasing potassium applications. A suggested manner of accomplishing this would be to continue with present spring applications of fertilizers such as 10-20 or 6-20-20 and then later follow up with an additional early summer application of potassium.

It is felt that growers could easily check any benefits obtained from additional potassium by fertilizing an entire bog with an annual application of a complete fertilizer to limit the additional application of potassium to only a portion of the bog for a comparison.

Because of the local practice of establishing new bogs on a sand layer that has been spread over the native peat soils, it was suggested that several split applications of fertilizers on these new bogs might materially aid in stimulating fast growth of new vines. The low plant nutrient retention of this sand layer necessitates more frequent application of fertilizers, especially more of the plant roots are found in this sand layer.

Weed Control

County Extension Agent Hagstein also reported on the progress in establishing several replicated screening trials for evaluating sprays

Treatment	Total Yield bbls/acre	Marketable Yield bbls/acre
Untreated	70	62
Fertilizer	96	47
Fungicide	70	66
Fert & Fung	95	77

al chemical herbicides used on cranberries. The extensive trial work in progress involves making residue determinations and comparing the effectiveness on various species of IPC, Chloro IPC, granular, 2, 4-D, Simazine and Derseron. Included in these trials are the combination treatments of Chloro IPC and granular 2,4-D based on favorable reports from E. Charles C. Doughty, Superintendent of the Coastal Washington Experiment Station at Long Beach, Washington.

CRANBERRIES AND BLUEBERRIES IN NEW JERSEY '62 REPORT

The 1962 New Jersey Agricultural Statistics of the New Jersey Crop Reporting Service says, cranberry acreage receiving care has declined sharply since 1930, but in recent years has stabilized at about 3,000 acres. Burlington County normally produces about two-thirds of the State's annual production and with Ocean and Atlantic counties, represents better than 95 percent of the total output. New Jersey, with 115,000 barrels last year, ranks fourth in the Nation in production of cranberries.

Blueberries continue to show a steady increase in acreage and production, with acreage for harvest now six times greater than 20 years ago. Burlington, the leading county, and Atlantic, in second place, have approximately 6,100 acres, or 90 percent of the State's total. Production in 1960 soared to a record high of 2,300,000 trays (12 pints) but fell off sharply in 1961 due to severe winter killing.

With blueberry production on the increase, this crop had a commanding grip on third place cash return among the fruit crops in 1961. Cash receipts from Garden State fruits and berries normally account for about 10 percent of total cash received from marketing of farm products.

READ CRANBERRIES

CRANBERRY 'N CHEESE MOLD

1 cup chive or pineapple cottage cheese
1 large (9 oz.) package of cream cheese
2 unflavored gelatin
 $\frac{1}{4}$ cup cold water
 $\frac{1}{2}$ cup boiling water
1 lb. can jellied cranberry sauce
Let cheese soften to room temperature. Beat together until fairly smooth. Soften gelatin in cold water. Add boiling water and stir until dissolved. Gradually beat into cheese. Pour into slightly oiled salad molds. Chill until firm. At serving time place a slice of jellied cranberry sauce in lettuce cup. Top with cottage cheese mold and serve.

Fresh From The Fields

(Continued from Page 6)
developing varieties which were more tender. This loss approximates the loss to the state last June.

Outlook Bright

First blossoms were quite noticeable the end of the first week of the month. As the warm weather progresses more and more blooms were forced ahead so that by the end of the month, the early varieties had a good cover of bloom and small berries were developing. Weather conditions during the daytime were most advantageous to set as there was strong winds and considerable sunshine. If this condition prevails during the balance of bloom an above average set could be expected. This season has all the earmarks of 1961 when the state produced its largest total crop and yield average per acre.

Institute

(Continued from Page 13)

in England. "It is my considered opinion that the 7 ounce whole cranberry sauce will be the leading idea for process sales and there is a very strong possibility that we will have to come up with a $\frac{1}{2}$ lb. window box in the near future for sales in England," Mr. Beaton wrote.

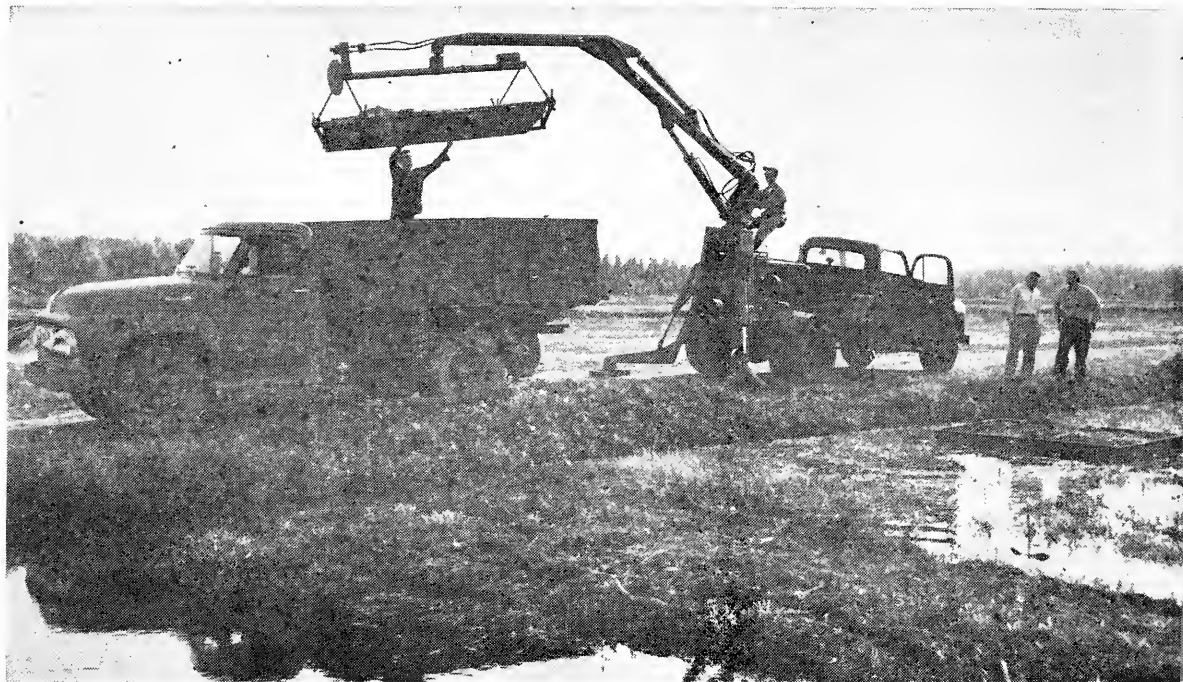
He visited Belgium and Luxembourg; have been selling where fresh cranberries in Brussels since 1956, and he found that a Mr. Jonckheere, originally came from Bilmerica, Mass. and has a knowledge of

American cranberries. He had imported from the Beaton Distributing Agency at Wareham, before this went out of the distributing business. Beaton purchased sample jars and tins of various Dutch manufacturers of the Preisselbeeren and the Lingonberry, and found sauce made from these European varieties of the cranberry have a stronger cranberry taste. However he found these were high priced products and he felt U.S. berries can be sold at a lower price. Cranberry sauce is used during the hunting season with game and at Christmas. He suggested a program of "Chicken with Cranberries."

In summing up Mr. Beaton said he felt the Benelux countries, Belgium, Luxemburg and Holland should be the second area of importance for development next to England.

In Germany Mr. Beaton visited a package manufacturer at Stuttgart, as he was acquainted with his son who lives in Wareham, Mass. Beaton was interested in the possibility of manufacturing window boxes for German sales at less cost than these could be made in the U.S. He found there would be no saving. In Switzerland he found a researcher in cranberries had discovered a new type of pectin in the berry. As poultry is one of the highest priced meats in Switzerland so he found, he felt there was no use in trying to promote cranberries with chicken in that country. After a visit to Paris he stated that he considered France as the least likely prospect for American cranberries and cranberry products. A visit to Ireland led him to classify Ireland in the same good category for prospective American business as England, Belgium and Holland.

In summary he suggested as future programs, to bring the retail price on cranberry products out of the specialty class by; shipping raw product for manufacturing in Europe and Great Britain, consider the possibility of a two-price system, one for the U.S. and Canada and one for export markets, selling raw or dehydrated cranberries to European processors. He felt a market could be built within four years.



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It is rather incomprehensible to us, that there is not more support, from independent handlers and growers of the Cranberry Institute in its work for the industry. We hope all will read of its activities on another page of this issue and let the facts sink in. Take the school lunch program of last year, alone. The Institute, speaking for the industry in Washington got approval of this program which brought about a money return of about \$1,300,000. The single program amounted to about 10 percent in barrels of the 1962 crop sales.

It should be acknowledged that of independent handlers, the growers of the following are participating; Indian Trail, Inc., Wisconsin; Morris April, New Jersey and Cape Cod Cranberry Cooperative, Inc. of Massachusetts.

The Institute budget for all purposes for the 1963 year is \$35,000, through the handlers members of the Institute. Thus, for an "investment" of \$35,000 through the school lunch program (plus the other Institute activities) the industry received a return of approximately \$1,300,000. For the program mentioned above and for other activities the Institute is engaged in, the "investment" of 3 cents a barrel, seems like an insignificant amount and that all growers should be willing to participate.

To be sure, it was Ocean Spray which supplied the fruit for the school lunch program (although all handlers had the opportunity to bid on it in whole or part); the sale removed the approximately 10 percent from the fresh fruit market, improving market stability.

Many of the Institute plans, are, frankly, "long-range," such as foreign trade, but what alert industry today is not forward looking? Not a few growers on our recent West Coast visit, expressed a hope a market for cranberries might be built up in Japan or other parts of the Orient — these West Coast growers are more alert, as they are much closer than Wisconsin or the east. Incidentally, the Institute has already given tentative study to a Japanese market for cranberries.

Remember too! That in the 1959 crisis, some 18 handlers flocked to the Institute and it was re-inactivated, with the result the industry received the \$10,000,000 "in-

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Editor and Publisher

EDITH S. HALL—Associate Editor
Wareham, Massachusetts

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New Jersey Cranberry and Blueberry Station
Pemberton, New Jersey

demnity." This life-saver could have been forthcoming to any single handler, no matter how big, but it could be done on an industry basis, and it was on this basis that the Institute acted successful.

With the publication of the May issue CRANBERRIES began its 28th year of serving the cranberry industry. Our thanks to all subscribers, a number of whom have been advertisers since the same time, our appreciation. In the next issue we begin the series on West Coast cranberries, which should interest our readers who now make up 100 percent of U. S. growers.

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Massachusetts Woman

(Continued from Page 10)

Rochester and of Cape Cod Cranberry Growers' Association. While Mr. Vose was able, he always attended these meetings, accompanied by Mrs. Vose, she is one of the most interested of attendants at the meetings held.

"The operation of the bogs offers me a challenge," she remarks, and I tried to meet it. I have enjoyed and do enjoy being a cranberry grower. But I couldn't have gotten along without help and advice from others. That I have had from the very start from a great many kind people, so much in fact, that I am extremely grateful to all."

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JULY

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CHINESE WOMEN weeders on bog at Lulu Island, British Columbia.
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Ocean Spray will push fresh cranberry sales this fall with a nationwide recipe contest offering \$10,000 in cash prizes. The contest will be advertised on two popular network radio shows, Arthur Godfrey Time, over 209 CBS stations, and the Don McNeill Breakfast Club, over 317 ABC stations. Announcements will start October 1st, when the new Fall crop will be reaching national markets, and will continue for 13 weeks.

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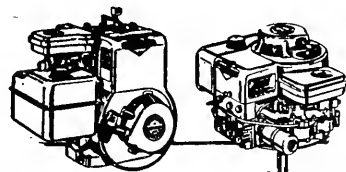
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cranberry recipe will be \$2,500 with 125 additional cash prizes for runners-up. Contestants are asked to send in an Ocean Spray box top or poly bag with their entry, and this requisite is expected to help stimulate fresh sales early in the season.

The contest is in addition to a full scale publicity and promotional program for cranberries this fall. UMI's fresh cranberry promotion for Ocean Spray, so effective last year, will be repeated this fall with new STA-HI color pages for newspapers and exciting serving ideas for newspapers, syndicates, magazines, radio and TV.

Ocean Spray's Cranberry Kitchen is supplying food editors with fresh cranberry recipes, and Educational Units, featuring fresh cranberry uses, will blanket home economics classes in schools and colleges. Movies on the cranberry are already heavily booked by schools, clubs and TV stations for the harvest season.

Ocean Spray packages will do their share to promote repeat sales by offering FREE a 16-page Fresh Cranberry Recipe Booklet, illustrated in four colors.

Last year Ocean Spray's Cranberry Kitchen received over 70,000 requests

for fresh cranberry recipes and the tempting new booklet is expected to draw over 100,000 consumer requests during the coming season.

Increased packaging and temperature controlled storage facilities at Ocean Spray's packaging plant in Markham, Washington and at Massachusetts plants in Hanson and Onset will be in full operation for the fall harvest, and the new sales office in Wisconsin Rapids, Wisconsin, supplementing sales activities from the Hanson headquarters, is ready to serve cranberry brokers in the Midwest.

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AGCA Meeting
August 29th
In New Jersey

Summer meeting of American Cranberry Growers' Association is scheduled for New Jersey, Thursday, August 29. At this writing the program had not been announced.

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Mass. Cranberry Station and Field Notes

by CHESTER E. CROSS
Director

This is crop estimation time. Whenever growers meet, this is the subject of their speech. Let us examine some of the points which have impressed the growers during the development of the 1963 crop.

Prospects Seemed High

It is generally conceded that the 1963 crop of cranberries in Massachusetts could have equalled the large crop of 1962 if certain adverse factors had not hurt the possibilities. In general, the vines budded well last fall, the picking machines are not damaging the vines as much as the scoops did, the cool, dry summer of 1962 gave us excessive sunshine which with a moderately dry growing season always gives us our best build-up for the next crop. Fall rains in 1962, while interfering with the '62 harvest, were frequent and heavy and kept the newly-harvested vines from drying out. Going into the winter of '62-'63, the budding was small but numerous and in general the '63 prospects were excellent.

Winterkill

Winter came early and temperatures remained subnormal and without snowcover in southeastern Massachusetts. The last few days of 1962 brought gale winds and temperatures near 0°F. Many bogs exposed

at this time suffered winterkilling, and none of them hurt in this way are producing a really good crop, though many have shown remarkable recovery and some are producing crops of 50 bbls. per acre.

Then in May came troublesome frosts on the nights of May 12, 23, 24 and 25. All these took some toll of our coming crop and many later showed the partial injury called "umbrellas."

Drought Damage

Since April, the rainfall in southeastern Massachusetts has tended to come in heavy downpours at very infrequent intervals. For example, near the end of July the Cranberry Station measured 2.01 inches in one storm, but recorded only 2.70 inches for the month as a whole. Drying was severe in June and July because of above normal temperatures and damage is readily found on many bogs. Those with new sprinkler systems now feel the great advantage of these devices in a summer like this one. On a few days in June and early July, bog temperatures went well over 100°F. Where this happened in full bloom, and especially on the "umbrella bloom" mentioned above, some blossoms were summarily blasted and of course could not produce berries.

660,000?

If one adds the damage caused by winterkilling, by frost and by drought, it is not hard to find 15% losses. If this is deducted from last year's crop of 778,000 barrels, one gets a figure of 660,000 bbls. which is a good approximation of grower thinking about the '63 crop prior to the government estimate.

Furthermore, it is apparent that all three major drawbacks are the direct result of faulty or inadequate control of water on our bogs. I have indicated this defect with my best effort since early 1961. Those who have installed sprinklers since then are happy they did so. More growers must soon decide on this investment, for without it crops will not be good enough to show profits.

Sprinklers Effective

This summer sprinklers were used effectively in midday (shut off in

early afternoon) without damage to flowers or berries. They were used to relieve drought conditions and even the low-gallage systems did this effectively. There is a noticeable increase in the size of berries on sprinkler bogs, and there are as many or more berries on such bogs by count.

The growth of cranberry vines in such a summer of excessive sunshine tends to be excessive on sprinkler bogs. It seems at present that fertilizer use should be sharply curtailed on such bogs since both the fertilizer and the supplemental water appear to produce increased vine-growth. Those with sprinklers report using their systems one to five or more times during the summer. Drought conditions have varied widely in the cranberry area itself, but until we have better information, it would seem to be good judgment to use the sprinklers no oftener than once a week, but apply a minimum of $\frac{1}{2}$ to $\frac{3}{4}$ inch each time it is run.

SEEK CHINK IN INSECT'S ARMOR

Almost everybody has heard about insect resistance to a succession of man-made chemicals intended to control them.

It's no-less familiar story, but an ever-changing one, to the men and women dedicated to protecting men and animals from insect-borne diseases and safeguarding crops and stored food from insect contamination.

The frustrating problems of resistance has started a whole new chain of investigation among entomologists such as those at Rutgers' College of Agriculture, New Brunswick, New Jersey. One group and supported financially by the Federal government is delving into the complex body chemistry of the house fly.

The goal is to find out the mechanism the fly used to transform its new chemical foes, such as DDT and others into harmless substances. Once they have unlocked the secret of fly resistance it could be on the way toward applying the findings to other insects as well. (Report from Rutgers)

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Sugar Price Eased A Little

While the price of sugar used in cranberry processing, as in all products using sugar, remains high, the Northeast price has eased somewhat, according to George C. P. Olsson, president of Ocean Spray. Currently the figure was about \$12.20

a hundredweight. In May it was up to about \$16. The normal range in recent years, Mr. Olsson says has been around. \$9.

Processed cranberries have been raised a little in price, as was reported last month. Whether the high sugar prices will influence the housewife in buying fresh this fall, of course, remains to be determined.

Three Major Meetings In Wisconsin

**Ocean Spray Directors,
Cranberry Institute and Mar-
keting Committee Gather
This Month.**

Three important meetings are scheduled to be held at Wisconsin Rapids this month. Ocean Spray directors meet for a general session, following committee meetings, Aug. 23; Cranberry Institute directors meet Aug. 24 and finally the Cranberry Marketing committee, principals and alternates hold a session expected to take up Aug. 26 and 27.

As a considerable number of the persons attending the three meetings are members and officers of more than one of the committees meeting, the sessions are being held at approximately the same time and at the Rapids to reduce travel expense as there will be attendance from every cranberry area.

The Marketing Committee members will have the preliminary USDA forecast of the 1963 cranberry crop, (released Aug. 20) and thus will be in position to determine the amount of the set-aside if any, for the crop of this fall. Last year this was 12%.

Although the Massachusetts crop is estimated to have been cut by about 50,000 barrels, due to the extreme drought and heat conditions of July, the Wisconsin production is expected to be large. New Jersey crop has also been hurt by similar drought conditions.

The USDA preliminary had not been received as this issue was closed (Aug. 16), but informed "guessimates," were that, with carry-over, the number of barrels to be sold will be sufficient to tax the best abilities of distributors.

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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of August 1963 — Vol. 28 No. 4

Published monthly at The Courier Print Shop, Main St., Wareham, Massachusetts. Subscriptions \$4.00, Foreign, \$5.00 per year
Second Class Postage Paid at Wareham, Massachusetts Post Office.

FRESH FROM THE FIELDS

Compiled by C. J. H

MASSACHUSETTS

July Tough Month

July, and especially late July, was a hard month for growers, with drought and intense, humid, heat prevailing. All month long growers sought to overcome the lack of rain, as the last precipitation of consequence had been June 21. Until the 29th of July, precipitation was only .69 inch. Precipitation, since the first of the year, Dr. C. E. Cross of the Experiment Station estimated, had been only about one-quarter of normal.

Early, and mid-July, although dry had not been too high in temperatures on the whole, but from the 24th to the 29th, there were six solid days with temperatures in the open in the 90's and approaching the 100 mark. These were temperatures with extremely high humidity. Caused by a Bermuda High over New England, which refused to budge, the weather was extremely uncomfortable, and was described by some weather men as "Texas weather," hot all night and hotter all day." Dewpoints were as much as 20 points higher than normal.

Extreme Temperatures

Maximum temperatures in the

shelter at State Bog were: July 24th, 83; July 25th, 87; July 26th, 84; July 27th, 94; July 28th, 91; July 29th, 85. Temperatures on bogs in the open were at or approaching 100.

Critical Drought

The drought really began the last week in June and from that time on growers were raising water in ditches, using "open-end" hose or pipe, dangerously flashflooding, and of course, the increasing number of sprinkler systems were kept in use. Considerable amounts of water were used.

Water Gave Out

By the 27th, however, water in reservoirs, ponds and streams was becoming non-existent, and even sprinkler systems were in danger of being without a water source.

10,000 BBLs. A Day Loss

On the 29th, Dr. Cross estimated the crop loss was running at 10,000

barrels a day and had been for the preceding four or five days. This news and the critical drought situation of the cranberry growers was broadcast, with bog pictures, by a Boston TV station, Massachusetts Assistant Secretary Charles F. Spemut, being interviewed.

Sudden Heavy Rain

On the 29th weathermen forecast a break in the torrid weather and likely rain. This rain came over the cranberry area early on the morning of the 30th, and the rain continued until about noon. It came in slanting torrents resembling a hurricane, and indeed it was a sort of tropical storm with the torrid weather. A total precipitation of 2.01 inches was measured at State Bog, with more falling in other areas and less in some others. This brought the total for July to 2.70, average is 3.24.

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Berries To Be Smaller

On the last day of July, Cross estimated the loss as probably about 50,000 barrels, heaviest damage being on bogs which had been sanded

last fall, where the berries "cooked on the vine." He said he expected berries will be smaller in size than hoped for, especially on early drawn water bogs; but there will be excep-

tions particularly, on areas which had been adequately sprinkled. Also late-water bogs may be less adversely affected. The heat had forced development and the fruit was a little ahead of normal in reaching maturity.

Feared Another 1952

The rain of the 29th gave a respite of a week or ten days and until that time Massachusetts seemed headed for another "1952 drought," when prospects of a 700,000 barrel crop were reduced to a harvested 445,000 with heavy financial loss to the Mass. growers. As it was, individual growers lost 50 percent or more on some bogs or entire holdings.

Dryness Quality Help

The dry weather had, it is hoped, one beneficial aspect, that is, it should have improved the keeping quality, which had not had many points in its favor.

Insects

As to insects this season, the fruitworm miller was just ceasing to fly at end of July, and although egg counts had been high on many bogs, there had, in general, been good control of this pest. Fireworm was very much of a problem on some bogs this year, but in general its activities were considered about normal. Also, there has apparently been a lot of girdler damage done, which will show up in August, perhaps more than is realized.

Concerning fungicides, Dr. Cross said he felt more had been used this season than at any time in the past and he expected this would add to the quality of the crop.

NEW JERSEY

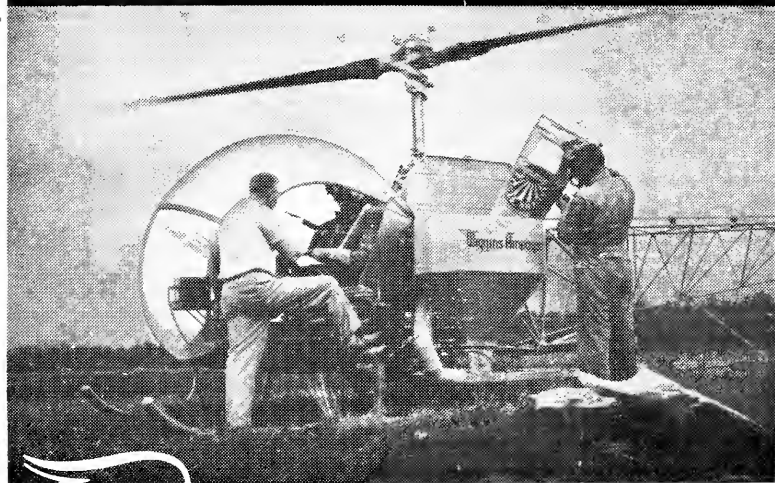
July Month of Extremes

July was a month of extremes in the cranberry area of New Jersey, with alternately very hot and quite cool days. There were 13 days 90° or above and 13 days below 60°. The temperature averaged 73.4°, which is 2.2° cooler than normal. The maximum temperature was 97 and the minimum 48. These are shelter temperatures. Readings well above 100° could have been obtained on cranberry bogs on several occasions.

Drought Continues

The drought continued through
Continued to page 20

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Wisconsin Grower Is Trying Out "Windmills" To Scatter Frost

HE IS MARVIN HEWITT OF CITY POINT, A MEMBER OF INDIAN TRAIL, INC.

A most interesting experiment in frost control is being tried out by Marvin W. Hewitt, who operates the C. & H. Cranberry Company, Inc., marsh at City Point, Wisconsin which is in the Town of Hiles. Mr. Hewitt has installed two powerful wind machines. The purpose of these so-called "Windmills," is to break up layers of inverted air, and thus prevent loss from any damaging frosts which may occur.

These machines were first tried out in Florida citrus groves. The machines are mounted on 15 to 20 feet concrete bases and each is expected to protect 10 acres of marsh from "freezing." Mr. Hewitt is depending on the experience of the orange growers, who have been "beating frosts," with wind machines since 1958.

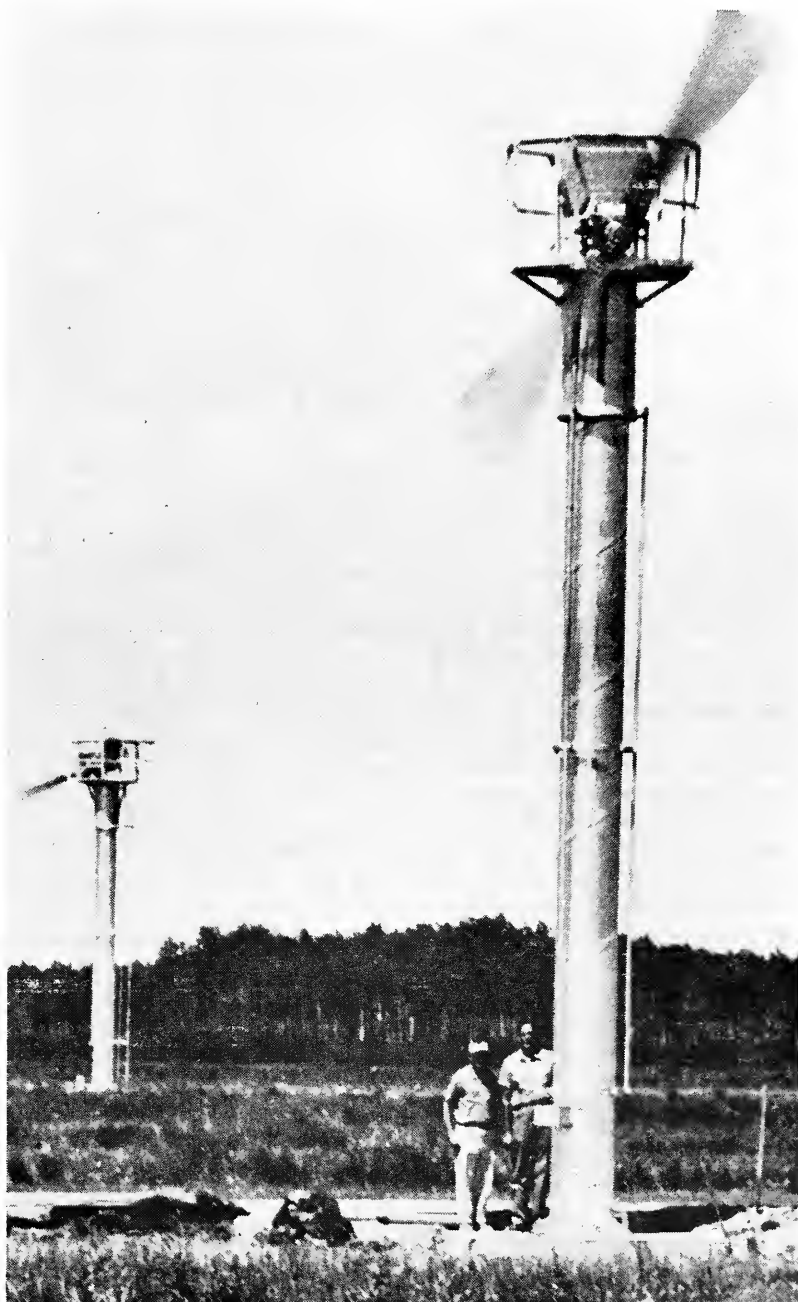
Mr. Hewitt is quoted in Milwaukee Sentinel as saying, "I got interested in them, when I saw one in use in a peach grove in Georgia four years ago. The temperature fell to 23 degrees that night, but the machines which had been set up saved the crop. Neighbors lost theirs."

On each of the two machines 15-foot fans are powered by 340 horsepower gasoline engines. The columns store 600 gallons of fuel for the engines. The entire motor and fan unit rotate slowly, making a complete turn in 4½ minutes. The motor can be operated by a thermostat or from controls at the base of the column.

Leo Sorenson of Wisconsin Rapids, cranberry consultant has the franchise for the machines and worked with Mr. Hewitt on the installation.

Emmit McPhail, field engineer for the Food Machinery and Chemical Corporation of Lakeland, Florida did the actual work of installing the machines. The big fans are mounted at a slight angle. Fans draws down warm air and distributes it over the marsh. It is claimed marsh temperature can be raised eight degrees in five minutes with the fans.

The machines, according to the Sentinel cost Hewitt \$5250 each. But,



Windmill "Scatter Frost," machines on the C. & H. Cranberry Company in Wisconsin.
(PHOTO: Milwaukee Sentinel)

it is understood they were bought with the understanding that if the machines do not raise the marsh temperature, the manufacturer will take them back.

Wisconsin State agricultural experimentors are interested in the project, and have set up a long pole with recording thermometers

at 10-foot intervals to measure the air action of the fans. Theoretically, it was felt the fans should be more effective in a cranberry marsh than in citrus groves, because there are no trees on a marsh to deflect the breeze created by the fans.

Mr. Hewitt is hopeful there are other advantages. The wind ma-

chines may help cranberry pollination, should eliminate water scalding from flooding on hot days and should eliminate high temperatures on hot days which are damaging to blossoms.

It has been stated that even though the cost of the machines is high, that the installation may not be any more costly or as high as sprinkler systems. One advantage over sprinklers might be from the standpoint that a grower would not have to use a lot of manpower hours moving pipes on and off the beds.

Before offering the wind machines to Wisconsin Sorenson did an extensive job of checking the merits of the systems and worked closely with the manufacturers.

Mr. Hewitt has been a grower since about 1947 and has about 20 acres, harvesting approximately 3000 barrels a year. His total land holding is 640 acres. He is a member of the Indian Trail, Inc., unit of Wisconsin Rapids, of which "Ben" Pannkuk is president.

Mr. Hewitt was quoted as saying that if the machines do work out, he has earned a personal bonus—his arthritis won't bother him as he has had to work around his marshes in frost nights to open and close floodgates. The machines can be operated to turn on and off automatically.

This seems to be an experiment which will be watched by other Wisconsin growers and if it proves successful may be of considerable importance to the cranberry industry, as a whole.

It may be recalled that this is not the first time that wind machines have been used in cranberries, although former experiments were on a much smaller scale and were more or less personally devised. One experimenter in this field was the late Leslie Kranick of Bandon, Oregon, who had airplane propellers operated by small gasoline engines, back in the 1940's.

CHEMICAL RESIDUES

Dominic A. Marini, Plymouth (Mass.) County Extension Agent in Agriculture has sent a "warning" notice to fruit and vegetable growers concerning the use of chemicals and their residues. He urged that illegal residues be avoided by following directions on labels and in pest control charts; and to prevent drift to other crops. "You cannot cover up an illegal residue, so chemists can't find it."

He tells growers, "know what you are using; keep labels with the list of active ingredients (trade names are not enough.)"

Also, importantly, to keep records.

Records will show FDA inspectors that you are reliable, cooperative and know what you are doing."

Massachusetts, he wrote, "has a good record to date. Let's apply chemical pesticides as they should be used and continue to produce safe, wholesome product. Stay alive, protect yourself and your health."

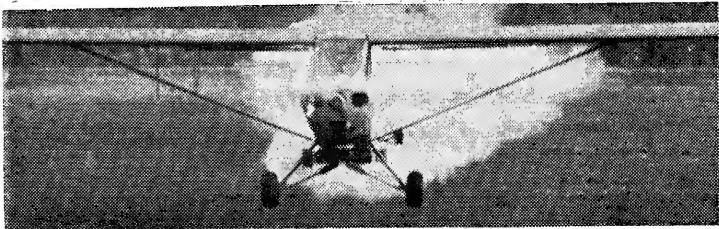
Plant Diseases Found By A Pigment

A red organic pigment — used in paints and printing inks — has provided a technological breakthrough in tracing wilt disease in banana and other plants at the University of Rhode Island's College of Agriculture and United Fruit Company laboratories, according to Harmon Colors of Allied Chemical's National Aniline Division.

When taken up with infectious plant spores, the "wonder" pigment — in effect a radar system for plant disease research — pinpoints sites of primary infection, reports Carl H. Beckman, associate professor of plant pathology at the college.

"Unlike other tracing materials," he says, "Electra Red Vinyl dispersion R-6252 as the Harmon pigment is called, does not fragment and, owing to its bright luminescence under ordinary light, the distribution of vinyl particles and the fusarium spores, wilt microorganisms, are easily detected." Harmon prepared a finely divided dispersion of its pigment in vinyl via one of its patented processes to effectuate the necessary pigmented vinyl particles found useful by Dr. Beckman.

Individual thread-like disease elements in the stained roots can be measured readily after inoculation and the extent to which the spores and disease have penetrated the various plant roots may be observed at any time.



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Our West Coast Cranberry Growers

This Article, General In Nature, Begins A Series Concerning Growers, Bog Properties, Developments, Plans Of Those At Lulu Island, B. C., Washington, Oregon — Series Is The Result Of Visit Of Your Editors

This article is to be the first of a series concerning cranberry growing and cranberry growers on the West Coast. It will be an account of my second visit, accompanied by your associate editor, Mrs. Edith S. Hall. On the Pacific, nearly 3,000 miles from the bogs of Massachusetts and New Jersey, where cranberry cultivation originated, the American cranberry of commerce, is being grown with increasing success.

These articles will not strive to be too technical, but will concern more with general impressions; of these growers, their bogs and of the world in which they live and work, and its majestic country. If I make errors, I hope some kind West Coast reader, will correct me.

My previous visits were in 1944 and again in 1949. Then what might be called the "Battle of the Co-ops" was in full swing; that is the struggle between American Cranberry Exchange, Inc. (later Eatmor Cranberries, Inc.) and National Cranberry Association, (earlier Cranberry Cannery, Inc.) now Ocean Spray Cranberries, Inc. The struggle was to obtain Coast membership and barrelage, by the two "big co-ops," both of eastern origin.

Today, nearly all growers are members of Ocean Spray.

by
Clarence J. Hall

Many Changes

There have been many changes since the earlier visits, as is only to be expected. However, one thing remained unchanged. That is, the friendliness and hospitality of these far western growers. In fact, their hospitality all but overwhelmed. They invited us into their homes—to see their cranberry holdings.

All-Time High, So Far

We were whirled from area to area, from Lulu Island, Vancouver, British Columbia to Bandon Oregon. These growers are proud of their bogs, as well they may be. The West Coast did become consistently higher in production per acre than the average U. S. bog; even as far back as 1924. The Coast was usually the leader in this respect, until Wisconsin jumped into the lead a few years back. Generally speaking, in recent times, production per acre is led by Wisconsin, with Washington second and Oregon third. The Washington high of 1961 with 125.5 barrels per acre, so far is the all-time high for any state. Oregon's peak was in 1940 with 87.9, and 86.1 in 1956; 81.1 in 1961.

The statistics should be accurate, impressions may not. Cranberry growing on the West Coast is a thin, red line, stretching along the edge of the Pacific from Lulu Island, which is in the municipality of Richmond,

a suburb of Greater Vancouver, to a few miles south of Bandon in southwestern Oregon, perhaps 900 miles as the crow or airplane would fly, much more by road. This is a lot of territory to cover in the short time we allotted for the visit.

Information Sources

Sources of information for this series include, two surveys made by Dr. F. B. Chandler of the Massachusetts Cranberry Experiment Station. One is his "Cranberries in Washington," published in 1956, following a visit and the other "A Survey of Oregon's Cranberry Industry," published in 1957, after a second visit; USDA statistics, experiment station publications, back files of Cranberry Magazine, and more freshly, interviews on the trip, and assistance from a number of growers and others with knowledge of West Coast cranberry growing.

There has never been a survey of Lulu Island cranberry growing that I am aware of, and I am not attempting a real survey of this unique area, which was our first point of call.

Coast Very Different

The whole Coast is different than other cranberry-growing areas. For instances, you cannot stand on a cranberry bog in Massachusetts or New Jersey or Wisconsin and look

up at snow-clad mountains, as you can at Lulu on a clear day, seeing the peaks of the high Canadian mountains. You see these when you look to the north and also the mountains of vast Vancouver Island 30 miles out in the Pacific. In no other bog can you see the high towers of a huge city, Vancouver. I know of no other place where you walk upon bog dikes topped with sawdust and sawmill leavings, as here lumber is still king.

The "Alpine" peaks of the Olympics are not far from the bogs of Grayland, Washington. At Grayland, nearly the entire cranberry production is from a single vast peat bog, in a swale between the coastal sand dunes, and there each grower has his own piece of bog, divided from his neighbor by a ditch only.

Long Beach area, Washington, is the most home-like to eastern eyes. In fact, the Long Beach Peninsula, 28 miles of continuous beach, is called the "longest beach in the world," and the sand is so hard-packed that automobiles run up and down it; there are dunes of sand, and it has been called "The Cape Cod of the West."

Lulu Island is approximately at the 50th parallel of north latitude and is north of the bogs of Nova Scotia. At Bandon, Oregon, which is at about the same latitude as Cape May in New Jersey, you see palm and bamboo (imported) growing, thousands of wild rhododendrons, very beautiful. Snow is an extreme rarity. All of the Pacific Northwest is warmed by the Japanese Current, which cuts in sharply. Much of the vegetation is extremely lush, and may be described as all but subtropical. Winters in the Pacific Northwest are extremely rainy, the greatest rainfall in the U. S. being in the Olympic Mountains, not very far from Grayland. Summers are dry and often almost cool at times.

Flowers Bloom At Christmas

The flowers are still in bloom at Christmas, spring flowers (and weeds) appear much earlier than in other cranberry areas; the blooming period for cranberries is much longer; the crop is picked later, extending generally into November.

In the Pacific Northwest the trees tower mightily into the sky, Douglas fir and spruce, even though much



A spray rig in operation at Discher Bog at Grayland, Washington.

(CRANBERRIES PHOTO)

land has been timbered off. Logging, however, continues at a great clip; log booms are to be seen in nearly every estuary, great tree bolls, more than a yard in diameter roll along the highways in huge lumber conveyors, sawmills belch smoke. This is still, in some respects, primitive, pioneering country.

Yet, while cranberry growers of the Coast as a general run, are not much richer than cranberry growers elsewhere, it is amazing how many have thoroughly modern homes, many of these at bogside. Usually single-storied, flat or shed-roofed, these homes contain many beautiful woods in exterior and interior finish. Private dwellings, I was told, are cheaper to build out there. They are nearer the source of supply of these woods.

Also electric power rates are much lower, so that about every house is completely electrified, from electric coffee pot, to electric heating. They also do not have cellars. Much glass is used and unusual woods from the

Orient—also a nearer supply source, than on the East Coast. Again, many of the cranberry men build their homes with their own ingenuity and labor. I was told by one such cranberryman. "We get an idea of what we want, the kind of house and the kind of arrangement of everything in it. We do not hire an architect, "we just go along, working out of our heads."

Likely, the most impressive of these is the magnificent, modern home of Mr. and Mrs. Frank O. Glenn of amazing Cranguyma Farms at Long Beach. Cranguyma will be taken up in a later article.

Bogs On Hills

To get back more specifically to cranberry growing, some bogs in the Bandon area are built on hills and on hillsides, not on flats. One bog, about three miles from the Pacific is on a hill top about 300 feet high. A number of the Bandon area growers "terrace" their bogs, that is each section is lower than the next one. Water is scarce in the summer. This terracing enables the

grower to drop water down from level to level for re-use, in the water-reel harvesting, which is the principal harvest method. Incidentally, some Oregon growers think it is ridiculous for East Coast growers to harvest "dry," and to lose 20 percent or more of the crop.

Of course, as has been published in previous issues of Cranberries Magazine, New Jersey has gone in largely for water-reel harvest the past year or two. In Massachusetts last year (notably by David Mann, Head-of-Bay Road, Buzzards Bay) extensively tried out water raking, but in the Wisconsin method (by "mechanical scoops," Dana-Get-singer picking machines). Dr. Chester E. Cross, director of Massachusetts Cranberry Experiment Station has harvested, experimentally at the State Bog, by both the Wisconsin picker and the water-reel method, and has urged such wet harvest methods be attempted by more Mass. growers. The program and much of the pioneering work in these wet methods has been done

through the mechanical ability of Prof. John "Stan" Norton, station researcher in engineering.

The foregoing should not give the false impression that all West Coast crops are harvested entirely by wet methods. The Grayland area which has the larger Washington acreage and more production, picks entirely by dry raking, with either the Western Picker, Darlington or the Furford Picker, a Grayland-developed machine. There is only one small exception to this to in the Grayland area. Lulu Island also harvests dry.

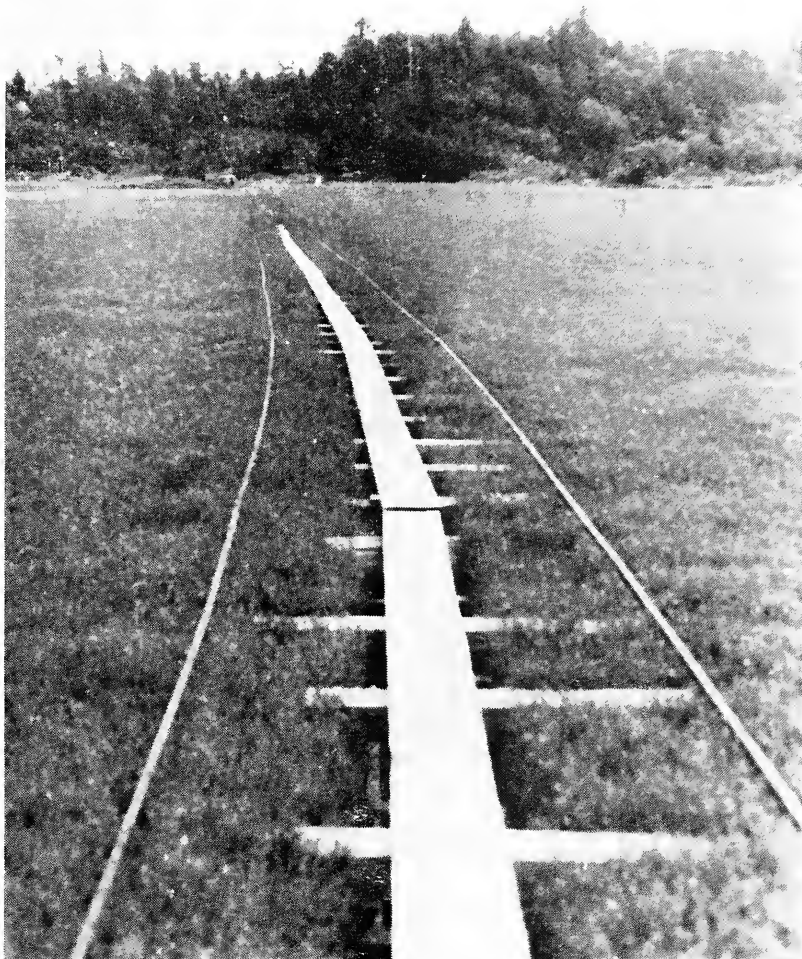
Dikes Of Aluminum

Bandon, also seems to be pioneering in a new type of enclosures for the harvest sections. These are dikes made of aluminum, and not of earth or wood. After use in each section, water is released to another through small gates, as, of course, is done to different beds of sections in other cranberry areas. These dikes can be in straight lines or curved.

Many bogs on the Coast do not have margin ditches, again different from in the east. Ditches often have boarded sides and sometimes also boarded tops, in both margin and cross ditches. In marginal ditches these boards retain earth material and also help prevent bogside weeds from spreading onto the bogs. Also, in the other areas not many bog railways are used, Grayland is a notable example of the use of railways.

More details on all these West Coast practices, including the use of aluminum dikes will appear in following articles.

All along the cranberry areas there flares the brilliant yellow of the Scotch Broom and the Irish Furz, the latter a distinct fire menace. This gorse contributed to the almost total destruction by a great forest fire in 1938 of the City of Bandon, with some loss of life. (Only last month a wind-whipped gorse fire badly damaged a Bandon home, a fire in which the owner was injured.) However, this gorse in its prolificness and its striking color along the highways and in the fields, is a feature of the Pacific Northwest. Also if there are not mountains, such as the low Coastal Range through Oregon, there are hills to be seen from the bogs, or near the bogs.



RAILWAY Track straddling top and side-boarded ditch on bog of John R. O'Hagan (formerly John Rogers) at Grayland, Washington.
(CRANBERRIES Photo)

Scenery Powerful

This is not the familiar landscape of the east, nor of Wisconsin. To me the scenery is so powerful, that it is a bit distracting, making it difficult to keep the mind on the details of cranberry growing. Everything is different and interesting.

There is no bog, that I know of, where a hundred or more peacocks strut and scream about the shores except at Cranguyma. These birds serve no practical purpose. At the Big Red Cranberry Company, Ltd. at Lulu there are employed gangs of Chinese women hand weeders. When cranberry bogs were first built at the Long Beach, Washington, Chinese labor was employed. The Chinese women weeders at Big Red are said to be most industrious and do clean up the weedy areas.

To "get down to cases," in 1961, Washington produced 139,000 barrels, the high production of the "Evergreen State." Oregon in 1961 produced 45,400 barrels, last year 34,000; Washington 55,000 but 1962 was an "off year," as far as the Coast was concerned. Growing conditions simply were not right. And, then on Columbus Day came "Freda," which was possibly a typhoon with winds exceeding 150 miles an hour, similar in destruction to the hurricanes which have swept the cranberry areas of Massachusetts and New Jersey.

Berries, boomed by the water reel method, were blown right out of the bogs and the vines were piled with the debris of fallen shrubs and trees. Millions of board feet of timber were blown down, and today



Sump at bog of Newkirk & Chabot on Long Beach Peninsula, Washington.

(CRANBERRIES Photo)

traces of "Freda" are still in evidence.

Of the 1961 production, Washington sold 115,800 barrels as processed fruit and fresh, 23,200; Oregon, 20,200 processed and fresh 6,100 (USDA figures). All berries sold of the Washington crop were produced in the Grayland area. I do not yet have figures as to processed and fresh Oregon sales for the 1962 crop, but expect to have in subsequent articles.

More Sold Fresh

Right here, it should be said that West Coast growers are striving to increase quality and want to have a larger proportion of production go fresh. It might seem this could be accomplished this fall with the new cooler storage room at the Ocean Spray plant at Markham, Washington, where all West Coast berries eventually wind up.

To get back to the growth of cranberry growing on the Pacific Coast; in 1924 West Coast acreage (USDA figure) both Washington and Oregon was 570 and production was

14,000 barrels; even then barrels per acre were 24.6, with the US average 22.2. By 1940 acreage had increased to 840 with production to 27,000 barrels per acre that year were 44.6, below the US average of 48.4.

By 1950 the acreage was 1,090, production 47,700; average production on the Coast per acre, 42.2. In the decade of the 50's, Washington production average was 62,400 and that of Oregon 32,490.

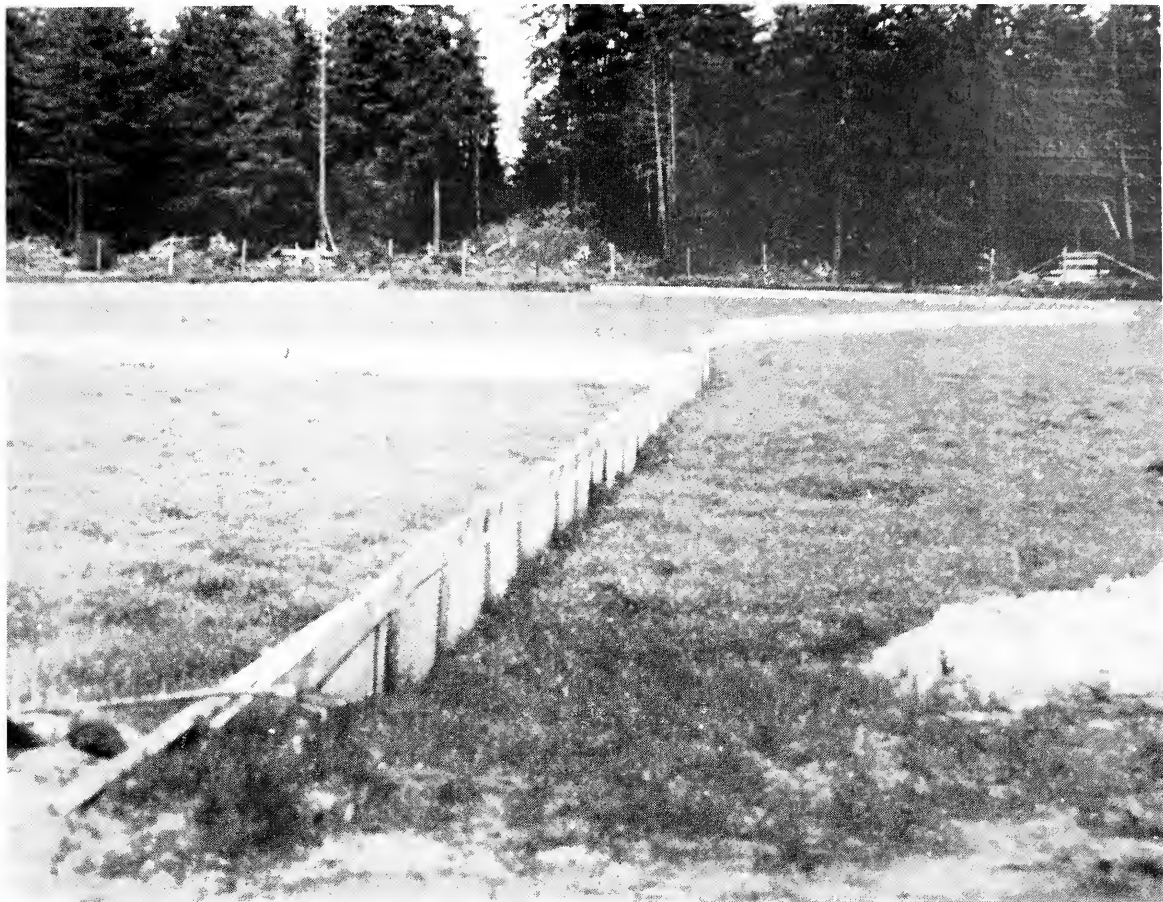
Latest figures (1962) for harvested acreage shows Washington has 1,100 acres and Oregon 560. Of this Washington acreage the Long Beach area has about 400 acres; Grayland about 600, while the so-called and relatively newer "North Beach" has something less than 100. (These figures were provided by the Coastal Washington Experiment Station at Long Beach.) Of production the Long Beach area produced 35 to 40 percent, while the balance is grown in Grayland and the "North Beach" district.

As to acreage, or production there

seem to be no official figures for Lulu Island. However, the Big Red, operated by the "Three Yanks from Carver, Mass., "Norm" Holmes "Fritz" Shaw and "Jimmy" Thomas, who migrated to Canada in 1954 (and about whom and their holding more will appear later) has 106 acres in vines. North American Peat Company, Ltd. has about 18 acres of new bog; Bell Farms, Ltd. has 67 in vines; Shaw has 3 of his own. Thomas Yardley, a veteran grower of Lulu has about 4. Several others have what they call "home" or "back yard" bogs of a few rods. Total at Lulu is therefore figured at about 175 acres. Production has not yet exceeded 5,000 barrels.

Most of these Lulu growers, and all the larger ones sell through Ocean Spray Cranberries, Ltd. of Canada, a subsidiary of Ocean Spray, and they are therefore not direct stockholders of the big U. S. co-op.

Some additional acreage is going in, and there is very abundant cranberry land potential. Conse



ALUMINUM dike at Rudell's bog, Bandon, Oregon, designed to flood three sections for water-reel harvest.
(CRANBERRIES Photo)

quently, production could be substantial. So far, there have been frosts or other adverse weather conditions, but, I was told "this could be the year," which, of course, is the hope of all who grow a crop of any kind.

Most Coast Growers Small

These West Coast growers with a few exceptions are growers with small holdings; the exceptions being the two big bogs at Lulu, Cranguma, at Long Beach and the Dellinger bog in Clatsop County, Oregon.

Figures compiled by Mrs. Irene Hollingsworth, secretary at the Markham plant, assisted by Superintendent Wilho Ross and Mrs. Maude O'Brien, show that present production per bog is approximately 350 barrels at Grayland and 714 at Long Beach. This discrepancy is explained by the fact that Chandler in his Washington survey found that "the relative size of holdings, (in Washington) may be expressed in the statement that Long Beach has 17 percent of the growers and 39

percent of the planted cranberry land, Grayland has 83 percent of the growers and 61 percent of the land," which means that Long Beach holdings are generally larger. Situation has not changed too much since then.

While this may be disputed, it seems probable that Grayland growers on the average, produce more to the acre than do those of Long Beach district.

In regard to Oregon, Chandler found that 59 percent of the growers had 3 acres or less and 77 percent had 4 or less and only 17 percent had more than five acres.

Growers Have Other Incomes

A large majority of the growers of both Washington and Oregon need other sources of income than cranberry growing. Some work at logging, some work in sawmills, a number go salmon fishing in season, many cater to the thriving summer tourist trade at Grayland, Long Beach and Bandon. Others work as garagemen, electricians, and

various occupations.

Ambition

It is my impression and strong belief that it is the ambition of many to become full-time cranberry men. I was told this many times.

With the high acreage production it is felt that 15 or maybe even 12 acres would make bog holdings, wholly self sustaining for a grower. With the few exceptions already noted, only a handful own as much as 18 acres today.

In all areas there is now a definite movement among the more progressive to consolidate holdings, especially at Grayland, to acquire more pieces of bog, even though they do not adjourn on the single, vast peat swale. This is going on also at Long Beach and at Bandon, where some new bog is being put in. Actually, a little new acreage is being put in, in at all areas—more than is being abandoned.

Fewer Growers

In most cranberry areas, as is

true in all farming, the number of growers is tending to be fewer, but each grower with larger holdings. On the first visit in 1944 the best estimate obtainable as to the number of growers was about 250 on the entire Coast. Chandler in his 1956-57 surveys received replies to questionnaires from 227 growers in Washington and in Oregon contacted 142, for a total of 379. The Cranberry Institute in 1962 for the referendum on the marketing order had a total of 340, in Washington 205 and 135 in Oregon.

Thus it would seem growers increased in numbers from the 40's to mid 50's, but have slightly decreased since. More exact figures may be expected as this series goes along.

Little Air Control

There is very little application of chemicals from the air on the Coast, but some, which is unlike the east Coast. Wisconsin uses ground applications. Unlike the East and Wisconsin, with mild winters, there is no appreciable ice forming on bogs, and not much winter flooding although there is some.

The West Coast is relatively new to cranberry culture, and this beginning requires only mention here,

as most of it has been published in this magazine before and will be reviewed later in the regional articles. The first planting west of the Rockies was in Oregon in 1885 by Charles Dexter McFarlin of Carver, Mass. The second was a little later on the Long Beach Peninsula by a French gardner, Anthony Chabot. These first plantings were established, as is apparent, long after cranberry growing had become an industry of some import in Massachusetts and New Jersey, and the first known cultivated cranberry planting in Wisconsin was in the 1850's.

Notable Coast Contributions

Yet, the West Coast had made several notable contributions to cranberry growing. One was the development of the first mechanical picker, near Bandon, principally by the late Joe Stankovich. This mechanical harvester was developed into the Western Picker and Rudy Hillstrom came East to introduce it; it came into wide use, and changed the harvesting of cranberries from the manual scoop to mechanical harvest, as revolutionary as had been the earlier scoop over the snap machine and hand harvest.

It was in the Bandon area, by Summer Fish and others, that the water reel was devised, and its use is spreading today.

First use of sprinkler systems for cranberries, appears to have been a Long Beach, Washington development. Their use was pioneered in the 1920's by D. J. Crowley, then director of the Washington Cranberry and Blueberry Station. Since then use of sprinklers in cranberry growing has been steadily increasing.

It might be surmised that the use of the aluminum dikes, developed in the Bandon area, as a means of dividing bogs for water-harvest, may spread, if the wet harvesting method continues to increase as is now the trend.

McFarlins Predominate

Nearly all of the entire West Coast plantings are McFarlins, although there are a few eastern Howes, Early Blacks and some Searls from Wisconsin. It was interesting to be informed several times that California people when buying fresh cranberries prefer what they call "the big, red cranberries."

Each cranberry area has its own growers' association, even to Lulu Island, a Grayland Cranberry Association, Long Beach Cranberry Club and Southwestern Oregon Cranberry Club.

West Coast Advisory Board

This might be a good place to insert mention of the West Coast Advisory Board. Each area on the Coast (but not in Canada) has its own elected group with membership on the board. This unit was formed back in the 1940's when Ocean Spray "went West."

The Board in actuality acts as a "go-between" of West Coast Ocean Spray directors and the cranberry growers. Growers may suggest their own ideas to the two directors. David Pryde of Grayland and Jimmy Olson of Bandon. These present the ideas, presumably if they are deemed worthy, at the several yearly meetings of Ocean Spray directors at Hanson. There they may be discussed.

Upon returning the directors disseminate what information they have ascertained at the meetings, not only in regard to West Coast suggestions, but what has taken place in general at the meeting of the directors. In other words, West Coast growers have a direct "pipe line" to the entire board of directors and as to what the plans of the board are. Cecil Richards, vice president of the Grayland board firmly believes and suggests that this would be a good idea for Ocean Spray members in other cranberry areas to adopt.

Last month Howard "Pete" Hull of the Bandon area was elected president of the West Coast Board, at the semi-annual meeting, held this time at Bandon. Mr. Richards

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in
BUYING
EARLY BLACKS**

**At the time of
harvest this
fall**

**VERNON
GOLDSWORTHY**

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was named vice president of the board.

Growers Not Discouraged

One factor of the visit seemed impressive. This was that none, or few of the growers, talked with really seemed discouraged with the future of cranberry growing. Were they satisfied with the returns they are receiving: Of course not! Yet the talk was mostly of how they planned to improve their bogs, increase production per acre, and of getting a little more acreage, either through building, or by acquiring acreage already built, as property became available to buy.

No West Coast "Boom" in Sight

Need the other cranberry areas "worry" because of a sudden big spurt in West Coast production? It would seem not, immediately. There may come a year when all conditions are favorable and production will zoom as in 1961.

Otherwise, it would seem there may be a little increase in production per acre, a little increase each year in total production. No big amounts of acreage are likely to be put in, as in all cranberry areas, until cranberry returns to growers become better, this seems true with the exception of Wisconsin where there is an almost steady increase of a hundred or so acres every year.

A word of appreciation to those who especially helped us most on the Coast; Wilho Ross, and Mrs. Irene Hollingsworth of Markham plant "Norm" Holmes at Vancouver; David Pryde at Grayland, also Cecil Richards and John R. O'Hagan; to D. J. Crowley at Long Beach and Dr. Charles C. Doughty and Mrs. Aloha Gustafson of the Experiment Station, to Mr. Glenn, and in the Bandon area to Ray Bates, Jimmy Olson and Jack Dean.

Tried To Be Cranberry Missionaries

Finally, on this trip we tried to be good cranberry missionaries. In casual talk with people at railroad, bus and air terminals, on trains, etc., we would fall into casual conversation as people do. When we mentioned cranberries there seemed to be only a little remembering of the "cranberry scare" of 1959, but still something vaguely "connected with cancer." We asked for a cranberry

product at eating places, we got cranberries only once, on a Santa Fe railway diner, and this was sauce, served with—you guessed it, poultry, in this case roast turkey.

Also, at the mention of cranberries to many it rang a bell—"Ocean Spray, oh, I've heard of that," when we had only mentioned cranberries.

If this article sounds "too much Ocean Spray," it is not so intended, but the fact remains about 83 percent of the industry is Ocean Spray and among West Coast growers the percentage is not more than a hair below 100 percent. And, as regards the name Ocean Spray being well known Ocean Spray does do a lot of National Advertising.

Future articles, as stated, will take up area by area and individual growers and properties and others with West Coast cranberry interests. There may be a little repetition of fact but only enough to maintain the continuity of each article.

Cranberries Edit In Congressional Record

Cranberries Magazine editorial of June, "Our West Coast Neighbors," was printed in entirety in the Senate Congressional Record of July 18. This was done through the courtesy of Oregon's senator, Wayne Morse, who made a speech and said as an Oregon senator he was completely in agreement with the editorial except for the fact that "far too little of it (Cranberries) is devoted to Oregon. However, I am sure that other West Coast Senators will also be pleased to learn his (Mr. Hall's) reaction to our part of the world."

Senator Morse has been thanked for his interest in West Coast cranberry growing.

— B U L L E T I N —

USDA, August 20—Preliminary forecast of the Cranberry crop. (Estimated)

Mass. — 630,000 barrels

Wisconsin — 428,000 barrels

N. J. — 76,000 barrels

Washington — 138,000 barrels

Oregon — 45,600 barrels

U.S.A. Total 1,317,600

1962 Crop Total 1,335,000

Isaac Harrison

Isaac Harrison, one of the better known and older New Jersey growers passed away August 3, after an illness of two weeks. He was in his 81st year.

Mr. Harrison was one of the organizers of Ocean Spray and served on the board of directors for a number of years. He was the general manager and executive officer of the Penn Producing Company, one of the larger cranberry operations in New Jersey, consisting of 2,000 acres of land with 200 acres in bog.

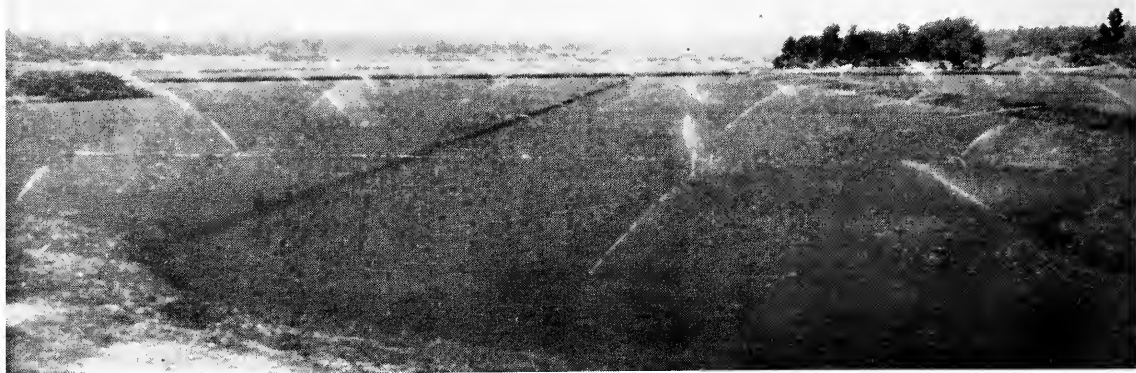
Mr. Harrison was a most interesting person and pioneered in the development of many useful labor-saving cranberry machines. He developed the Harrison Pruner and was working on a harvester at the time of his death. He was the first grower in New Jersey to lay out his bogs with carefully-measured roads to facilitate the use of special spray outfits for rot control.

He was a member of the Mount Morris Lodge No. 28 A.F. and A.M. and the Scottish Rite, and Crescent Temple of Trenton, New Jersey. He was also a director of the New Jersey Fire Insurance Association.

Surviving are his wife, Mrs. Sarah E. Kester Harrison, three daughters, Mrs. William E. Snell, Jr., Mrs. William P. Morse and Mrs. Richard S. Newes; and a sister, Mrs. Willet Satterthwaite. Services were held August 5 at the Peglar Funeral Home in Allentown, New Jersey. Interment was at the Jacobstown, New Jersey cemetery.

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Five acres of Cranberry Bog, with the crop, 12 acres of upland, gravity flow from river; one Western Picker. \$8,000
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DURING THIS SUMMER'S EXTREME DROUGHT IN MASSACHUSETTS, growers with sprinkler systems used these with great success. Photo shows a 14-acre installation at the Atwood Bog of the Beaton Company, "Shoe-string" Road, Carver. The layout was engineered chiefly by "Bill" Stearns of the Beaton Company. Installation was by the Larchmont Engineering Company of Lexington, and is a solid-set aluminum system. Sprinkler heads are Buckners, set 80 feet by 80. This is a low gallonage systems. (CRANBERRIES Photo)

Marketing Order Opens New Markets For Ancient Crop

California date growers are earning more money these days by finding new uses and new markets for one of the world's oldest crops—dates, so reports the June issue of "Agricultural Marketing," publication of the USDA agricultural and agricultural marketing service.

"As the result of a research and development program sponsored by the date growers under a Federal marketing order a whole new family of date products is on the market, and export markets for California dates have been developed where none existed before.

"The new date products have increased in annual sale to manufacturers from about 700,000 pounds in the 1954-56 season to nearly 8 million pounds in the 1961-62 season. New export markets took more than 400,000 pounds of dates last year, and the research program is turning up even more new products and important improvements in processing the dates themselves.

"Date growers' returns had fallen below costs of production back in 1954, when the industry decided a marketing order offered them a

way to work together on their marketing problems."

Article goes to say "restricted" portion of the crop could not be profitably sold as packaged dates in the U. S. market and were diverted to processing outlets, which would not compete with packaged dates.

"What outlets might there be? "The growers, asked, article continued. It goes on, the Date Administration Committee, which administers the marketing order, decided the answer lay in developing new markets for their dates. The order includes provision for research (as does the cranberry order).

The big breakthrough came in developing date granules. This was a new product, suitable for use in a date bar mix. Other date products were soon on the market, including date muffins, date bread, date-nut cake, date-nut ice cream, and a frozen date cake batter.

The date administration has also permitted handlers to use some of the "restricted" dates to develop export markets, which had not previously been importing significant amounts of California dates. Mexico was one market selected, and more than 100,000 pounds of dates were sold there.

Working with the USDA Utilization Research and Development labora-

tory at Pasadena, a method was found for keeping dates from growing hard when exposed to air for long periods—this was through an enzyme process. It was found this process could also change dry dates into softer, smoother, high-quality dates. From this, it is thought this process may artificially ripen dates, and thus eventually allow growers to harvest all of the dates at once, instead of having to climb the date trees for harvest several times.

Article concluded, "the date story is a graphic example of the value of a program tailored to the industry's needs by the industry itself—and the average price per ton in 1961-62 was more than 50 percent higher than in 1954, the last season before the order was adopted."

Institute To Sponsor Berries At Cologne Fair

Cranberry Institute will sponsor an industry display of cranberries and cranberry products at the Anuga Food Fair, known as the "World's Largest International Food Fair," at Cologne, Germany. The dates will be September 21-29.

One of the features of this fair will be a modern supermarket at which U. S. agricultural products

will actually be sold to those attending and who desire to buy.

The fair offers opportunity to: test sales potential of cranberry products in Europe; to get products into European homes; to introduce cranberry products to European wholesalers; to measure European tastes for cranberries; to tailor merchandising practices to the European need; to meet food trade dealers from 15 Western European countries.

"Casoron Tour" In Wisconsin

Interesting results have been obtained following spring application of the herbicide, Casoron, according to Dr. George C. Klingbell, extension specialist, fruit production, Wisconsin Extension Service. He arranged a tour of bogs for growers in the central and southern Wisconsin cranberry areas last month. One stop was at the Thiele Cranberry Marsh, east of Biron; another at the Biron Cranberry Company Marsh (Jean Nash) at Biron, another at the Whittlesey Cranberry Company Marsh (Newell Jaspersen) Cranmoor.

Tour was conducted by Dr. M. H. Dana, U. of Wisconsin, Dr. C. Allan Shadbolt of the Thompson-Hayward Chemical Company, manufacturers of Casoron. The group lunched and held discussion at Robinson Park.

A LITTLE BIT OF CAPE CRANBERRIES IN FLORIDA

Ocean Spray has found a new booster in Rennie Hinkley, formerly of Centerville, Mass. He is at present manager of the Colonial Lounge on North Federal Highway in Ft. Lauderdale, where every Sunday is "Cape Cod Day" with drinks to Cape Codders at a reduced price. Mr. Hinkley has his own drink mixture which he promoted with the Florida Rumm Company and it is called "Cranberry Rum-Cran."

The formula is: 2 ounces of cranberry juice, juice of ½ lime, 1½ ounce of Florida rum. Shake well and serve unstrained in 8 ounce highball glass.

The Florida Rumm Company is following through with a promotion program. "Everybody finds the drink is great," Mr. Hinkley is quoted as saying. This item was sent in by Bert Leasure of Lauderdale and Wisconsin.

BLUEBERRIES IN

NEW JERSEY

New Jersey in 1962 harvested 6,900 acres of cultivated blueberries, of this figure 350 was in Burlington County; Ocean had 350 and Atlantic, 250. Production per acre was re-

spectively, state, 237 12-pint trays; Burlington 237, Ocean 240, Atlantic 245, state average was 240 trays per acre.

Other counties than the three named harvested 250 acres, average per acre, 240. Total production in trays was 1,650,000.



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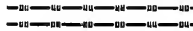
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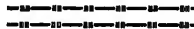
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CRANBERRY HIGHWAY

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PROTECTION FROM FROST

BY WATER SPRINKLING

The protection of plants from frost by continuous water sprinkling, already used for many years by cranberry growers in the U.S.A., is now being increasingly used for other crops. Thanks to recent research in many counties, the theory and practice of the method are now much better understood.

Water sprinkling during frost is a method of heating. It is not, as is sometimes said, a method of insulation—ice is a poor insulation of heat. A little heat is given up by the water as it cools to freezing point, but the main heating effect comes from the release of latent heat as the water turns to ice.

A thousand gallons of water turned to ice in the field releases as much heat as 800 gallons of boiling water cooling to freezing point. Because of the release of latent heat, the temperature of a leaf or blossom on which water is freezing, remains at or near 32 degrees F., at which temperature it is undamaged. Frost damage to temperate plants begins at about 28 degrees F., so there is a margin of safety of about 4 degrees F. (American Fruit Grower)

Fresh From The Fields

Continued from page 6

July. Some cranberry growers were in dire need of water toward the end of July and there was a little drought damage obvious on some bogs. There was evidence of some burning of the tender uprights on late drawn bogs (drawn in July). The total rainfall for the month was 2.74 inches, a deficiency of 1.59. For the growing months of April, May, June and July there has been a total of only 7.31 inches, or less than half of normal.

Showers Relieve

On the first day of August the drought was relieved considerably on most New Jersey cranberry bogs. General showers brought from 1 to 2½ inches to most of the cranberry areas.

WISCONSIN

Ideal Cranberry Month

A most ideal month for cranberry growing was experienced in the state during July. No frost and very cool nights, coupled with above normal temperatures with considerable sunshine and wind resulted in above average set. Moisture came on the 11th, 22nd and 31st along with some hail. Heavy precipitation was experienced on the 11th in the southern marshes when in excess of three

inches in a long soaking period occurred that evening. Overall temperatures averaged from 4 to 6 degrees above normal and precipitation was well over normal in the south, below normal in the northeast and well below normal in the northwest. The outlook for August calls for about normal in temperature and precipitation.

Season Ahead

The rain that came on the 11th was most beneficial as the vines were coming out of bloom and even the heavier soils were getting quite dry. Irrigation had been practiced on sandier marshes prior to the rain and also on new plantings and mowed areas. Set counts the latter part of the month showed an average of from 40 to 50 per cent. This could be attributed to the ideal weather during bloom. For the most part the above normal temperatures in June and early July forced the bloom and many marshes were in full bloom the first week of the month or an average of one week to ten days ahead of normal. The rains were helping to size the berries and also coupled with the above normal temperatures stimulated vine growth naturally weed and grass growth.

Insect Damage Light

Insect damage appeared to be light except where marshes had buildups of 2nd brood fireworm during bloom and failed to dust during that period. It appeared fruitworm were biologically controlled the latter part of June when surface flooding for frost apparently killed many of the adults preparing to emerge from their cocoons. Tipworms were numerous on natives and howes. Sparganothis fruitworm were a problem on some marshes in the Cranmoor area.

Hail Loss, 5,000 Bbls.

Two damaging hail storms occurred the latter part of the month with the first storm on the night of the 22nd in the City Point area and the second on the night of the 31st in the Millston-Tomah area. Losses were expected to run about 5000 bbls. knocked off the vines and a high percentage bruised. The light bruises were expected to heal. The hail occurred in both instances in the early morning hours. Few uprights were knocked off as the hail was small and round.

FROST CONTROL

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Here, Edward Gelsthorpe, recently appointed executive vice president and chief executive of Ocean Spray Cranberries, Inc., is shown speaking at Bordentown, New Jersey. This was an area meeting of Members of Ocean Spray, arranged by Edward V. Lipman, New Jersey Ocean Spray manager. It was one of a series of "get-acquainted" sessions by Mr. Gelsthorpe in various districts.

Chloro IPC

the new answer to dormant weed control in

Cranberries



Chloro IPC, a time-tested herbicide made by the Chemical Division of Pittsburgh Plate Glass Company, can now be used on dormant cranberries. This is good news to growers who need an economical way to control annual grasses (bent grass, annual blue grass, turkeyfoot grass) as well as such weeds as rushes, horsetail, velvet grass, loosestrife, tearthumb and certain others. Chloro IPC is applied while the plants are dormant. It is completely dissipated before the fruit ever appears, so there's no residue problem. Chloro IPC is among the least toxic of all commercial herbicides.

Thorough field testing of Chloro IPC on cranberry bogs in Massachusetts, Wisconsin and Washington has developed local experience and recom-

mendations suited to each area. PPG Chloro IPC is easy to apply in the form of 20% granules, 100 lb. to the acre during November or December after harvest. A repeat application in early spring before cranberry growth begins will give further control of annual weeds. Ask your experiment station personnel at the state university for local recommendations on use of PPG Chloro IPC. Write for more details and your local distributor's name to: Pittsburgh Plate Glass Company, Chemical Division, One Gateway Center, Pittsburgh 22, Pa.

 chemicals

AUGUST — PREHARVEST

August is the month, just before the battle smoke of the harvest hangs over the bogs and marshes, and the battle to sell the new crop begins. As this issue is printed the USDA preliminary forecast has not been given out. We would not attempt to pre-estimate the statisticians, and besides the size of a crop is never known until the last pickable berry is in. But we do hear knowledgeable "guessimates," that the crop "looks like somewhere around a million, three, (1,300,000 barrels) plus the carryover of September 1."

August is also the month of meetings, the "big" Massachusetts meeting of the year, that of the Cape Cod Cranberry Growers' Association at the State Bog, is scheduled for August 29th. This date is about ten days later than usual, and is mainly that a report of the Marketing Committee meeting at Wisconsin Rapids, Wisconsin, August 26, 27 may be given. At this meeting the Committee will make the big decision as to what part, if any, of the crop will be the "set-aside," or berries restricted from the normal channels of sale. Last year the "set-aside" was 12 percent.

It is determined by the prospective size of the crop and what portion of it can be satisfactorily marketed, at reasonable returns to the growers.

Then there is the meeting of Ocean Spray directors also at the Rapids on August 23 and of the Cranberry Institute directors there on the 24th. "Cranberry eyes and ears" will be on the Rapids in August.

There was also the meeting of the Wisconsin State Cranberry Growers' Association at the Rapids on August 7th, and the summer meeting of the American Cranberry Growers' Association is to be held in New Jersey on the 29th.

While on the subject of these growers' meeting, we might repeat again, that we believe there is considerable merit in suggestion made by Orrin G. Colley, president of the Institute that some sort of a "marketing seminar," be held in conjunction with these area summer meetings.

At that time all handlers, Ocean Spray

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East Wareham, Mass.

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

and Independents, might like to express their opinion and to give their marketing plans for the coming crop. We think these discussions would be of interest to all growers coming just at the start of the marketing season.

These sessions could scarcely be held on the same day of the area meetings, but the thought has been put forward they might be on a preceding or following day. The idea is not to interfere in any way with the firmly established summer growers' meetings, but at that time growers are assembled.

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CRANBERRY FIGURES

The 1962 report of the New Jersey Crop Reporting Service, just released, shows that in 1962, New Jersey harvested a total of 3,000 acres; of this Burlington County harvested 2,140; Ocean County, 570; others 290. The state average per acre was 34.0 barrels, that for Burlington 36, Ocean, 32. Total production for the state was 102,000 barrels of which Burlington harvested 77,000, Ocean 18,200 and others 6,800.

Production in 1961 was 118,000, the harvested acreage the same and state production per acres, 39.3 barrels to the acre. Of acreage picked Burlington harvested 2,100, Ocean 570 and others 330.

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**Marketing Committee
Votes 5% "Set-Aside"
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**DECISION MADE AT
WISCONSIN MEETING**

Cranberry Marketing Order Committee meeting at the Courthouse, Wisconsin Rapids, August 26-27 voted for a "set-aside" or restricted pool and then set the percentage at 5% instead of 12% as last year. This was based on the U. S. Preliminary Forecast that the total crop will be 1,317,600 barrels, or the third largest on record. Total last year (USDA figures) was 1,335,000.

Assessment against growers to cover cost of administration of the marketing order last year was set

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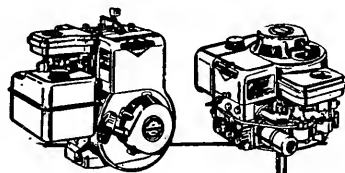
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at 4½ cents a barrel, this year the assessment was set at 4 cents, by unanimous vote. Anthony Briggs was re-appointed manager.

There was considerable discussion as to the differences in figures between those of the USDA and the Cranberry Marketing Committee as to total production last year. It was brought out that government figures are the actual quantity after shrinkage last year was "abnormally high."

The amount of cranberries on hand was estimated as 1,482,851 barrels, which includes a carry-over of 165,251 barrels. With the five percent "set-aside" plus 125,000

barrels to fill the "pile lines," leaves an estimated total of 1,252,443 barrels on the market. Using 1,100,000 barrels as the amount of cranberries sold in the selling year just past that left a balance of 152,443 barrels for which there might be no market.

Anthony R. DeMarco moved there be a "set-aside" program this year, second by Raymond Hebelman. Mr. DeMarco moved the set-aside by 11 percent, seconded by Frank O. Glenn.

The vote taken lacked the necessary five affirmatives.

Mr. Decas suggested that a sub-committee be appointed and report back with a recommendation on the "set-aside." Mr. DeMarco later

moved the percentage be set at 9. Chairman George C. P. Olsson named as the sub-committee, Mr. Decas, Behrend Pannkuk, Mr. DeMarco and himself with Mr. Dever, Mr. Powers and Mr. Healy of the USDA, sitting in.

The five percent figure on motion of Mr. Pannkuk, was voted and also that the standards for the "set-aside" be the same as last year.

There was much discussion as to the figure of the "buy-back" berries from the "set-aside." No price was set at the meeting.

A letter was read from Peter LeSage, independent of Massachusetts, expressing his hope "the marketing order will be abandoned," but suggested it would be a better policy, with the program continued that the crop estimate be made later, at the October meeting of the committee. There was some discussion, from Mr. Hebelman and Walter Case of Wisconsin concerning alleged dumping of some good berries, and why "shouldn't any marketing agency be willing to sell to any other marketing agency any berries it had in surplus at a price equal to what they paid to their growers?"

Chairman Olsson replied that the "set-aside" was supposed to put the business (cranberry) in balance as far as supply and demand are concerned. He said, at another point "I think the cranberry industry has been trying to get a good fresh pack that will stand up. I agree that in the first place you take the soundest berries it will help the whole industry and this is the goal and one of the things we have talked about."

All 7 principals of the order were present, also alternates, Maurice Makepeace, Massachusetts, Frederick B. Barber and Clarence A. Searles, Wisconsin, the three USDA representatives and about 20 grower and processors from various cranberry areas.

Next meeting is set for September 17 for a sub-committee consisting of Mr. Olsson, Mr. Decas, Mr. Pannkuk and Maurice Makepeace at the O'Hare Inn, Chicago, the full committee to meet September 18 at the same place.

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Mass. Cranberry Station and Field Notes

by CHESTER E. CROSS
Director

Personal

Dr. Satendra Khera will be terminating his studies at the Cranberry Experiment Station on September 27 and with his wife, Dr. Krishna Khera, and their two young daughters will fly from Logan Airport on September 28. Dr. Khera came here from India nearly two years ago, has done some careful and helpful work on the relation of pectin to the keeping quality of ripening and storage cranberries, and has done considerable original research on parasitic nematodes of cranberry bogs. He has well-earned the friendship and esteem of his co-workers and we wish him every success as he assumes new duties as associate professor of nematology at the University of Jodhpur in India.

Harvest

Massachusetts cranberries ripened

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earlier this fall than in any recent season. Picking began in earnest about September 7. The berries seem of unusually good color for so early in the season, not many are marked with sun scald spots, but berry size appears only average at best, reflecting the warm dry summer. Probably 25 to 30 percent of the crop has now (Sept. 18) been harvested and the quality of the Early Blacks appears as exceptional as their color. This is in part due to the very extensive use made this year of fungicides, but is also apparently related to the very dry weather of the blooming period which apparently made fungus infection of the flowers difficult. There is, at any rate, very little field rot, and the fruit looks firm, crisp and glossy, promising to keep well in storage.

Harvest Suggestions

Growers should do all in their power to keep these berries at their best. Pick them only after the vines and berries have become dry. Do not continue picking after the coming of afternoon damp—this will increase bruising and hurt the vines that will produce next year's crop. Regulate the speed of the picking machine to a deliberate pace—fast operation throws the berries around and increases bruising by the elevators. The crop is ripening nicely and berries will resist considerable frost—there is no need for over-hasty picking! Market prospects are improving, and if that market receives fruit of good quality with minimum bruising that in itself will increase the market for cranberries.

Girdlers

Bogs troubled with girdlers should be harvested before September 25 and flooded immediately for a week. Do not neglect trash floods after picking generally—it may help prevent future girdler infestation. More attention should be given to pruning bogs with heavy runner growth and raking up vines and weeds broken off in picking. The better trained and combed the vines are, the less bruising and the cleaner the bog will be picked next year.

The University mole plow has arrived at the Station and will be available to growers wishing to put in drainage tubing during the next several weeks.

WSCGA Summer Meeting Very Informative

**Group Will Seek to Obtain
State Marketing Order to
Raise Funds for More Research.**

Wisconsin State Cranberry Growers' Association summer meeting was held at the Cutler Cranberry Marsh, Camp Douglas last month with more than 150 attending. As first speaker, A. R. Kurtz, chief, division of Plant Industry, USDA, having had a meeting with the growers who do some shipping of vines, gave a talk and the meeting resolved that the State Growers' Association suggest that legislation of plants be withdrawn, as this inspection is no longer needed within the state. However, this would not apply if the vines sent to other states when these states have regulations requiring inspection, in which case inspection would be continued.

Mr. Martin of the Rural Mutual Hail Insurance Company gave a talk on hail insurance. This is the first year for this company in the Wisconsin cranberry hail business, and it was reported well over a half-million in coverage was written, and this covered a little more than 1,000 acres. It was reported a program was being worked on which will give the growers of Wisconsin a more beneficial rate, providing all of the growers would apply for coverage. Mr. Martin is also the adjuster in the case of claims and intends to do quite a bit of research in this after more experience has been obtained with cranberries.

Nicholas Calabressae, ASCA, discussed the benefits available from ASCA, particularly in the area of water conservation, using the overhead sprinklers, and also mentioned the new "windmill" concept being tried out by Marvin Hewitt on the C. & H. Cranberry Company marsh (reported in the last issue).

Warren Wallis, Wisconsin frost forecaster gave a fine talk and also a demonstration on how to use a radiometer. A separate story appears in this same issue on the radiometer. Leo Sorenson Cranberry Consultant, explained the operation

of the new "windmill" method of frost control and how it is operating to date. Mr. Sorenson and Mr. Hewitt are keeping complete data on its operation.

"The Marketing Picture," was a most interesting talk by Don Wilkinson, chief, Market Division, Wisconsin State Department of Agriculture.

There was a Round Table discussion, moderated by Miss Jean Nash. She was assisted as chief speakers by Dr. Don Boone, Dr. Malcolm M. Dana and Professor Klingbeil of the University of Wisconsin.

A. C. Bark, gave a story of the association financial picture, which was not too encouraging as the association has only about 60 percent of the growers who are supporting the frost warning service, and the program of raising a sufficient fund through dues was not completed. Only about half the required amount of a proposed fund for increased research was raised and the meeting decided that if the sum could not be raised on a voluntary basis, that the wheels should be put in motion to have a State Marketing Order which will make an assessment for Cranberry Research De-

velopment compulsory, and also for frost warning service. The \$2,000 that was sent in to the Association for these uses will be returned to the individuals.

A sum was voted for Dr. George L. Peltier, to continue his work in gathering material for the history of the cranberry industry of Wisconsin, as was an additional \$375 for the Public Museum Exhibit at Milwaukee.

The Bark River Culvert Company of Eau Claire gave a prize of a culvert, and also two cases of aluminum foil. The door prize of an AM/FM model radio was won by Gerald Rezin of Tomah. This should enable him not only to get news and entertainment but the weather reports.

Ladies of the Lutheran Church served a delicious meal, nicely served, which included homemade cranberry sauce and jellied sauce. Chilled cranberry juice was available, plus plenty of cold pop, which was welcome as the day was warm.

Before the opening of the speaking program a number of suppliers had equipment on display, and at this time growers saw the exhibits and caught up with "cranberry chitchat."

Networks, Periodicals To Push Sales

Starting Oct. 1, a Heavy Campaign Begins for Cranberry Juice Cocktail, Cranberry Sauce and Fresh Cranberries—\$10,000 Cash Receipt Contest

Cranberry Juice Cocktail, Cranberry Sauce and Fresh Cranberries will be promoted in a nationwide advertising campaign by Ocean Spray Cranberries, Inc. starting October first on network radio, TV and in national magazines. The cocktail is now available nationally in both pint and quart sizes.

Commercials will be carried on these top daytime shows on NBC-TV; "Loretta Young;" "Truth or Consequences;" "Merv Griffin's Shopping Spree," "You Don't Say" and "Match Games;" on ABC-TV, "The Price is Right," "Seven Keys," "Queen for a Day" and "Who Do You Trust?" Full page full color ads for cranberry sauce will run in October issues of American Home and Good Housekeeping, plus the November and December issues of McCall's, Ladies Home Journal, Good Housekeeping and American Home.

The network radio, according to Miss Betty Buchan of Ocean Spray, will highlight a contest offering \$10,000.00 in cash prizes for the best fresh cranberry recipes. This will be "plugged" for 13 weeks on "Arthur Godfrey Time" over 209 CBS stations and on the Don McNeill, "Club Breakfast" over 317 ABC stations.

Publicity program will back up the three campaigns, food editors, syndicates and radio and TV program directors will be well supplied with new ideas for serving all three cranberry products, while some 800,000 home economics teachers will receive Ocean Spray teaching units for classroom use. Ocean Spray fresh cranberry packages will offer a new 16-page recipe booklet in color and films about cranberries are reported heavily booked by schools, clubs and TV for use during the harvest season.

Available to stores are tie-in promotions pieces and advertising mats, displayed with related foods. Ocean Spray products are expected to build up sales for the three cranberry products.

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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

August Start Rainy

There was some rain on the night of the first and on August 2nd came a brief deluge.

The first week was about normal in temperature, although many of the days and nights were humid and there were extremely heavy morning dews, but the bogs dried off early in the day and did not seem in general to be developing much if any fungus diseases.

Heavy Rain Again

By the 13th the temperature for the month was 13 degrees below the average (Boston). The 12th also brought the heaviest rainfall in a long while, a decided relief after the arid July and the latter part of June. A total of 2.29 inches of rain fell, as recorded at State Bog, East Wareham. The precipitation was in the form of squalls, with heavy rain and howling winds, with thunder and sharp lighting. Weatherman described the storm as tropical and almost hurricane-like. This brought precipitation for August to 3.31 inches, with average for August 60 inches.

Cool Month

Polar air followed this storm and

nights and days were cool, fall-like in August. Daytime highs were only in the 50's in Southeastern Mass. Month to that date was a minus 37 in temperature.

Another very helpful rain fell on the 20th, .73 inch of rain being recorded at East Wareham.

Ideal Weather For Cranberries

This rainfall was most welcome and also the cool nights, the rains tending to size berries and the cool nights to hasten color. Weather was almost ideal for the period of the growing season.

August Rain

A total of 4.45 inches of rain was recorded at Cranberry Station for the month of August, although there was more at other points and less at others. Average for the month is 3.60. Despite this amount of rain, conditions were getting somewhat dry

again in the cranberry area as September came in.

August Rainy

The month was about 40 degrees minus for the 31 days, or slightly above a degree a day. At Boston, the month's temperature had averaged 70.4 degrees. The coolness of the month broke a chain of warmer than normal months, stretching from March through July.

It was pointed out by the weather bureau that New England has been hit hard by tropical storms five times in September—in 1938, 1944, 1954, 1960 and 1961.

September Starts Cool

September started off cool, about a degree a day below average.

Harvesting Begins

Picking began in a scattered way, scooping of high spots on high places on Labor Day and increased some-

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what during the first week of September. Picking was interrupted by a heavy rain on the 6th.

First General Frosts

There was heavy rain, .75 inch on September 13 and this was followed by the first general frost warnings of the fall. Forecasts from the State Bog were for about 25-26. These temperatures and also 27 were reached on a number of bogs.

Fruit, however, was well colored and well advanced and flooding and sprinkling water was available and used. It was estimated there was no frost loss. The month continued cold, the deficiency being figured (Boston) at 49 degrees.

Estimate Seems Holding Up

By the 16th the crop was estimated to be nearly 30 percent harvested and it seemed to be holding up to the estimate in most instances, although a few bogs were under-running. A few were also over-running.

WISCONSIN

Hail In Wisconsin

August was a rather dull month compared to the two previous growing months in that there was little variation in the weather. Statistically the month averaged almost a perfect normal for temperature and below normal in precipitation in the north, about normal in the south, and above normal in the west. Frost warnings were issued three times during the period on the 11th, 14th and 25th. Coldest was 25 on the 14th. Very few above ninety degree lays were recorded, but many above normal minimum temperatures kept the average up. Heaviest rain fell in the west marshes on the 6th and 7th when up to four inches was recorded. Rain fell almost weekly on most areas which aided the irrigation problem.

The most outstanding feature of the weather was the damaging hail in the west on two occasions during the period. The extended forecast for September calls for temperature to be slightly below normal in temperature and about normal in precipitation.

No Bumper Crop

Two damaging hail storms occurred in eastern Jackson County and western Monroe County on August 1 and 16th. Some properties were hit

by both storms. The first one occurred about 3 a.m. and the second about 7 p.m. The first storm hail was small and round, while the second was large and jagged. The second storm hit more marshes and knocked off more berries and bruised more fruit. Counts showed as high as 25% berries knocked off and 35-40% bruised on the vines. Damage from berries knocked off and those expected to decay on the vines where the skins were ruptured extensively is estimated at least 25,000 barrels. These storms along with the one in the City Point area eliminated the chance of a bumper crop in the state. Very few uprights were cut by the hail and very little if any fruit bud damage is expected.

Quality, Size Good

Berries grew well during the month and younger plantings along with the Ben Lear variety were showing good color at the end of the month. Except where there was hail damage or a shortage of water, most growers were planning to start harvesting the last week in the month. The other marshes mentioned beforehand were planning on starting on the 16th. Berries were maturing rapidly and cup counts indicated above normal size. Quality was expected to be above average due to lack of flooding during the immature berry stages above normal amounts of fungicide applications.

Some Water Shortage

Some growers were reporting a shortage of water supply which is not a good situation for the frost season.

WASHINGTON

August Drought

August was a very dry month, rain fell only on 7 days and total precipitation for the month was only .65 of an inch. A year ago August precipitation was 3.18 inches.

Month Cool

Temperatures ranged from a high of 78 degrees on August 8 to a low of 43 on the 14th. Summer really arrived on Labor Day and the mercury soared into the 80's.

OREGON

Weather Ideal

Late summer weather was ideal for cranberry growing in Southwestern Oregon. Temperatures were neither very hot nor very cold. There had been very little frost damage.

Fireworm Injury At Minimum

Growers, in the majority have kept fireworm damage to a minimum. It is estimated that more fungicides were used this season than ever before. This indicates that growers continue to be interested in high quality fruit minded.

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The Story Of Lulu Island, Vancouver, British Columbia

Some 13 Growers Now Cultivating the American Cranberry of Commerce, Amid this Spectacular Metropolitan Area, with Spectacular Mountain Scenery All About—Large Bogs on “Mined” Peat Properties—Being the Second of a Series of West Coast Cranberry Articles.

by

Clarence J. Hall

Lulu Island, a part of Greater Vancouver, British Columbia, Canada is the newest cranberry producing area—of which I had heard much, but had never visited before. It began to come into the cranberry marketing picture in the late '40's. It was reputed as an area, where cranberry bogs could be built inexpensively, relatively, because large tracts of land had already been cleared and “mined” of a few feet of top peat, these peat beds extending down to as much as 30 feet. These tracts, thus, made an ideal cranberry bed, on peat, which grows cranberries so well.

The companies which mine this sphagnum peat sell it far and wide as peat moss for use in horticulture, such as on lawns, golf courses, shrubs, flowers, in greenhouses. It is, as is commonly known, a great soil builder. This clearing and mining of the top layer of peat left cleared beds of peat, and the beds were without utilization. So the growing of cranberries was the answer to the use of this waste land, just as the Cape Codders of more than a century ago utilized otherwise waste land on the Cape and began our cranberry industry.

Lulu is Delta Land

This island, perhaps 12 miles long by about five wide, thus comprising about 50-60 square miles is delta land. That is, it is “made” land, built up over the centuries by the washing down of soil from the

mighty Fraser river, which runs far into the interior of enormous British Columbia. Just a word about this river, along which we were taken for 50 miles or so—much is fertile valley, where farming is in progress, but there are gorges and spectacular

mountain views, particularly snow-clad Mt. Cheam.

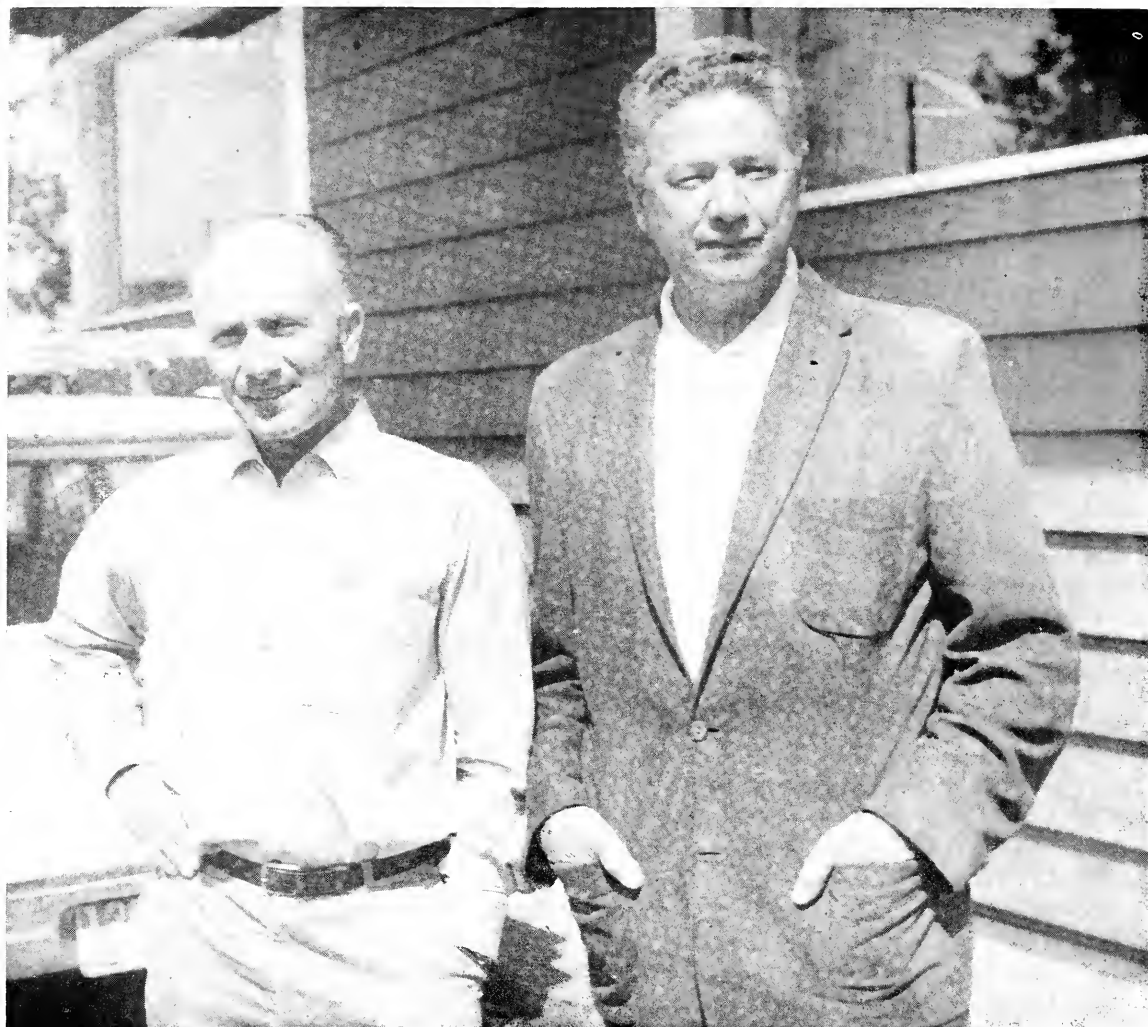
Lulu Island is below sea level at high tide, and it has been diked. It is kept drained by canals, with automatic pumps. Lulu is in the municipality of Richmond, and from it the great mountains of Canada, most snow-topped may be seen from the bogs on a clear day. Also the spires and towers of the City of Vancouver are visible. Lulu, like much of the Pacific Northwest is spectacular, in scenery.

Vancouver is Beautiful City

Vancouver is Canada's third largest city, with a metropolitan population of 650,000, and is Canada's gateway to the Orient, a port city of commerce and industry. Around it tower the snowy mountains, north and east and behind these stands a great wilderness, rich in gold, silver, uranium, aluminum; timber and “scenery”. Vancouver, itself, is one of the most beautiful cities I have ever visited. There are extremely modern buildings, with much use of glass, and as a port has great ships bound for the Orient and elsewhere in the world gliding in and out. It is a city of many, many parks; there was one,



This shows one of the broad dike roadways at Lulu Island, with the sawdust, wood chip topping. The peat is so deep and spongy some sort of topping is necessary and the yielding peat sometimes make bog operations difficult.
CRANBERRIES Photo)



JACK BELL (right) second largest grower at Lulu Island and Heinz Knoedler are shown here.

(CRANBERRIES Photo)

Queen Elizabeth Park most well-kept on an elevation, which we visited just at dusk; it offered a breathtaking view of the millions of lights of the great city below.

British Columbia is still rather "English." Late one afternoon, Mrs. Hall and I took a cab. As we reached our destination the taxi driver turned to us and said; "Folks, do you know what I would like most of all right now? A good cup of tea and some crumpets." That from a taxi driver! This was at New Westminster, another beautiful area of Greater Vancouver.

Has A Native Cranberry

A wild cranberry grows in British Columbia. To the north of Vancouver is an island named Cranberry Island. This native fruit formerly was utilized,

but not today, at least to any extent. Once, however, this native cranberry was shipped out in considerable quantity from North Vancouver.

Varieties grown today are of Eastern or Wisconsin origin. There are a few Wisconsin Searles, a few Early Blacks, a few Howes but the almost universal planting is of the variety so favored on all the Coast, the McFarlin. There will be shortly a fairly large planting of the hybrids, Bergman.

I understand the first planting at Lulu was as long ago, as 1932 on a very small scale by an Englishman named Smith. One of the earlier growers, by name George Yardley, has a planting of about 4 acres. E. E. Carncross of the Western Peat

Company, Ltd. was a main pioneer in about 1946-47. I was unable to see Mr. Carncross, although I had hoped to. Mr. Carncross had gone east about that time and visited the Cranberry Experiment Station at East Wareham, Mass. There he talked with Dr. F. B. Chandler. As the result of this talk he set out a piece of bog, nine acres, I was told. Later Dr. Chandler made a visit to Lulu. At about the same time Jack Bell, made a sizeable planting at the present Bell Farms, Ltd. which is another peat operation.

The Three Yanks

The "Three Yanks" from Carver Mass. Norman V. Holmes, Fred "Fritz" Shaw and Jimmy Thomas, all cranberry growers and with other interests in the cranberry industry

pulled up stakes in the east, arriving August 1, 1955. This was after a preliminary survey visit by Mr. and Mrs. Thomas. Bell Farms began cranberry growing about 1946. With three sizeable operations started cranberry growing was on its way in the Vancouver region. Advice was furnished them by D. J. Crowley, director of the Washington Cranberry-Blueberry Station at Long Beach, Washington; helpful information came from the Canadian Agricultural Council, and from Prof. Hans Fischer, horticulturalist at U. B. C. near Vancouver.

The three Massachusetts men operated as the Big Red Cranberry Company, Ltd. building this to 106 acres, the largest holding to date.

The story of the Big Red and the "Three Yanks," (as they are known on the Coast) will be taken up in a separate article. The remainder of this will concern Vancouver area cranberry growing in general and the facts concerning Bell Farms, which is second in acreage and North American Peat, Ltd. an enterprise about two years old, and third largest growing organization.

Total acreage is about 175. with the highest production to date estimated at about 5000 barrels. Adverse weather conditions have so far taken a toll each year. Vancouver is about on the 50th parallel of latitude, about even with Quebec and north of the cranberry bogs of Nova Scotia and Cape Breton on the Canadian east coast. Yet, Vancouver, warmed by the Japanese current, which cuts in sharply is not generally cold; snow and ice skating are rarities. Roses are picked at Christmas time.

Ocean Spray of Canada

British Columbia cranberries, are all, or nearly all processed and sold through Ocean Spray of Canada, Ltd., a wholly owned subsidiary of Ocean Spray Cranberries, Inc. Headquarters are at St. John, Quebec. Marcus M. Urann of Massachusetts is president, "Norm" Holmes, vice president.

Fruit comes for this Canadian subsidiary from all over Canada. British Columbia, Quebec, and Nova Scotia. These berries are sold in Canada, about 20,000 barrels a year the British Columbia market, according to Mr. Urann is for about 5,000 barrels. When fruit for the Cana-



Mr. and Mrs. Syd Freer obligingly stood for this "shot" in front of their office at North American Peat, Ltd. (CRANBERRIES Photo)

dian market is needed in addition to the Ocean Spray plant at St. John; for British Columbia and western Canada to Cascades Foods, Ltd. in the Vancouver area, Hector Carslake, general manager.

There is about a 10 percent duty on the import and there are higher freight charges for the distances involved. Ocean Spray of Canada last year returned to \$15.37 to its members and the same amount was returned to Ocean Spray at Hanson for the U.S. berries which goes into the pool of the year. Prices to consumers are somewhat higher

than in the states to compensate for customs and freight.

I visited Cascades Foods and found it a modern plant, not packing cranberries at the time. It also processes products of the region.

Directors of Ocean Spray of Canada, of which Holmes is one, meet regularly at Hanson, when Ocean Spray directors gather, this meeting preceeding that of committee and the final general session.

Bell Farms

I have referred to Bell Farms, the actual title of which is Bell Farms Ltd. This is headed by Jack Bell,



MOOSE, a huge black dog owned by Mr. Kneedler accompanied us on the tour of the Bell Farms bog. A cross between a German Shepherd and Collie (with a suspicion of some Irish Wolf), Moose, of his own accord, took this pose by the side of the well-kept Bell bog.

(CRANBERRIES Photo)

who also operates the Northern Peat Company, Ltd. the entire holding being about 450 acres. This cranberry operation is the second largest at Lulu, having 67 acres in vines. Twenty more are ready to go in this year. All plantings are McFarlins.

Bell started in cranberries in the spring of 1946 when he planted three acres. He sanded with about an inch in building, using river sand.

Harvesting has been by dry picking machines, but Heinz Knoedler, who is agricultural advisor there, is anxious to try water reel harvest. Top production at Bell Farms has been about 2,000 barrels. However on some half acre plots, 300 barrels to the acre have been grown and harvested.

Mr. Bell said it was really rather a "toss up," whether he or Mr. Carncross was the first to plant at Lulu on a large scale.

Bell Farms also grows cultivated high-bush blueberries, the stock hav-

ing come from Michigan. Also at Bell are such items as Christmas trees, juniper, Scotch pine and other trees.

The story of how Bell got into cranberry growing is most intriguing. He was in the peat business and could only remove 3 ft. of peat (because of a local law). He wondered what he could do with beds to make use of them.

Late Guy C. Myers Helpful

He tells the account of how he was on a plane from Winnipeg bound to Chicago. Some four seats behind him he heard someone talking about cranberries. Although this was pretty late at night, he went back to the gentleman he had overheard, to talk with him. He found out this was the late Guy C. Myers, prominent financier of New York and Seattle and the builder of Cranguyma at Long Beach, Washington.

Bell says Mr. Myers was genial and very kind to him, telling him about cranberry growing and invited

him to Cranguyma to see a cranberry bog and the operation of growing cranberries for himself. This he did and there met Dr. Harold Clarke, who was then, supervisor of Cranguyma. Dr. Clarke arranged for him to buy cranberry vine cuttings.

In 1946 the vines arrived and he started to build the bog. In 1955 he engaged two agricultural graduates to help with technical advice. He also received advice from Mr. Crowley and the bog has been visited and advice given by Dr. Charles C. Doughty, superintendent of Coastal Washington Experiment Station (formerly Cranberry and Blueberry Experiment Station.)

Jack Bell

Mr. Bell was born in Montreal. He was educated at McGill University there, where he majored in mathematics and physics. He continued these studies at British Columbia University. He has BS degrees.

At the time I interviewed Mr. Bell, he was busy getting ready, to go to Russia, with Mrs. Bell, to attend the Second International Peat Conference.

Bell Farms is one of the bogs at Lulu which have the sawdust-wood shaving roadways atop the dikes. This is really refuge from the sawmills which anyone may obtain for the carting away.

Heinz Knoedler

Mr. Knoedler came to Bell Farms in 1956. He was born in Germany. He received his masters degree in general agriculture at Stuttgart. He did outstanding experimental work in horticulture at the University of British Columbia later, where he received a B.S.A. degree. He is married. The couple has four children and live in Richmond.

Mr. Bell, besides being in the peat and cranberry business has other enterprises. For one he is building an 18-hole golf course at Richmond. He is a tremendous golf enthusiast.

Mr. and Mrs. Syd Freer

The third largest grower of Cranberries in the Vancouver area, next to Big Red and Bell Farms, is North American Peat Ltd., Syd N. Freer, president.

This operation is on the mainland at Burnaby. The bog is all new, two years old, 18 acres, all McFarlins. Dave Pryde of Grayland, Washing-

ton, "rounded up" the vines from Washington for North American Peat.

"I have to spray once a year for black-headed fire worm." Mr. Freer said. "We used Parathion and DDT. The spraying was done by Skyways Air Service, straight wing, which operates all over B. C. We are one hundred percent Ocean Spray." he added.

It was here I saw my first Peat Company in the operation of mining peat. The holding is all in one piece, with ditches. There is a grass problem in some parts, and there is a possibility that sprinklers might be put in. No sanding is done, and dry harvesting methods are used.

Mr. Freer was raised on a farm in Manitoba, which produced cattle and wheat. He and Mrs. Freer have three daughters, and are active in various community organizations.

All the other bogs at Lulu Island are very small, really in a number of instances "back-yard" enterprises. On most of these small pieces, harvest is by hand scoop which has now nearly gone out of use, in the U.S. with a few exceptions.

The growing season at Lulu is very short.

No Frost Warning Service

There is no frost warning service for these Greater Vancouver growers, but they watch the Canadian weather bureau reports. Actually they as a whole can do little to prevent frost injury and the only sprinkler system (so far) is at Big Red.

As stated in the first article on this West Coast series, there are about 13 growers. They have formed the British Columbia Cranberry Growers Association. President is Jimmy Thomas, Mr. Knoedler, secretary and treasurer. This group meets from time to time, usually at the Big Red office at Lulu Island and discusses all kinds of cranberry growing problems, from cultural to marketing. There is a complete weather station at the home of Shaw on the bog at Big Red, as he is an official government weather observer, so there is this help in regard to weather.

Insects and Weeds at Lulu

The most troublesome insect is the blackheaded fireworm, and materials for its control used are Parathion, Malathion and DDT, applied by airplane at Bell Farms.

Maneb is used for the control of Cottonball disease as this is a fungus trouble.

There have been a variety of fertilizer programs and this varies from year to year, depending on vine condition. Mr. Knoedler has tried out liquid fertilizer (Nachura, 10-5-5) in combination with fireworm spray. He says excellent results followed and it was repeated this season in July.

Sanding

Most newly-planted bog is sanded with half an inch of sand at planting time and resanded in six or seven years. The sand is applied with a specially designed sander, the sander being equipped with airplane tires. (There is never enough ice for ice sanding as is done in the East and especially in Wisconsin.)

As has been noted previously, Big Red in its weeding program makes use of Chinese women hand workers at times; others use spot sprays with solvent up until the beginning of May, when hand weeding becomes necessary. Weeding costs per acre are estimated at as high as \$50.00 at times. Shell Sol is the solvent most widely used, and according to Mr. Knoedler this has an aromatic content higher than the regular agricultural weed-killer No. 1 Chloro IPC and Simazine, among the newest of herbicides have been used as pre-planting treatment on new bogs and also applied by portable mist sprayers.

Lulu Island with spectacular Vancouver and spectacular coastal British Columbia proved to be most interesting to visit to an Easterner interested in cranberry cultivation.

What of Lulu Island's future in cranberry cultivation? General production per acre to date has not been high, but there is new acreage going in, there is much potential cranberry land and the growers are gaining experience and learning the natural cranberry conditions. "Any year," they say, "can be the year when big production may be achieved."

Cranberry Institute Votes Assessment Of 3½ Cents

May Have Associate Members — Vote Subscription of Cranberries Magazine Be Continued

Cranberry Institute Directors meeting at Wisconsin Rapids, Wisconsin, August 24th voted that the assessment of member growers of the handlers comprising this over-all cranberry body be set this year at 3½ cents a barrel. Last year the assessment was 3 cents. This assessment is for the operating costs of the Institute.

Orrin G. Colley, president, has pointed out this assessment is not against all growers in the industry but only those whose distributors are

members. There was discussion as to a plan to set up a new associate, non-voting membership, with these associate members making a contribution of \$200.00 to the operating costs in lieu of the barrel assessment.

Directors also voted that the Institute, as one of its services to the industry subscribe for another twelve months, beginning in November, to Cranberries Magazine to every known grower in every cranberry area in the United States. This policy has been in effect for the past eleven months. As there are often two or more partners of a bog one copy of Cranberries has been and will be sent to each cranberry property on record with the Institute.

One of the major activities of the Institute is to develop a foreign market for American cranberries, especially in the United Kingdom and Western Europe, working in conjunction with the Foreign Service Agency of the United States Department of Agriculture.

Beginning September first the project provides for an additional government contribution of about \$80,000 in foreign funds, bringing the total contribution of the Government to approximately \$110,000. Industry contribution will total approximately \$65,000 in dollars, foreign currency, personnel, goods, facilities, services or a combination thereof, the Institute reports. In addition a four-year funding arrangement calling for a \$400,000 contribution by FAS and about half of that by industry is being negotiated.

It has been pointed out that fruit used in foreign trade build-up can come from the "set-aside" under the Marketing Order, and thus these berries are utilized rather than merely not marketed.

USDA Again To Buy Fresh Fruit

Cranberry Institute has been notified that the U. S. Department of Agriculture will buy fresh cranberries again this fall. Amount is not known as this goes to press. USDA purchases for fresh cranberries for school lunches in the last two years, have each been around 100,000 barrels.



Outgoing and incoming presidents of the Cape Cod Cranberry Growers Association exchange mutual congratulations. Philip Gibbs, left, of Carver, has completed his term in office, and now Raymond Morse assumes the post. Picture was taken at association's annual meeting.

(CRANBERRIES Photo)

Optimism Prevails At Annual Meeting Of Cape Cod Cranberry Growers Assn.

Speakers Hope For New Uses, Markets

Some 200 cranberry growers and their guests attending the 75th annual meeting of Cape Cod Cranberry Grower's Association at State Bog, East Wareham, Aug. 29, heard the most optimistic report concerning the cranberry industry in a long while. Rain threatened all day, but mostly held off for the out-door session, and for the exhibits of cranberry equipment and bog tours.

Edward Gelsthorpe, recently-ap-

pointed executive vice-president and chief administration officer of Ocean Spray Cranberries, Inc., in his first general Massachusetts appearance said he felt certain that not only could cranberry sales in sauce, cocktail and fresh fruit be increased with more profitable returns to the growers, but that new fields could be opened up for use of cranberries, possibly in plastics.

He said he had "plans in his hip pocket," which he felt would assure this. He also stated he was closing the purchase of two cranberry properties for himself. He said he had

two reasons for this, one being a "selfish" one, that he believed the growing of cranberries would be a good thing to be in; and secondly, because he felt as executive head of Ocean Spray, he himself should thoroughly understand the cultural problems of growers.

George C. P. Olsson, chairman of the Marketing Committee, said he felt that "at last the industry was getting out of the woods." Orrin G. Colley, president of Cranberry Institute, reported on progress being made in developing a European market for American cranberries, and possibly elsewhere in the world, in cooperation with Foreign Agricultural Service of the USDA, and foresaw a foreign market for cranberries which would increase sales and returns to growers if grower support is given. He also said that USDA purchases of fresh cranberries for school lunches in the past two years had returned to the growers \$2.6 million and he was hopeful such a program might again be forthcoming for the 1963 crop.

Gilbert T. Beaton, export manager of Ocean Spray, who last spring made a visit to United Kingdom and Western Europe as institute delegate, gave a report and said he could see a market there for 20,000 barrels, in a few years after the necessary market research had been made and contacts developed, and this considered only the European markets.

Mario P. Alfieri, associate director of N. E. Crop Reporting Service said "speaking strictly off the cuff," with the ideal weather conditions of late August, he would not be surprised if the preliminary USDA estimate for Massachusetts, of 630,000 barrels might not prove to be somewhat too low.

Another important development of the day was that it became known that five researchers of the USDA will be in Massachusetts this fall testing a new storage process which might prolong the shelf life of fresh cranberries, and improve quality. If this experiment proves to be successful, it could more or less remove cranberries from the immediately "perishable" list of fruits, and thus be of tremendous importance to the industry. The process had already been used successfully with peaches, and sweet peppers (more concerning this will be given in a separate story).

Meeting was presided over by Philip H. Gibbs, whose term as president was expiring and the meeting, on nomination of Louis Sherman, chairman nominating committee, elected: president, Raymond F. Morse; first vice president, Alfred L. Pappi, second vice president, Robert Hiller; re-elected secretary, William M. Atwood; treasurer, Mrs. Ruth E. Beaton; directors, Louis Sherman, William B. Stearns, Jr.

Dr. Chester E. Cross, Paul R. Morse, Anthony R. Briggs, Oscar L. Norton, Gilbert T. Beaton, Philip H. Gibbs, Raymond F. Morse, Alfred L. Pappi, William M. Atwood, Ruth E. Beaton, Robert Hiller and cranberry club presidents, Robert Meharg, William M. Atwood, Francis Kendrick; honorary directors, Dr. Herbert F. Bergman and Joseph L. Kelley.

Dr. C. E. Cross, director of Mass. Cranberry Experiment Station, said he would omit the usual reports of staff members and make his own remarks brief in view of the threatening weather, as did, in fact, all speakers. He confined himself mainly to references to water improvements for Massachusetts bogs, chiefly through the installation of overhead sprinkler systems. He referred to the fact that "those rascals" out in Wisconsin had come within 9,000 barrels, in a recent year in equalling the production of Massachusetts. He gave as one reason the better and more improved handling of water for flooding. He told of one marsh of 80 acres which could get the water on and off in 80 minutes and there was nothing in Massachusetts to compare with this. He said there is also much new installation of sprinklers in the Badger State, as well as in Massachusetts. He told of the very good results which had been obtained this past summer by growers who used sprinklers during the drought and he felt the time had come when better water facilities must be installed on Massachusetts bogs, if Massachusetts is to maintain its lead in production and to produce good crops. He said sprinklers do call for an investment, but the investment paid off. Dr. Cross has been for several years an ardent advocate of improved water facilities.

Dr. Ernest A. Walker, chief officer biology section of pesticides, regulations branch of the USDA said the regulation of what chemicals might be used in crop protection is a most difficult task, and he depended upon such people as Dr. Cross of the Mass. Station to give him reports; he added that nearly all manufacturers of agricultural chemicals were responsible people and cooperated fully. He said the USDA in "clearing" a material, must be sure it would be acceptable to Food & Drug Administration, with no harmful results or more residue than is the tolerance. He then said he wished to make a tour of some cranberry bogs, that he might be more familiar with the growing of cranberries.

Mr. Gelsthorpe in elaborating on his subject said he was inexperienced in cranberry growing, "probably knowing less than anyone here." He said his experience had been in packaged goods (toiletries), toothpaste and deodorants.

He told how the deodorant industry decided to build its sales and did so



Dr. Ernest Walker (Pesticides, retiring President Gibbs is at right.

USDA addressed the Cape meeting, (CRANBERRIES Photo)

threefold, from about a \$30,000,000 industry to more than \$90,000,000; by careful research into every possible aspect of the potential market and through competent promotion. He told of how George Washington Carver determined to find more uses for peanuts and found many new ones, including plastics.

He said this must be done with cranberries—there might be a use for cranberries in plastics. He said no part of the cranberry should be wasted, but that by-products must be developed as well as increasing sales of fresh cranberries, sauce and cocktail. He said more people must be induced to eat more cranberries, more often—that too many people thought of cranberries as only a traditional dish at Thanksgiving and Christmas. He said cranberries have a distinct asset in their distinctive flavor and that people like the cranberry flavor.

Mr. Gelsthorpe also touched on the fact that such a large part of the advertising-publicity burden of the industry is carried by Ocean Spray, but said that fact was accepted by Ocean Spray. He also said that if Ocean Spray advertising-publicity or its other marketing plans succeed in selling more cranberries and increasing returns to growers, that not only Ocean Spray

growers would benefit, but also the growers of independent distributors.

He concluded by saying he felt sure he had plans to solve these problems and would not say so unless he was sure.

He began by explaining how he came to accept the Ocean Spray job, and a big reason was because he had a summer home on the Cape, and wished to live in this area and "by a miracle I was offered the opportunity."

"Gibby" Beaton in his European report said the U.S. population is approximately 173,000,000 while that of the United Kingdom and Western Europe is approximately 167,000,000. "It might be figured therefore that a European market of about a million barrels of cranberries might be build up as in the U.S. But studies do not show that, I would expect that in four year's time we could be selling about 20,000 barrels to this market."

He told how West Germany imports about 7,000 barrels of a native Swedish cranberry and that these were a high-priced, specialty item. He said the price for a one pound can ran from 55 to 85 cents in American money. He said in Europe Eatmor canned sauce brought from 50 to 69 cents and Ocean Spray 7-ounce can 34 cents.



Edward Gelsthorpe, new executive head of Ocean Spray, was a guest speaker at the annual meeting of the Cape Cod Cranberry Growers Association. Seated at left is Mrs. Ruth Beaton, treasurer of the Association.

(Courier Photo)

He said the problem would be to obtain a mass market for American cranberries, at a lower price, to get them out of the luxury class and into ordinary markets for ordinary people to buy. He said it would have to be determined what would be the best form in which to ship cranberries overseas, as fresh, processed or in a dehydrated form perhaps (the idea of having cranberries processed in Europe is being researched).

He said the European housewife—the man almost never is doing the food shopping—buys in small quantities every day, not mass buying as in America, where there is much more home refrigeration. He said one answer might be in a can or jar of something like 7 ounces, instead of the pound which is now established here.

He said he felt certain countries should be concentrated upon and a “shot-gun” advertising - publicity campaign should not be used. He said he felt the United Kingdom and possibly Belgium offered the best

immediate potential. He said he would not advise efforts in France at the present time.

He said he felt sure a valuable market could be built up, and Europe is only a part of a possible world market for surplus cranberries.

Pres. Colley of the Cranberry Institute told of the assessment of 3½ cents per barrel to be levied against members for operating costs of the Institute this coming year, and pointed out that this cost, was not borne by all growers, but only those whose distributors were members of the over-all body although all growers were benefited by the Institute work. He told of the financial and other assistance being given to the cranberry industry by the USDA, particularly its Foreign Agricultural Service, in helping to develop markets for cranberries in the United Kingdom and Western Europe, eventually perhaps to be expanded to other foreign countries.

He said these berries could come from the “restricted,” or “set-aside” berry pool, and these berries could

thus be utilized in a worthwhile project rather than being merely unmarketed.

He told how, for the past ten months, every United States grower had been receiving Cranberries Magazine, through a subscription provided by the Institute and he hoped articles, pertaining to the foreign market being developed were being read. He said he hoped more growers would wish to take a more active part in the Institute and would want in some way to contribute to the costs involved.

Beaton further said that the “Continental Breakfast” is nothing like ours here, where we often have a more-or-less harty meal. In Europe it is merely coffee, rolls and a jam for the rolls. He said if this jam could be made American cranberries, the market might be large.

Olsson in his talk said he felt the cranberry order, the school lunch, if it is forthcoming this year, and a new executive head for Ocean Spray will make a big improvement in the cranberry marketing this coming season.

“Dick” Beattie, for a long time one of the Cranberry Station staff and now filling a top executive position at the University of Massachusetts in extension service, expressed his pleasure at being able to attend the meeting and brought official greetings from Dean Spielman. Those introduced, but not speaking included: Dr. Charles C. Doughty, head of Coastal Washington Experiment Station; Lou Webster, head of marketing division, Mass. Dept. of Agriculture; his associate Nathaniel Tilden; Barnstable County Agricultural director, Oscar Johnson, Don Marini, Plymouth County agricultural agent.

A chicken and cranberry barbecue was served at noon to 173.

Cranberry equipment included a Furford harvester from Washington State; a new granular spreader; a Dana-Getzinger water harvester from Dana Machine & Supply Co., Wisconsin Rapids, Wisconsin; a Samson clamshell shovel from Turgeon Equipment Company, North Dartmouth; a Oiva Hannula sand rig, Carlson Mfg. Co. wheeling-off rig; International loader; Darlington dry harvester; carry-off wagon, chain saw and irrigation equipment; Hayden Separator, harvesting bags, a helicopter from Aerial Sprayers, Inc., Marshfield; a Darlington picker, dry picker, with a special vacuum fan, designed to raise vines and result in less bruising of berries; a water reel made in Massachusetts, a ditch cleaner, an all-around bog vehicle, the latter five being designed as experimental equipment by Prof. John S. Norton of the engineering department of the Cranberry Station.



FRESH CRANBERRIES surround Arthur Godfrey at Ocean Spray Onset Screening Plant; left to right, William B. Stilwell, Ocean Spray Advertising Manager, "The Old Redhead," General Manager Edward Gelsthorpe and export division manager. (CRANBERRIES Photo)

Arthur Godfrey, To Promote Ocean Spray Fresh Cranberries Flies To Cape Cranberry Land And Finds "It's The Berries."

Famed Entertainment Figure Sees Fresh and Processed Cranberry Packing, Visits Bog, Picks Cranberries, Enjoys Cranberry Products Makes Quips and "Has a Ball"

Arthur Godfrey, longtime radio, TV and entertainment personality, flew into the cranberry picture Sept. 9, when he was guest of honor at a cranberry bog in Hyannis and later inspected the packing of fresh and processed cranberries at the Onset plant of Ocean Spray. Godfrey, an amateur pilot of renown, flew his own twin-engine high-powered Conair from New York to Barnstable Airport, was then taken to the Bay View bog of the A. D. Makepeace Company and then two helicopters flew Godfrey and group to Onset. At the conclusion Godfrey with his manager, C. Leo De'Orsey, flew back to Teterboro, New York.

Starting next month, Godfrey will promote the sale of fresh cranberries for the big advertising-publicity cam-

paign of Ocean Spray for 13 weeks on the program, "Arthur Godfrey Time" on 209 CBS stations.

At Hyannis, shortly before 3 p.m., Godfrey was taken from the Barnstable Airport to the Bay View bog, (in both Yarmouth and Hyannis, and owned by A. D. Makepeace Company), a property of 32 acres and recognized as one of the finest Cape cranberry bogs. Although now more than 100 years old. He was welcomed at Hyannis by Victor F. Adams, chairman of the Barnstable Board of Selectmen, cranberry grower and a director of Ocean Spray. Howard Marchant, Yarmouth selectman, Edward Gelsthorpe, executive general manager of Ocean Spray, Miss Betty Buchan, publicity director; and Gilbert T. Beaton, manager fresh fruit and export division of Ocean Spray.

Onset arrangements were handled by William B. Stilwell, advertising manager of the co-op., Mrs. Janet Taylor, head of home economics department and Mario Lince, processing plant manager, who had been at Ocean Spray for 35 years or since

the Onset plant was opened.

Host at the Bay View bog was Raymond Syrejala, who has been manager of the bog for many years and began work there when he was nine years old, his father before him being the owner and selling the bog to Makepeace. Also at the bog was Walter Chase, more than 80, who was hand picking cranberries there in 1895 and demonstrated how this, now all but extinct procedure was carried on in the old days.

There was both hand scooping and mechanical harvesting underway at the bog, and Godfrey tried his hand out at both methods. A very sizeable crowd had gathered at Hyannis to meet him.

Two helicopters, one from Wiggins Airways, Norwood, piloted by Jack Connelly and one from Copters, Unlimited, Warwick, R. I., piloted by Bill Barolet, then flew Godfrey, his manager, Gelsthorpe and Beaton to the Onset plant.

Godfrey was first shown the cranberry separators and women screen-



GODFREY is fascinated by the screening of fresh berries.

(CRANBERRIES Photo)

ers at work, his guide being "Gibby" Beaton. Godfrey, reddish of hair, freckled, perhaps a trifle shorter than might be guessed, but stocky and extremely active, seemed to take in all the process with much interest. He asked many questions, joked and posed for pictures with screeners and others.

His manager said, "Arthur is getting a real kick out of things like this. He is having a ball. He is a remarkable man, always maintains a fast pace, is never ruffled. Today he has not only given his show, but flown from New York and tonight will fly home to Teterboro and give his show again tomorrow."

Godfrey at one point ate a fresh cranberry and then, in the manner of "kidding" the product which he is sponsoring and which first brought him into national fame, said something like, "Good, good, not bitter at all. Eat 'em but don't swallow 'em, they are raw."

Other quick quips attributed to Godfrey during the day were, looking at a piece of can-filling machinery; "a most amazing machine. Automation is a blessing in a way, but in other ways its a pain in the neck, especially when you are waiting for an elevator on the top of a 25-story building." Also he added

"Rube Goldberg (the cartoonist) would have had a ball in here."

A youngster later asked him who Goldberg was and he replied "He invented automation."

After the tour of the fresh fruit department and a portion of the processing department, Godfrey obligingly posed for the general public, signed autographs and even on request, kissed a number of the girls and women. He shook hands with the men. Most of the plant had been closed down for an hour to give employees a chance to see Godfrey.

In the "Welcome Shop", Godfrey was hosted by Mrs. Taylor and others and ate heartily of a number of cranberry dishes. His repast included cranberry juice cocktail, this being served him in a reproduction of an old English "Yard Glass". That meant there was actually a yard of cranberry juice. The "Yard Glass" was developed in England in the 17th century and was often used by the barmaid at an inn, who handed the coachman a "yard of beer" so that he could remain on his seat and tend to his horses while he was refreshed. It was also used in various national and local celebrations. This particular glass was the gift of the Sheraton Hotel in Providence, where it is said a patron may actually buy a yard or a half yard of beer if he wishes.

Other cranberry dishes specially prepared were cranberry or ange marmalade, cranberry fruit bread, cranberry kitchen cookies.

In addition to the Godfrey and extensive magazine and newspaper promotion by Ocean Spray, Don McNeil on his "Breakfast Club" program over 317 ABC stations will "plug" cranberry products and McNeil is expected to be flown into the Wisconsin cranberry area from Chicago, to gain first-hand knowledge of the cranberry business.

Both men will concentrate on a \$10,000 fresh cranberry recipe contest, first prize to be \$2500 with 115 other cash awards.

A sign "Cape Cod and Ocean Spray Welcome Arthur Godfrey" was displayed at Hyannis, General Manager Gelsthorpe presented Godfrey with a cranberry scoop filled with cranberry products, to take home with him.

Serious remarks by Godfrey were, "I feel your cranberry enterprise down here is gitantic, enterprising and loaded with flavor," and on departing, declared, "I feel thoroughly imbued with the cranberry background, now I'll know what I am talking about."

Wisconsin Concern Sued For Alleged Order Violations

12 Criminal Counts, Civil Damages of \$32,292 South in U.S. District Court Against Cranberry Products, Inc. Defendant Goldsworthy To Fight Case

Cranberry Products, Inc., of Eagle River, Wisconsin, has been accused of violating the federal cranberry marketing order, and charges were filed in U.S. District Court at Madison, Wisconsin. A criminal complaint alleges 12 counts and a civil suit seeks an injunction to prevent further violations and asked damages of \$32,292.00, is the report.

The suit was filed by the U.S. Attorney Nathan Heffernan of Madison, and served on company officials at Eagle River. Suit alleges that Cranberry Products marketed 3,075 barrels of cranberries over the 1962 quota and at that time the market price was \$10.53, per barrel, thus bringing the suit total to the sum named.

The suit was served on Vernon Goldsworthy, president, Victor Radant, vice president, Ralph Sampson, treasurer and Howard Querry, secretary.

Charles Goldsworthy, sales representative of the Cranberry products Company and son of Vernon Goldsworthy is quoted as saying the marketing order, which ordered them to "confiscate," or set-aside 12 percent of their harvested and graded berries was improperly handled. He claimed that one large corporation controls close to 80 percent of the growers in the nation and that it wanted this restrictive marketing order, because it had a surplus of berries.

A 66% majority of cranberry growers was required to make the marketing order effective on the industry. The national vote of the cranberry growers was taken and on August 3 of last year, the USDA announced that the growers had approved such a cranberry marketing order and company marketing agreements had been signed by handlers and canners.

The report further said that the growers had voted by more than 70 percent both by number and volume in favor, the actual vote count being 700 for and 279 against.

Charles Goldsworthy was further quoted as saying, "We hope to get the marketing order thrown out and once again permit growers to market whatever berries they produce."

Vernon Goldsworthy as a defendant has further stated his attorney "feels we have an excellent chance in a court of having the Marketing Order thrown out because of its

monopolistic position, as one organization controls approximately 90 percent of the cranberries grown in the United States.

"Actually from the government report, as I see it, Ocean Spray did not dump anything in Washington, Oregon, and practically none in New Jersey and Wisconsin, but did dump in Massachusetts," Goldsworthy says. "We being an organization in Wisconsin did not have an Eastern supply of cranberries available to us because we (Cranberry Products) are not national, which certainly puts us to a decided disadvantage, and then we tried to buy cranberries from our competitor but they claimed they did not have any for sale." He added, "We are hoping the government marketing order on cranberries will be thrown out, as it is illegal.

Defending attorney is Calvin Burton of Eagle River.

Preliminary USDA Forecast

Third largest cranberry crop in history seems to be in the making according to the August 20 annual preliminary forecast of the USDA. Estimate is for a U. S. production of 1,317,600 barrels, which is 9 percent above the five year (1957-61) average. The current crop prospects were exceeded in production in 1960 and 1962.

Massachusetts is estimated as having 630,000 barrels, production last year being 779,000 so the forecast is down 20 percent for this state, but still above average. Estimate for Wisconsin is 428,000 which is up 19 percent over last year, when Wisconsin and a relatively low production of 380,000. New Jersey is estimated at 76,000; Washington State, 138,000 barrels, this state production only having exceeded this by its record of 1961 of 139,000 barrels. Oregon is given 43,000 also up, last year 28,000.

New Jersey is down 25 percent compared with last year, 102,000 and 18 percent below average. Oregon is 55 percent over last year. New Jersey suffered from drought conditions as also did Massachusetts, where an estimated 50,000 barrels were lost.

The total crop last year was 1,335,000 barrels.

The report said of Massachusetts that spring frosts damage was light, but winterkill affected some bogs. Hot, dry weather during July damaged the crop but hastened maturity. From August first, cooler weather and rains helped the crop.

In New Jersey, there was win-

terkill, spring frost damage and a poor set of berries. Dry summer weather limited sizing. Insect and disease were light. This is Wisconsin's third largest crop; the set and development of berries were good; there was little disease or weather damage.

Second largest crops were in prospect in both Washington and Oregon. In Washington vines had a heavy bloom and favorable weather during that period resulted in a good set. In Oregon growing conditions were excellent; the crop there being 55 percent larger than last year.

Study Process For Longer Fruit Life

The new heat process for fresh cranberries, as revealed at the meeting of the Cape Cod Cranberry Growers Association may offer a tremendous potential of aid to the fresh fruit cranberry market, it has been pointed out. It is hoped fresh cranberries in poly bags or window boxes can be given additional "shelf-life", to last during the entire fresh fruit selling season, in quality, or, that is, cranberries being taken off the "highly perishable" list of fruits.

A team of five researchers from the USDA, headed by Dr. Anderson and including Dr. Wilson Smith, developer of the process is to be in Massachusetts this fall, working in cooperation with the Cranberry Experiment Station, the University of Massachusetts and Ocean Spray. The latter will permit experiments to be carried on at its Onset plant.

This is a new process to help control certain fungus rots, which break down fruit in storage and shelf-life.

It has already been proven successful with peaches, sweet potatoes and sweet peppers. It is described as a hot water process in which cranberries will be dipped in water about 110-120 degrees then dried and cooled. Whether it can be adapted to cranberries, remains to be seen, and is the objective of the experiment.

HORTICULTURISTS VISIT MASS. STATION—BOGS

Officials of Mass. Cranberry Station in August were hosts to more than 50 visitors from throughout the United States and Canada on first day of a three day horticultural trip. The visitors were students, professors, and members of their family; the trip being sponsored by Department of Agriculture, in cooperation with the American Society operation with the University of Massachusetts and the American Society for Horticultural Science.



"BOB" GOTTSCHALK is shown watching as a load of cranberries is shipped out in a flatbed from his marsh. (Wisconsin Rapids Daily Tribune Photo)

Large Shipping Boxes Cut Cranberry Costs In Wisconsin

For the second season, the Gottschalk Cranberry Company of Route 3, Wisconsin Rapids, Wisconsin, is using flatbed trucks, hauling harvested cranberries in large boxes containing 800 pounds of fruit. Robert (Bob) A. Gottschalk has said that the use of these boxes, 42x48 inches, has cut the size of the crew needed to harvest and haul the crop away. Where he used to have three men, filling, tying and piling bags he now has the berries running from the sorter directly into the boxes.

Gottschalk is one of the Ocean Spray growers using this method. "Bob" Gottschalk, a progressive grower has been experimenting with the use of large boxes for several years. He has attempted storing berries from the dryer in large boxes before sorting but found they wouldn't keep the berries dry. However, he has not had that problem with the berries after they have been sorted. He has held berries in storage three

days without having them "wet up."

Shipping in the large boxes eliminates the backbreaking work of filling huge trailers with bags of cranberries. Loading the 45,000 pounds of berries on the truck is a simple procedure with one man operating a fork lift truck.

Ocean Spray also believes that the boxes also make the freezing process more economical for berries which are frozen. The flatbed truck with 48 boxes is unloaded in about half the time at the North Chicago plant.

Berries, it is reported, were frozen in the boxes in about two days, compared to a normal freezing time of 5 in bags. Ocean Spray last year purchased 6,000 of the collapsible boxes for use in shipping. The folding boxes eliminate the problem of shipping trucks filled with empty boxes to Chicago back to the Wisconsin growers.

Another feature of the boxes is that they are interlocking, making it eas-

ier to stack them. This is a big advantage in shipping on flatbed trucks, because the berries can't be stacked three high in sem-trailers.

These collapsible boxes were bought from Bigelow-Garvey Company in Chicago and were made in the company plant at Shawano, Wis.

Gottschalk Company harvest is wet with three Dana-Getsinger pickers and the berries are dried in a Dana revolving belt dryer. Gottschalk picks for both the fresh and processed market.

"Bob" Gottschalk purchased the Tim Foley marsh of 10 acres in 1939. It has now been rebuilt and expanded to 25 acres of Searls Jumbo with an average production of 200 barrels per acre. In 1957 Bob purchased the adjoining property of Ward Bros. which consisted of 23 acres, which is now in the process of being rebuilt and expanded with the Searls Jumbo variety and Ben Lear vines. When completed the bog will all be on one level.

Bob's grandfather, Rufus McFarland had a marsh on the north of the town of Cranmor which was destroyed by fire in 1893 and he then later established a marsh south of Nee-kooosa on the 14 mile creek, which was later abandoned because of the flooding of the Wisconsin river and also because it was too far from his other interests at Wisconsin Rapids.

Bob's father, A. F. Gottschalk, was a grocer in the Rapids for 47 years before retiring in 1955. Bob believes it was probably his delivering of groceries to different cranberry marshes that got him interested in cranberry growing. Through the elder Mr. Gottschalk has had no financial interest in the marshes, he does, along with Bob's mother, take an active interest in the growing and harvesting of each year's crop.

His two sons are also interested in cranberry growing. Jon will be a freshman at Oshkosh State College this fall, majoring in business. Greg will be a freshman at John Edwards High School this fall. Both are working with their father in developing the marshes.

Bob was graduated from Northwestern University School of Commerce at Evanston, Illinois in 1936. He worked for a short time for Commercial Credit Company in Chicago and for two years was field representative for General Motors Acceptance Corporation, working out of Green Bay, Wisconsin and for one year was payroll auditor for Paperboard Products Division of Consolidated Papers, Inc.

1962 CROP STATISTICS

The national average of cranberry production per acre shows almost steady increase. In 1962, barrels per acre, according to USDA Crop Reporting Service; New Jersey, 34.3; Massachusetts, 62.2; Wisconsin, 37.7; Washington (an off year), 49.1; Oregon, 52.7; United States, 61.7.

Acres harvested were 21,460; of the 1962 production, utilization was 520,999 barrels fresh sales; 660,800 processed.

Climatological Summary Mass. Cranberry Station

30-YEAR RECORD KEPT AT STATION IN EAST WAREHAM

An extremely interesting climatological summary of East Wareham has just been completed by Robt. E. Lautzembelser, Mass. State Climatologist, Weather Bureau, Boston, in cooperation with the Cape Cod Cranberry Growers' Association. East Wareham was selected as accurate weather records are kept at the Mass. Cranberry Experiment Station there. The summary covering two pages of small, closely set type, is presumably applicable to all this immediate area, at least in general.

The data is based primarily upon the 30 year's record, 1931-1960 kept at the cranberry station.

"Moderately warm summers, moderately cold winters and ample rainfall characterize the climate. Buzzards Bay and the Atlantic Ocean to the south frequently affect the weather. In summer the immediate coast line is most effectively and enjoyably moderated, while heat waves prevail further inland."

Summary says much day by day variation also occurs because this area is near favored paths of weather systems which bring in alternately warm and cold air. "Bog soil", especially with low heat conductivity, is prone to very low minima as it has little capacity to warm up cold air.

"Favorable summer temperatures are indicated by the relatively low extreme maxima. The highest temperature of record is only 100 degrees. The 95 degree mark occurs less than one year in three."

"About one winter in six has no zero weather, while one in ten has more than 10 days with minima of zero or lower. The most was 14 occurring in the winter of 1933-34. Normal winter average, based upon the three months, December-February is 30.0 degrees. Normal summer June-August is 68.3 degrees."

It reports the growing season for tender crops averages 160 days. The extreme dates for the last freeze in the spring are April 13 and May 30. The fall extremes are September 19 and October 24. There is an 185 day season between the average dates.

"There is no dry season, though the monthly, normal precipitation shows a moderate decrease in mid-summer. Normal totals for the four 3-month seasons are remarkably even. Seldom does a month receive less than 1.0 inches precipitation.

Months with 10 inches are also rare."

Mean or average rainfall is 46.85 inches. (The driest one year in ten will still have about 37.2 inches, or more than the normal for many agricultural areas elsewhere in the United States.) Mean snowfall is 27.0 inches. The principal snowfall season is December through March. Days with one inch or more of snow have varied from as few as 2 to 5 in a season, with an average of 3. Only about one season in ten has as much as 10 inches in one day. (March 3-5 1960 snowstorm brought a total of 18.9 inches).

"Snow cover does not remain on the ground all winter in this area. The average depth of the longest continuous snow cover of one inch or more is only 13 days. The average season maximum snow depth is 9 inches, occurring at an average date of February 8. The ground is bare much of the time in an average winter.

Glaze (ice) storms resulting from freezing precipitation occur on an average of once or twice a year, but reach important proportions only rarely. Hail may fall about once a year. Prevailing winds are from the southwest in the warmer part of the year and from the northwest in the colder part.

"In summary East Wareham's climate offers very comfortable summer temperature levels. Winters are not severely cold. Though free from harsh levels of heat or cold, this climate provides the frequent variation in day to day conditions which is thought to be stimulating to physical activities."

\$17 Berry Opening Price Same As 1962

FIRST BERRIES ARE SHIPPED

Ocean Spray, Sept. 9, shipped out Massachusetts Early Black cranberries this week at \$4.25 a quarter barrel or \$17.00 a barrel FOB shipping point. This is the same figure as last season for the early fruit.

Color, quality and size for the early-picked fruit is described as excellent, both by Ocean Spray and Independent shippers, the rains of August and the cool night of the latter part of the summer adding much to a crop which previously had not looked too good in quality. Fruit is said to have been faster-ripening and of better quality than in several seasons.

Among the very first shipments made were loads from Decas Bros. Wareham, these starting to go out September 6 to Chicago, Minneapolis, Kansas City and other mid-western points.

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Chloro IPC, a time-tested herbicide made by the Chemical Division of Pittsburgh Plate Glass Company, can now be used on dormant cranberries. This is good news to growers who need an economical way to control annual grasses (bent grass, annual blue grass, turkeyfoot grass) as well as such weeds as rushes, horsetail, velvet grass, loosestrife, tearthumb and certain others. Chloro IPC is applied while the plants are dormant. It is completely dissipated before the fruit ever appears, so there's no residue problem. Chloro IPC is among the least toxic of all commercial herbicides.

Thorough field testing of Chloro IPC on cranberry bogs in Massachusetts, Wisconsin and Washington has developed local experience and recom-

mendations suited to each area. PPG Chloro IPC is easy to apply in the form of 20% granules, 100 lb. to the acre during November or December after harvest. A repeat application in early spring before cranberry growth begins will give further control of annual weeds. Ask your experiment station personnel at the state university for local recommendations on use of PPG Chloro IPC. Write for more details and your local distributor's name to: Pittsburgh Plate Glass Company, Chemical Division, One Gateway Center, Pittsburgh 22, Pa.



chemicals

NOT A DULL YEAR

As this issue goes to press, the harvesting of the 1963 crop is underway, and it does appear beyond any doubt it will be one of the "big" ones, now, possibly a little bigger in Massachusetts than anticipated, perhaps a little smaller in Wisconsin. The marketing of this crop seems to be being approached with more confidence than in most recent years, and a spirit of better feeling was evidenced at, for instance, the annual meeting of the Cape Cod Cranberry Growers Association.

Edward Gelsthorpe, new executive manager of Ocean Spray, in making his first general public appearance, impressed the cranberry growers with his conviction that more cranberries can be sold in the present, fresh, juice and sauce forms with increasingly better returns to growers, and that cranberry products, not now existing will be found. This, benefitting, as he pointed out, not only Ocean Spray membership-growers, but all cranberry growers.

Ocean Spray, in cooperation with the progressive McCann-Erickson advertising agency has worked out what would appear to be a hard-hitting advertising promotion campaign, through the intensive use of radio, television, magazine, newspapers, and other channels which would bring the cranberry story home effectively to the mass consumer. One large independent handler told us his organization could sell, he was sure, all the fruit its members provided.

We feel sure that the plan of Cranberry Institute, providing it can obtain support of more cranberry growers, for a worthwhile export market is not a dream, but can be made an actuality, and this could utilize berries from the "set-aside" pool. Unlike American poultry in Western Europe cranberries would not be a competitive product with the European product.

Frost and drought damage to growing crops can probably never be entirely eliminated, but the present movement, particularly in Massachusetts and also Wisconsin toward the installation of sprinkler systems will tend to lessen this hazard. (We are also watching that "windmill frost protection experiment out in Wisconsin, with interest.)

The Wisconsin State Cranberry Growers' Association is apparently about to seek a

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Editor and Publisher

EDITH S. HALL—Associate Editor
Wareham, Massachusetts

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

New Jersey

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

State Marketing Order to obtain funds for more Wisconsin research and improved frost warning service. It is also working toward a mass hail damage insurance plan, and this protection can be either through a private company or Federal Crop Insurance.

A prominent and large Wisconsin grower, head of a distributing and processing concern, has been indicted for alleged violations of the cranberry marketing order. In his defense, it is understood, he will challenge the validity of the order, and this is his right in a free society. A U.S. court will decide the merits of the defense.

This is not a dull year in the cranberry world.

SERVING WISCONSIN

Ocean Spray Names Executive Assistant

Ocean Spray Cranberries, Inc. has announced the appointment on July 15 of John Calderwood Weld as Assistant to the Executive Vice President. Mr. Weld will be in charge of the administration of labor relations and personnel and will act as house counsel according to Executive Vice President Edward Gelsthorpe.

Weld received his AB degree in 1937 and his LLB in 1942 from Cornell. He formerly held executive positions with The Plastic Coating Corp. in Holyoke, Mass., Bestwall Gypsum Co. in Brunswick, Ga. and Sylvania Electric Products in Buffalo, New York. He practiced law

in Rochester, New York for some time and served with the National Labor Relations Board in Buffalo, N. Y. and Washington, D. C. He is a member of the Massachusetts, New York and Connecticut Bars.

Headquartered at Ocean Spray's executive offices in Hanson, Mass., Mr. Weld will make his new home in Duxbury, Mass. with Mrs. Weld, the former Alma Dailey, and their two children, John, Jr. and Jessica.

BANDON FESTIVAL PLANS COMPLETING

Plans for the 17th annual Cranberry Festival at Bandon, Oregon, September 20, 21, 22 were in high gear as this issue went to press. Jim Olson and Jack Dean have reported the large street signs are ready. A new barbecue pit is nearly

completed. The Bandon Chamber of Commerce is to be responsible for the coronation evening preparations.

A "firefall" is planned for the Saturday night celebration, and one point considered has been Table Rock, but there was a problem in getting the materials to the top and devising a safe descent for those manning the display.

Invitations have been sent out to all past festival queens to attend, invitations to marching groups have been issued, vintage auto clubs and bands are to participate.

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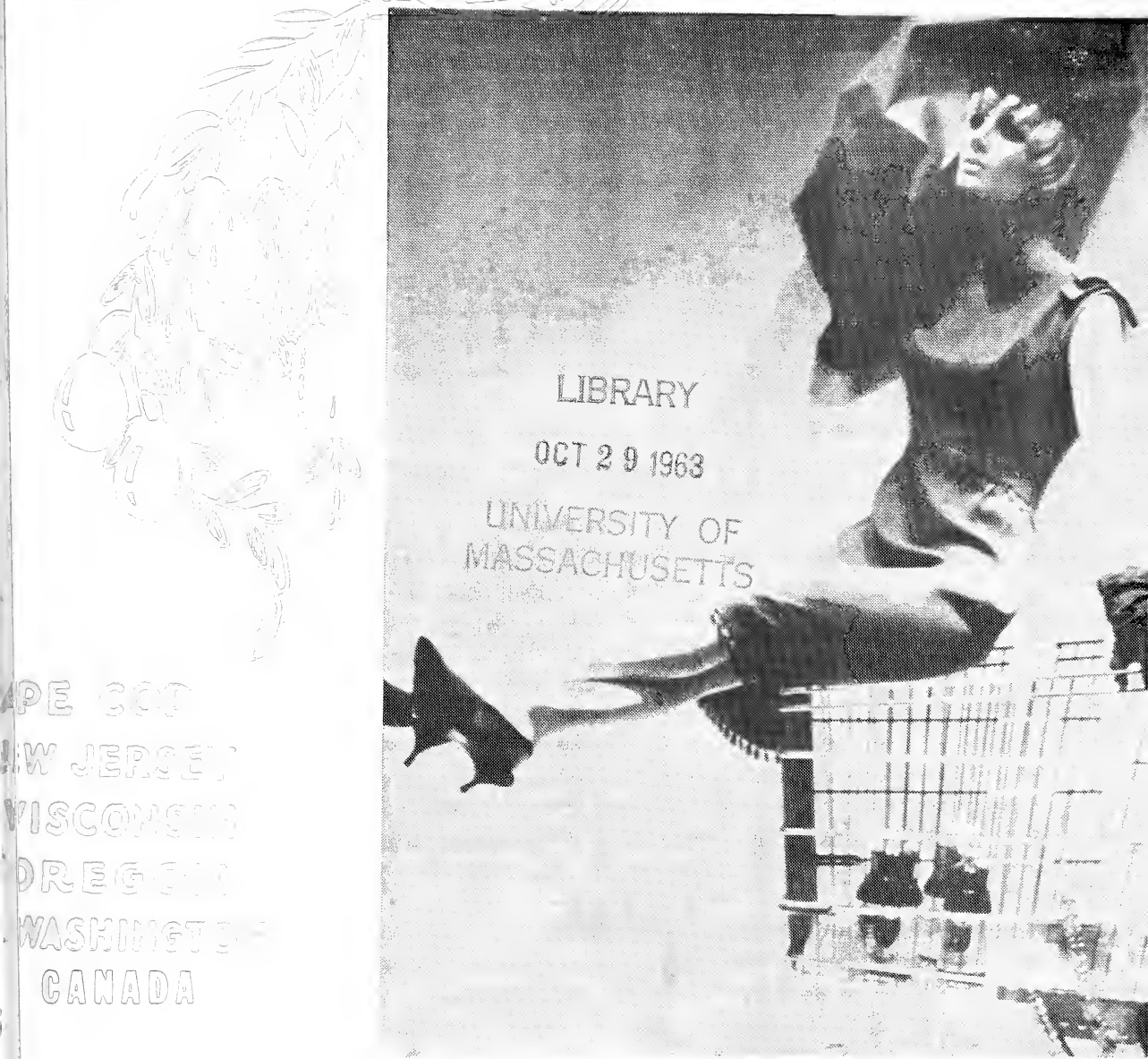
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Cranberries On USDA "Plentiful Foods" List

Cranberry Institute has notified handlers of cranberries that cranberries are included in the USDA October plentiful foods list. The USDA distributes this material to the public media—newspapers, magazines, radio and television, to distribution trade, institutional trade, etc. This service is of real value.

Cranberries are listed for all three meals on the "Menu of the Month;" breakfast, as apple, grape, cranberry medley; lunch, cranberry juice; dinner, fresh cranberry pie and with extra emphasis for week beginning October 27, broiler-fryers, cranberries.

USDA notes the foods listed are expected to be in plentiful supply, throughout the United States. Cran-

berries will also be on the list of plentiful foods for November.

The list includes suggestions to merchants to offer a preview in October to establish their stores as "cranberry headquarters" for the holiday meals ahead, to spot fresh cranberries in the poultry department to go with turkeys, broiler-fryers, in bakery departments to inspire cranberry muffins and other cranberry-based baked items.

Proclaims "National School Lunch Week"

FRESH CRANBERRIES TO BE INCLUDED AGAIN

A proclamation by President Kennedy to observe the week beginning October 13 as "National School Lunch Week," has been made. For the past two years fresh cran-

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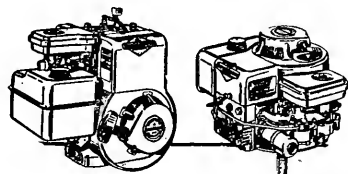
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berries, to the value of approximately \$2.6 million have been purchased by the United States Department of Agriculture for use in school lunches. This year, the USDA has informed Cranberry Institute, it will purchase an, as yet, another undetermined quantity of fresh cranberries from the 1963 crop.

A White House press release announces nutritious lunches will be served to some 16 million children daily under this program, which was introduced through Congressional act in 1946. The program serves one out of every three children in the United States.

Cumulatively, it is described as a \$1.25 billion food industry, serving

2.7 billion lunches a year. It has become the largest single food service in the nation, and is essentially a community effort, and is further described as an effective use of agricultural abundance and giving expanded markets for farmers, food industries and local businessmen.

The Federal Government contributes some cash and food to schools participating in the program, the Federal contribution amounting to about 20 percent of the total cost, the release states. Children's payments, which average about 27 cents a lunch, take care of about 60 percent of the cost. State and other local sources pay the remainder. It is estimated four-fifths of this food

is bought by the schools in their own local markets.

Lunchrooms are required to be operated on a non-profit basis, and that free or reduced-price lunches be provided for children determined by local school officials to be unable to pay the full price. Schools taking part follow a menu pattern set up by the USDA, based on nutrition research, and using this pattern, local school program managers plan their menus to include the proper quantities of protein-rich foods, fruits, and vegetables, bread, butter or margarine and milk.

USDA Buys 70,000 Bbls. Fresh Berries

The United States Department of Agriculture has decided to buy 70,000 barrels of fresh cranberries for the national school lunch program.

All handlers were invited to bid on the amount, in whole or part. Bid has been awarded to Ocean Spray Cranberries for the 70,000 at a price of \$13.80 a barrel. Last year the purchase was for nearly 100,000 barrels at a barrel price of \$13.20.

Berries are to be screened and packed in 25 pound cartons, and it is understood they will be berries from Massachusetts and Wisconsin. It is also understood there were one or two bids besides that of Ocean Spray.

This is a sale approaching a million dollars and reduces the fresh crop from the general market in the amount of 70,000 barrels.

Statement required by the Act of August 24, 1912, as amended by the acts of March 3, 1933, July 2, 1946 and June 11, 1960 (74 Stat. 208) showing the ownership, management, and circulation of

CRANBERRIES, The National Cranberry Magazine published monthly at Wareham, Massachusetts for October 1963.

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.

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.

Total No. Copies Printed (Net Press Run), average no. copies each issue during preceding 12 months, 2100; Single Issue nearest to filing date, 2200; paid circulation, average, by mail, carrier delivery or by other means, 1730; nearest issue, 1730; Sales through agents, new dealers or otherwise, average, 25, nearest issue, 25; Free distribution, by carrier delivery or other means, 35, nearest issue 35.

Commonwealth of Massachusetts — Plymouth, S.S. September 18, 1963

Personally appeared, Clarence J. F. Hall, and made oath that the statement subscribed him are true, before me.

BARTLETT E. CUSHING

Notary Public

My commission expires April 4, 1974

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Mass. Cranberry Station and Field Notes

by CHESTER E. CROSS
Director

Crop In Early

The Massachusetts cranberry harvest is nearly completed as this is being written (Oct. 16). This is a remarkably early date to speak in such fashion, for it was just a year ago that because there were still so many growers with unpicked bogs, the frost warning service was continued until Nov. 7 and several growers were turning to water-harvesting as a last resort to get the crop in. How is this accounted for?

A warm, sunny early summer gave us a fairly short, dry blooming period in which bee activity proceeded at top level day after day. August brought more than normal rainfall, and this was rather well distributed throughout the month. Coupled with this is an important point—on 22 days in August the temperature was subnormal, on 3

more it was normal, and on only 6 days did temperatures rise above normal. Both temperature and rainfall combined to ripen our crop early and well. By the 7th the harvest was under way.

As so often happens, picking was halted by rain on the morning of September 13 and could not be generally resumed until September 24! Measurable rain fell at the Cranberry Station on 15 days in Sept. and traces were noted on two others. All this only adds to the astonishing speed of harvest. There were only 9 or 10 picking days in Sept.

October, Warm, Dry Again

October is different again, with a return to dry summer weather. Only one-fifth of an inch of rain has fallen in the first 16 days and none is in sight. While every effort should be made to conserve our dwindling water supplies, it is my opinion bogs should not be allowed to get too dry right after harvest. Where water is plentiful, get the trash flood on and off; where you have them use your sprinkler systems to wet down the vines which have been mauled in harvesting.

Tooled To Harvest Fast

Finally, it appears that Massachusetts growers are "tooled up" to harvest their crop in 20-25 days. Current estimates indicate we have

picked our fourth-largest crop in history and it is my opinion it was picked in fewer days than in any previous harvest.

Bandon Holds 17th Cranberry Festival

The queen of the 17th annual Bandon (Oregon) Cranberry Festival is Donna Tucker. Blonde Donna was sponsored by the Lion's Club, and is the daughter of Mr. and Mrs. Howard Tucker. She succeeds Carole Cameron, queen of the 1962 festival.

Winners in the Festival parade were: school division, first, second and third grade Ocean Crest School float, "Shipping on the Coquille;" commercial division, Woodland Heights Shopping Center, first; civic division, Gamma Lambda Chapter, Myrtle Point, first; "kiddie" section first costume, Timphy Pruett, dressed as "Bandon Lighthouse;" vehicle division, first Stanley Albertson, riding his "Stanley Steamer;" pets division, Gary Ellis as Davy Crockett and his pet racoon.

There was a tie for the title of "Queen of the kitchen" between Mrs. Gene (Mary) Strain and Mrs. Kenneth (Beverly) Ingram. Ribbon win-

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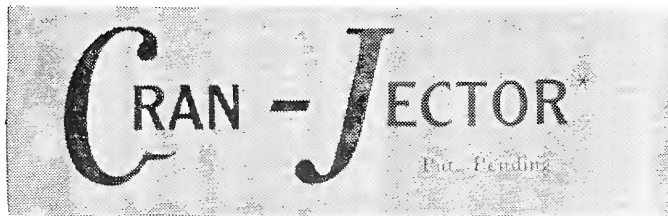
Note: New rates effective with October issue.

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ners in the Cranberry Fair included, Mrs. Mary Belle Shortridge, mixed fruit; canning, Mrs. Beverly Ingram, whole berries, served sauce, Mrs. Mary Strain; Jam, Mrs. Ingram, juice, Mrs. Nellie Anderson, decoration, Mary Strain; pie contest, Mrs. Jackie Wilson; junior, mixed fruit relish, Tamsin Hanna. Fresh berries were exhibited by William Panter and Jackie Wilson.

Madge Hickam of Riverton received the high point over all trophy with a total of 204 points at the show of the Bandon Broncs, local 4-H horse club.

The Bandon High School Tigers defeated the Toledo Boomers in the Cranberry Bowl game as part of the Festival by a score of 60-0.

The Festival theme was "Do You Remember," and first graders dressed as little Indians in a float won second place in the school division of the parade as "Little Wild Indians Ate Little Wild Cranberries."

The Mystery King of the Festival proved to be the Rev. Tim Dalrymple, pastor of the First Presbyterian Church. Mrs. Don Dodrill received the prize for having been the first to guess the identity of the "Mystery King," before he was unveiled.

"Cranberry Red" Sweeps The Nation This Fall

Cranberries and cranberry products are receiving unique promotion from the fashion world this season as department stores "hi-style" Cranberry Red for women, children and even men. Stores from Coast to Coast have lavish display windows, (17 in May Company, Hollywood, California.)

The displays feature women's apparel of all kinds in "Cranberry Red," and include accessories, such as handbags, in red, shoes, scarves, umbrellas, jewelry. To encourage the fashion-food affinity, Ocean Spray has provided display posters and products (as shown in the cover picture) to department stores and specialty shops, and has offered prizes to the most creative display, window and in-store.

As a special bonus, Ocean Spray will serve Cranberry Juice Cocktail free for a day to patrons of the prize winning stores. According to Miss Betty Buchan, publicity director of the cooperative, the deadline for photographs of the displays is November first. Prices will be awarded and the juice served during the holiday season.

This use of the color "Cranberry Red" goes way back to the days of the Indians, who colored rugs with the berry. Incidentally, any red seems to be called "Cranberry Red," even to that color in old glassware. We can only say this is "all grist to the cranberry mill."

Oregon Studies Rot In Storage

The Oregon State University Department of Botany and Plant Pathology is currently making tests to determine the effectiveness of certain chemical treatments for the prevention of rots in cranberries during storage. Coos County extension agent Fred Hagelstein reports that the work being done by Dr. Edward K. Vaughan should help determine whether various fungicides can aid in cutting down storage losses of dry picked and water harvested fruit grown under Oregon conditions.

Various dip and spray treatments including Harven, Verdan and several experimental materials are being included in the tests. These materials showed promise in Vaughan's preliminary trials conducted a year ago.

Besides determining the effectiveness of these materials to control storage rot breakdown, the trials will determine whether there are objectionable residues and also give indications concerning the economics of the various chemical treatments. Vaughan's trials will also incorporate laboratory tests to determine the influence of the chemicals on the rate of respiration of the fruit, a contributing factor to storage rot breakdown.

A grower advisory group in the Bandon area is assisting with certain phases of the trial and has expressed need for longer storage life of cranberries. Vaughan's preliminary data last year showed as high as 39% loss from storage rots after a two months storage period.

Plots for Vaughan's present trials were located on the Jack Dean and Jim Olsen bogs at Bandon. Each of the chemical treatments is being

(Continued on Page 20)

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Cranberries

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Late Sept., Rainy

September weather, from about the 16th on, was anything except favorable towards getting the cranberry crop off the vines. The weather was mostly rain, about a dozen days of this, plus a couple of other mornings when bogs were wet from having been sprinkled or flooded the night previous for frost.

Month Sees 40 % Off

However progress was made and where on the 16th it was estimated at least 25 percent of berries were harvested and the picking was progressing a little ahead of normal schedule, on the last day of the month the estimate of crop picked was 40-50 percent. These were mostly all Blacks or other early varieties, as Howes seldom have sufficient color to pick before October.

Crop Holding Up

Crop at that time was estimated as about holding up to estimate, with "previous little," if any over-run. Quality continued the best in several years.

Sept. Frost Loss, 2500 Bbls.

The first really heavy frosts took place the nights of the 23rd and 24th,

with the latter much more severe. This frost whitened uplands and turned foliage black, but neither frost was really a "killer." Forecasts were out for about 21.22.23 on those dates and on the first night only about 25 was generally reached. There was some cloud and some wind, particularly on the Cape. An estimate of the frost loss was made at State Bog of perhaps 2500 barrels, some of which can be salvaged as the berries touched were all Blacks.

A Very Cold September

September was a very cold month as a whole. It ended with a minus of 128 degrees (Boston) or more than four degrees a day for the 30-day period. There was practically none of the proverbial, beautiful "Indian Summer" weather. Month was put down in books of the Boston Weather Bureau as the coldest September

in 46 years. It was noted that for the past 15 months, the persistent trend has been towards colder weather, but, of course, with some months not following the pattern.

Rainfall Up

September was also a wetter than normal month, with precipitation, as measured at the State Bog, being 4.40 inches, average for September is 3.56. A good deal of this rain came in slashing, vicious storms, more reminiscent of winter storms than of fall.

Frost Oct. 1

First frost of the fall characterized as "rather dangerous," went out for the morning of October first the prediction being 21-22. Lows of at least 21 were reached, but the State Bog estimated there was no injury as most growers by that time had high spots and "cold holes," harvested. However, this was a long and very

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general frost, not spotty as had been the previous ones.

Weather then turned milder and more seasonable for the first part of October.

There was the warning for the first frost described as dangerous on the morning of October 5, with lows of 20-21 forecast. There were lows, as low as 17 at some locations, but there was often some wind and it was felt there was no real frost loss. For one thing, as the crop continued to be harvest, berries remaining could be flooded or sprinkled more easily.

Falling Off?

On about that same weekend came first indications that the Massachusetts crop might be fading a little. Some of the larger growers were running 10 percent over, while others were running the same under; with a number of smaller growers reporting a falling off.

Indian Summer

The second week in October brought real "Indian Summer," or more accurately a heat wave for three or four days, culminating in record-breaking temperatures of 80's and even to the 90's.

Mostly Picked By Oct. 15

Up to October 15th there had been very little rain—.2 inches as recorded at the State Bog to hamper harvest. As the result many growers, including most of the smaller ones had completed picking by the Columbus Day, October 12th holiday. Several of the larger operators, however still had some berries to get in.

Small Frost Loss

The month had been nearly normal in temperatures, (12 plus, Boston, Oct. 15) and frost loss was still being estimated by the cranberry Station at about only 2500 barrels this fall.

WISCONSIN

September About Normal

Temperatures were slightly above normal for September and rainfall continued below normal. The first half of the month was above normal and the last half below normal, in both precipitation and temperature. Frost warnings were issued the nights of the 4th, 13th, 20th, 21st and

22nd. Coldest was the 13th when readings in the teens were recorded in the north. A light hail storm hit northern Juneau County and west Monroe County on the 28th. The stones were small and round and in some areas were several inches deep. The Valley Corporation was hit by this hail storm marking the fourth time it was hurt by hail storms this year. Soil moisture is low throughout the state and ground water tables are very low in some areas, with no area up to normal. The outlook for October calls for temperatures to average 1 to 2 degrees above normal and precipitation to be near the seasonal average of 2 inches.

Crop Falling Off

Harvest begun in earnest the last week of September. Prior to that date a few marshes with short water supplies or severe hail damage had started. Early raking appeared to indicate the crop was going to be below estimate and this was borne out when raking was completed at months end on a number of smaller marshes. Small berry size and poor set in the center of sections was in evidence. Only the young early plantings or sand marshes were producing above average size berries, as a result of higher nighttime minimum temperatures and earlier start. Poor crops in the center of the beds indicated severe chilling of the hooks and blossoms the night of June 19th and the cool minimum temperatures during bloom in early July. Beds which were surface flooded during those periods appeared to have better set and larger berries.

350 - 375,000 Bbls.

Quality appears to be excellent due to rather dry conditions during bloom and immature berry development and lack of flooding during August. More marshes also used more fungicides this year, following last years very poor keeping quality year. At months end it appeared the Wisconsin crop would probably run between 350 to 375,000 barrels.

Would Have Been Second Biggest

The preliminary USDA forecast of 428,000 barrels would have been the second largest in Wisconsin. After blossoming in July, the berries "swelled up like balloons", and there

were plenty of blooms which could have meant plenty of berries.

No "Corn Weather"

Two reasons for the non-filing of early hopes are given by Dr. "Mac" Dana of the University of Wisconsin. First - there is a saying that "corn weather" is also cranberry weather, and Northern Wisconsin got little of this during August and September; and the berries didn't size, and second a lot of the blossoms simply did not set.

Some "Egg Beaters"

This fall several of the growers have adopted the so-called "Egg Beater" picking machine developed on the West Coast, just as New Jersey is now doing on a large scale.

WASHINGTON

Heavy Yield

Harvest got underway on the Peninsula bogs about October first and John Sacks, manager of the Long Beach Receiving Station estimated bogs were yielding heavily. Some bogs were yielding almost 250 barrels to the acre, Sacks reported. Last year was one of the poorest of recent years and the Long Beach district yielded only about 12,000 barrels.

The Ocean Spray plant at Markham was sending a considerable portion of the early-picked berries to fresh market.

Some Water Lack

September had been very moderate in precipitation, there being only 2.28 for the entire month and some growers were being handicapped in the wet harvest by lack of water.

Weather Improves

The current season started out as if it would be poor for berry growth; June had 19 days with some measurable precipitation; July had 14, August 11 days and September 12. Starting in July, the weather, according to Dr. Charles C. Doughty, director of the Coastal Washington Station, Long Beach, became more favorable.

Good Fall

September and October were good for growth and development of the berries. Maximum temperature for August was 75 degrees on Aug. 8 with a minimum of 40 on the 2nd. Minimum in the low forties were

(Continued on Page 17)

Washington Has Achieved Highest Production Per Acre To Date - Often Now Third In Total Cranberry Production

Most Fruit Processed, But Growers Hope to Increase Fresh Fruit—Sprinklers for Cranberry Bogs Apparently Developed There—Being the Third in a Series of West Coast Articles.

by
Clarence J. Hall

Cranberry growing in the State of Washington, "The Evergreen State," is confined mainly to two areas, both on the very coast of the Pacific. These are what are known as the Grayland and the Long Beach districts. There is a relatively new and small but growing development in North Beach, or Copalis, which is to the north of Grays Harbor and Grayland. This is often "lumped" as a part of the Grayland area. Unfortunately, I did not get to this district. The other main area is, of course, at Long Beach not far from the mouth of Columbia River, which separates Washington and Oregon. The Long Beach Peninsula, as I have stated in previous articles, is often called "The Cape Cod of the West," and there cranberry growing and the region are most similar to Massachusetts or New Jersey.

There is also one small bog, far away from all other areas, on the northern rim of the Olympic Peninsula, north of the mighty Alpine peaks of the Olympic National Park. This bog is near Clallam Bay on the Juan De Fuca Strait, across from the Canadian island of Vancouver. All other Washington bogs are on the Pacific. This Clallam Bay bog, I believe is the northern most bog in the U.S., north of the northern bogs of Wisconsin, such as those at Hayward, or Eagle River. Clallam Bay is nearly 49 north latitude and Eagle River is 46.

A Varied State

Washington State has been described as having more variety than any other place on earth. It has glaciers and many snow-capped mountains, sandy beaches and rocky seashore, strung along 1700 miles of deep indentations. It has mighty forests, plains. The Olympics with 6,000-7,000 feet Alpine peaks, the Alpine meadows with Alpine flowers, swamps and almost tropical growth in the dark and dank rain forests, to deserts and irrigated sections to wheatlands. It has the beautiful Cascades, 100 miles in width, with Mt. Ranier, near Tacoma, comparable to Fuji in Japan, in lonely spectacularness about 14,000 feet into the clouds.

Yearly Rain Heavy

Average rainfall in the U.S. is about 29 inches, the rainiest state is Louisiana, with about 55 inches, but the greatest local average rainfall is at Wynoochee, Oxbow in the Olympics, just to the north of Grayland, with 150.75 inches. The Washington cranberry growers get much rain during the fall, winter and spring months, about nine months of the year, yet during the summers they are plagued by dryness, and

droughts. Growers who have the sprinkler systems, sprinkle frequently for irrigation and also during the "beats" of the summer months. Nearly 8 feet of rain fell at Long Beach in 1961 as measured at Cranguma cranberry bog, the total measuring 91.23 inches. However, many who live there have called this region, where the cranberries are grown, "God's own Country." I did not meet a grower who wished he lived elsewhere.

Washington is relatively new as a state; on November 11 1889 the area was formally granted statehood. The pioneers who settled Washington, were (obviously) of sturdy stock, many who came to the Pacific Northwest being Scandinavian; they came principally for sea-faring, fishing, mining, lumbering, and Scandinavian names are prominent today among the cranberry growers, especially at Grayland. These West Coast growers are still of sturdy spirit and willingness to engage in the hardest physical labor.

Still "Pioneer" Country

Washington is still "pioneer" country, despite the modernness of the great cities, and of the extremely modern homes of many of the grow-

ers, usually at bogsides, and countless other modern structures.

A Bit of History

There seems to be an interesting link between two of the early explorers of Washington and the N. E. cranberry area. In 1787 Captain John Kendrick, a native of Harwich, Mass. born in 1740, left Boston in command of the ship "Columbia Rediva" and the sloop "Lady Washington," with Capt. Robert Gray, born in Tiverton, Rhode Island in command of the latter. The ships, owned by Boston merchants were to procure by trade otter skins and invest these in China goods. Captain Kendrick was a member of the Cape Cod Kendrick family later engaging in cranberry growing up to the present and for a time he lived in Wareham, and his ancient house there is historically marked.

Kendrick was an American navigator and trader, one of the Cape skippers who went to sea as a youth and during the Revolution he sailed as a privateer. Making the voyage with the two ships around the Horn, the voyage took him first to Nootka Sound, where he transferred the Columbia to his assistant Gray, then where he engaged in trade and to China, via the Hawaiian Islands (Sandwich Islands), returning to North America in 1791 he visited Japan on the way, being one of the first Americans to do so. He again crossed the Pacific in 1793 and re-visiting the Sandwich Islands was killed. (The Encyclopedia Americana, 1962).

Captain Gray sailed with sea otter skins to Canton, China the only port open, changed the fur for tea and returned to Boston in 1790 and was the first American to carry the new U.S. flag around the World. He sailed south entered the Columbia river and sailed some miles upstream, and is said to have been the first navigator to cross the breakers guarding the river mouth. (Same Source.)

The Columbia River, formerly called the Oregon and next to the Yukon, the longest stream in the Western Hemisphere, 1,270 miles in length. Gray named the river, The Columbia, in honor of his ship, the "Columbia."

Grays Harbor, with the cities of Aberdeen and Hoquiam at its head, Grays Harbor County, where cranberries are grown and Grayland,

itself seem to be named in honor of Captain Gray.

(As this portion has no great bearing on cranberry growing in Washington, although some interesting aspects, it will be concluded here, but an interpretation of the Kendrick-Gray explorations appears at the conclusion of this article, this being compiled by Mrs. Aloha Gustafson, secretary at the Long Beach experiment station.)

State Second in Barrels Per Acre

Washington, as has been stated in previous articles has become often in recent years, the second state in production of barrels of cranberries per acre. Here are some average productions: 1956, 68.1; 1957, 88.4; 1958, 63.7; 1959, 105.0; 1960, only, 40.7. But in 1961, Washington achieved the highest production ever of any state to date, 126.4; a figure which it seems at present writing will be almost equalled this year.

Nearly Third in Production

Washington is now fourth in total production, but only by a very slight margin next to New Jersey, and sometimes in most recent years, third.

Acreage Increased Slowly

Of growers in the state today the number is compiled by Dr. Charles C. Doughty, director of the Coastal Washington Experiment Station at Long Beach, as 186; 22 of these are in the Long Beach area; 134 at Grayland and 20 at North Beach. Practically every grower is today a grower-member of Ocean Spray. Most processing is done at the Ocean Spray plant at Markham, most of the growers do their own screening, largely unlike those of Massachusetts and New Jersey.

The average acreage harvested in the decade 1951-60 (USDA figure) was 870. In 1962 there were 1,100 acres harvested, showing that state acreage has been increased in the past dozen years. Figures from the Long Beach Station show that Pacific County, which takes in the Long Beach and also about half of Grayland has 820 acres while Grays Harbor county which takes in the rest of Grayland and North Beach has 280 acres. Actually the area known as the "Long Beach district" alone has perhaps about 400 acres.

35-40% Long Beach

Dr. Doughty estimates that about 35 to 40 percent of the Washington crop is grown in the so-called Long Beach region, and this would not include the part of Grayland which is in Grays Harbor county. An estimate is also made for the year 1961, the "big" Washington production per acre yield, that the Long Beach region produced about 175 barrels per acre and in the poor year of 1962 about 75 barrels to the acre. Dr. Chandler (1956) found that in the years 1954 and 1955, Long Beach produced 46.5 and 33, while Grayland produced 66.7 and 54.5.

No fresh berries are now shipped from the Long Beach district, although it is said some of this fruit could be held for fresh market if the handling facilities were present. Several of the Long Beach district growers have dry mechanical pickers.

Ocean Spray rents a small freezer at Long Beach which is managed by John Sachs, a grower. However, this is not designed to hold all the Long Beach crop, and is mainly a receiving station.

45% Of Grayland Crop Fresh

An estimate from Ocean Spray at Markham, is that approximately 45 percent of the Grayland berries go on the fresh market, none from Long Beach.

The approximate average production per bog is also given at Ocean Spray by Mrs. Irene Hollingsworth, secretary, as 350 barrels at Grayland and 714 at Long Beach, indicating that Long Beach holdings are generally larger than those at Grayland.

The average size of holdings in the Long Beach area is about three times greater at Long Beach than in Grayland (F. B. Chandler Survey, 1956) and this seems to be about true today although many Grayland growers in particular are now consolidating acreage and a number have larger holdings than in 1956. There is a similar trend at Long Beach.

I was told there is not much storage rot as berries are taken to the cooler at Markham as soon as they are screened. But this is one of the problems being worked upon at the present time. It is reported that fresh berries in storage have lost between

15 to 25 percent for the Christmas market. Dr. Doughty says that tests during the past two years indicate this is not due to rot caused by fungi, but due mainly to a physiological breakdown of the berries themselves. Washington, and in fact all West Coast growers have been very conscientious in using fungicides.

Controls

For disease, insect control and for weeds growers use ground rigs, some on track, some more conventional such as Hardie Sprayers, or insecticide is applied through the sprinkler systems. Twig blight is perhaps the most troublesome, but this has been greatly overcome through research and control methods developed by Drs. Doughty and Johnson of the University of Washington. Maneb, Zineb, Captan and Ferbam are used, all wettable powder. After harvest Bordeaux mixture is used for Red Leaf and Rose Bloom.

For fireworm, fruitworm and Lecanium scale materials include Sevin, Parathion, Malathion, Slugs are something of a problem in Washington. For a control mataldehyde bait is used. Field mice are partially controlled by a border application of endrin. Toxaphene is applied to bogs as a spray following harvest to aid in mouse control.

In root weevil and grub control dieldrin is used before planting; for established plantings aldrin is applied.

Material cleared for weed control on commercial bogs include, according to Doughty, 2, 4-D granular, Chloro-IPC granular, Simazine granules or wettable powder, IPC wettable powder or granules, Dalapon, iron sulfate, copper sulfate and petroleum paint thinner or white kerosene. These materials are all, except for iron sulfate, copper sulfate and paint thinner, applied as sprays pre-emergence to the weed growth while the cranberry vines are still dormant. Newer materials, such as Casoron and several others are under test, but not cleared for general use as yet.

Washington Developed Cranberry Sprinkler

Washington, with the "pioneering" spirit of the researchers and the growers has made at least one very valuation contribution to the whole

Chandler in 1956 interviewed 237 growers, which would indicate that the number of growers in the state has declined slightly as has the number in about all cranberry areas, and the number of workers in all agriculture in the U. S.

Further installments of the "West Coast Cranberry Story" will continue in future issues.

Two vessels left Boston Sept. 30, 1787. Their object was to procure by trade, sea otter skins and invest these in China goods. They were heavily armed carried special papers issued by the Continental congress and a cargo of goods ill-fitted for Northwest Trade. The command of the 220 ton "Columbia Rediviva" was Capt. John Kendrick who had spent 47 years at sea. "The paltry two-penny objects of his expedition were swallowed up in the magnitude of his Gulliverian views. N.E. America was on the Lilliputian but he designed N.W. America to be on the Brodignagian Scale" (quotations here are from log kept by his clerk John Howell). It would appear that he was intemperate in habit and disposition, a poor trader, and a man not to be trusted with other people's property. His activities in the Nootka Sound area were composed mostly of double dealings. He was befriended by Marineland who provisioned their ships (Kendrick's and Gray's) as he wrote later to get them away from the area. These provisions were from stocks of captured English ships.

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ALL GROWERS



Above is shown a water-reel harvest at the Washington State Bog at Long Beach. Type of harvester is one of earlier ones, no longer in general use, but one of the first so-called "egg-beaters," which are now in use on the West Coast, to a large extent in New Jersey the past couple of years and being used in a few cases in Wisconsin, and have also been used experimentally in Massachusetts. (Photo courtesy of Washington State University, Coastal Washington Experiment Station.)

SPRINKLER FROST PROTECTION

by

John "Stan" Norton

Associate Professor of Agricultural Engineering
Cranberry Station, University of Massachusetts

(Editor's Note: The following is a talk given by Prof. Norton at the Massachusetts Cranberry Club meetings upon cranberry sprinkler systems in which growers are now much interested.)

With the growing interest in sprinkler frost protection it seems appropriate to discuss the subject before this group. Experiment Station Bulletin No. 532, "Design of Minimum Gallonage Sprinkler Systems for Cranberry Bogs," presents the story in somewhat general terms. I will elaborate on some specific items that should be emphasized.

First, we'll discuss the use of the system, then we will concentrate on some of the design problems.

Uses

These systems are designed primarily for frost protection. Sprinkler spacings are based on operation during periods of calm only. Coverage would not be adequate when operating under windy conditions. However, it is this very feature of using a minimum of equipment to provide protection that has made the large scale installations of irrigation systems feasible. To get proper coverage when irrigating or applying spray materials it is advisable to operate the system when the air is calm.

In order to realize the greatest benefit from your irrigation system it is necessary to use it properly. Naturally, the first bogs on which to install irrigation systems are the dry ones. A two-fold benefit that should pay for the system quickly can be experienced here. First, frost protection that had never been available would be provided. And secondly, production should be increased by the application of water during periods of drought.

When using a sprinkler system for frost protection there seems to be a tendency to risk loss to frost by waiting too long before starting the system. This is especially true when the approach of a strong cold front is accompanied by fairly high winds, as was the case on May 30, 1961. Under these conditions it is not unreasonable to expect temperatures to be 10 or 15 degrees lower on well sheltered areas of a bog than they are on more exposed areas. Therefore, if the thermometer is not located on the most sheltered area, that area may be frosted long before the thermometer reaches the danger point. So, when severe frosts,

preceded by strong winds, are forecast it would seem advisable to put the thermometer on the area of the bog most sheltered from the wind, at least for that particular night.

To be further assured of timely protection, it would be advisable to start sprinkling when the temperature is still a couple degrees above the danger point. Wetting the bog for two or three hours in the afternoon or evening before an imminent frost will provide a measure of protection, in case there are naturally colder areas that may accidentally reach the danger level when the remainder of the bog does not.

Designing A System

There has been considerable interest among the people currently planning new systems, in getting a little background information on the main factors that control the design of an irrigation system.

The basic design that we have been using is a 55' x 65' spacing with a triangular arrangement of the heads. The triangular arrangement gives more complete and uniform coverage than a square or rectangular arrangement. The standard head is a rather small, single nozzle one, with about four gallons per minute capacity at 30-35 psi (pounds per square inch) pressure when using a 5/32" nozzle. The 55' x 65' spacing is based on maximum recommendations by sprinkler manufacturers. With the equilateral triangular arrangement they allow, under no-wind operation, a spacing of 75% of the diameter the heads can cover.

Spacings greater than the one given above may be used for heads with a coverage of over 90' diameter.

Some growers have elected to use larger heads to cut down on the number required. And, although they may require more water per head, the requirement per acre may be less than for smaller heads.

An average water application rate of 50 gallons per minute per acre or 1/10-inch an hour is presently recommended for frost protection. Using this water requirement and the number of acres to be covered, it is simple to get an estimate of the pump requirements. However, in order to get the exact water requirement it is necessary to carefully lay out the plan on an accurate map of the bog. This is the only way to determine the amount of pipe, fittings and heads required for the job. The number of heads required, times the gallons per minute per head will give the actual water requirements.

Determining The Pipe Sizes

After the lay-out has been completed it is necessary to determine the pipe sizes. This is a fairly simple but time consuming process. If all the laterals are the same length, only one calculation needs to be made for the lateral size. As you probably know, part of the pressure at the pump is wasted as friction as the water flows along the length of the pipe before it is discharged into open air. This pressure loss varies approximately as the square of the velocity of the water. In other words, if the amount of water being pumped through a given size pipe is doubled, the friction loss increases four times.

The maximum friction loss ordinarily allowed in the laterals is 20% of the average operating pressure of the heads. If the average operating pressure on a lateral is 33 psi, then the allowable loss from one end of the lateral to the other is 6.6 psi. This allowable loss determines the lateral size. To determine the lateral loss it is necessary to estimate the size lateral that will be needed. Then find on a chart or table the loss between successive heads for the amount of water flowing through that section. The combined total of those losses gives the lateral loss. If this figure is greater than the allowable loss the process should be repeated for the next size larger

pipe, etc. If it is considerably smaller may be possible to use a smaller size pipe.

Although large mains cost more than smaller ones, some figure must be established for permissible friction loss in the main between the first and last laterals. A figure that seems reasonable to me is 6 psi or less.

The friction loss in the main is found in the same manner as it is in the laterals. Here, too, a trial pipe size is assumed; although the main often consists of two or more different sizes of pipe. It is permissible to start at either end of the main to make your determinations. I prefer to start at the last lateral and work toward the pump. Here we determine the amount of water flowing between the next to the last lateral and the last one by the number of heads being supplied. The friction loss is given in the table or chart in either feet of head or psi per 100 feet of pipe. Therefore we have the loss per 100 feet times the distance divided by 100, which equals the loss in that section of main. The next section will be figured for the volume flowing to supply the last lateral and the next to last one. If both laterals have the same numbers of heads the volume in the second section will be double that in the first section, and the friction loss will be about four times as great. The process is continued for each section of main until the pump is reached. If the loss in the main exceeds 6 psi or 13.8 feet, a larger size pipe must be used for part or all of the main and the friction loss re-figured. If it is less than 6 psi, a smaller size pipe might be satisfactory.

In order to realize the economic advantages of the low gallonage system on large areas it is necessary to compromise some of the standard recommendations of irrigation designers. It is obvious that the pressure at the sprinkler nearest the pump will not be the same as in those near the main line but 1000 feet from the pump. Theoretically this difference should be compensated for in order to get uniform distribution.

Part of the difference can be compensated for by limiting the

lateral loss to less than 20%. However, this would result in larger more costly laterals. The difference could also be kept down by using large mains. This also increases costs. A third method of compensating is to use smaller nozzles on the heads near the pump. This should only be done when the pressure difference between the head to receive the smaller nozzle and the most remote head exceeds 10 psi.

The 6.6 psi lateral loss in our hypothetical case and the 6 psi loss in the main produce a 12.6 psi friction loss in the system between the beginning of the lateral nearest the pump and the end of the one farthest from the pump. The 12.6 psi is added to the pressure desired at the most remote head, say 28 psi, making a total of 40.6 psi. To the 40.6 psi must be added any friction loss or elevation difference occurring between the pump and the first lateral, plus the suction lift from the water source to the pump.

Since we have two different measurements involved in determining the pump pressure requirements, that is psi and feet of lift or elevation, they must be converted to a common term. This term may be either psi or feet of head. Pump performance curves are often given in feet of head. This means, the height to which a pump could force a given volume of water under the specified conditions. If the height were increased the volume would be decreased.

There are 2.31 feet of head to one psi. That is, a column of water one-inch square and 2.31 feet high would weigh one pound. So the pressure at the bottom of the column would be one pound per square inch. Therefore, any time it is necessary to convert psi to feet or head you multiply by 2.31. Or if you want to convert feet of head to psi you divide by 2.31.

To continue the example, let's assume that the pump is located 300 feet from the bog at a point 10 feet below the level of the heads. We shall further assume a 10-foot lift from the reservoir to the pump. If we are irrigating a four-acre bog the water requirement will be about 200 gallons per minute. The friction loss in a 4-

inch aluminum pipe would be 2.78 feet per 100 feet of pipe, or 8.34 feet in 300 feet. This loss would not be excessive. Furthermore, it would not contribute to any difference in pressure between the heads because it occurs ahead of the first lateral.

We have now considered all of the important factors effecting the pump pressure requirement. They are: 1, minimum operating pressure of the heads of 28 psi; 2, allowable friction loss in the lateral of 6.6 psi; 3, allowable friction loss in the main of 6 psi; 4, friction loss in main from pump to first lateral of 8.34 feet; 5, elevation head between pump and bog of 10 feet; and 6, suction lift at the pump of 10 feet. These various requirements must now be converted to a common term to establish the pump specifications. Combining the figures given in psi we have 40.2 psi, which when multiplied by 2.31 is 93 feet of head. To this we add the 8.34', 10.0' and 10.0' that occur between the pond and the first lateral and we get a total dynamic head of 121.34 feet. This would also convert to $121.34' \div 2.31 = 52.6$ psi.

These figures mean that the pump must be able to deliver 200 gallons of water a minute against 121.34 feet of head or 52.6 psi pressure.

I hope that this presentation has cleared up some of your questions and that you better understand why I say each layout on a cranberry bog is a custom job that must be figured individually.

Courses Offered On Pesticide Use

Notices have been sent out from Massachusetts County Extension Offices concerning courses on general mosquito control, advanced mosquito control and the safe use of pesticides, at the University of Massachusetts, Amherst, October 21, 22 and 23 and at the Waltham Field Station, Waltham, October 28, 29, 30 and 31. Co-sponsors of the course are the United States Public Health Service, U. of Mass., and the Massachusetts Department of Public Health.

An announcement states that the licensing of all pesticide users will be required in the Commonwealth of Massachusetts in the near future. The courses are designed to aid in preparing those engaged in the use of pesticides for examination leading to licensing.

Killing Weed Trees Around Cranberry Bogs

(Talk Given by Carl B. Cranmer, Asst. Chief, Forest Management Section, N. J. Bureau of Forestry, at the Annual Summer Meeting of the A.C.G.A.)

New Jersey cranberry and blueberry growers are often plagued with volunteer red maple trees along dams, ditches and even in producing areas. Periodic mowing provides temporary relief but does not eliminate the problem as Hydra-headed sprouts grow vigorously from the well established root systems. (Table 1.) Larger nearby trees produce seed to increase the infestation.

In recent years foresters have been recommending the use of tree injectors to control cull and weed trees in woodlands. This tool consists of a cutting bit attached to a cylindrical tube which serves as a handle and a reservoir for the herbicides. A valve arrangement permits the application of the chemical solution directly into each cut.

In mid-April, just as the maple buds were beginning to show color, Stephen V. Lee of Lee Brothers Inc., near Chatsworth, Burlington County, New Jersey, again tested "The Hot Iron of Hercules," a light-weight easy tree injector, on red maple and other tree species in the vicinity of their cranberry and blueberry operations at Speedwell.

Using Trinoxol, a non-toxic hormone type herbicide containing 245-T, mixed in No. 2 fuel oil in the propor-

tion of 1.9 for 40 lbs. of active per hundred gallons, nearly 1½ miles of dams and ditches were gone over to kill stems, sprouts, and roots of tree species. A smaller test was made using the same material but at twice the concentration or 80 lbs. ahg. Less than 3 gallons of solution was used. This was applied by one man in about two days.

Results soon became apparent. (Table 2.) The leaves on stems ranging from less than ½" at breast height to those with a diameter of about 3" withered and died. Larger trees, up to 10" DBH, while they did leaf out, showed signs of leaf deformation, but complete top kill may require a year or two longer. By late August sprouting was negligible. Maple flowers wilted and none of the treated trees bore seeds at the end of seven weeks. The 40 lb. concentration in this test appeared as effective as the 80 lb. Few signs of new sprouts were observed and there was nearly a 100% kill of all stems less than 3 inches. All willow, black gum, sassafras and grey birch, nearly all less than 2" DBH, were dead. No new sprouts were observed on these species.

The application consisted of a single cran-jector stroke for stems one inch or less in diameter at point of application. Two strokes on opposite sides for stems from one to two inches. Stems larger than 3" were completely girdled. Cuts were kept conveniently close to the ground.

About 1½ milliliters of solution were used per cut.

Mr. Lee's first use of the injector began in October of 1960 to deaden large, up to 14" DBH, seed producing maples near his cultivated areas. In April of 1962 he used it again to kill maples from areas later cleared for cultivation. This spring's application eliminated many sapling sized trees from dams and ditches. In August of this year he continued to use the injector to rogue maples from blueberry rows. Previously these maples were cut back during pruning operations, only to sprout with increased vigor.

Figuring that an ounce of prevention is worth a pound of cure, Mr. Lee's cran-jector program has practically eliminated his weed tree problem. This program is planned to include young stands of southern white-cedar.

Jersey Growers Discuss Land Assessment

That and Farm Labor Main Topics at Annual Meeting

The annual summer meeting of the American Cranberry Growers' Association, held at the Sweetwater Casino at Batsto, was well attended. The main topics of discussion were the farm problem and the farm labor situation. These are both increasing problems for New Jersey cranberry growers.

The farm tax situation will be somewhat eased for growers if the proposed Farm Land Assessment Amendment, which would have farm land taxed on the basis of production rather than real estate values, is put through. Edwin A. Gauntt, secretary-treasurer of the Citizens Committee to Save Open Space in New Jersey, spoke on the efforts of this group to educate city people on the necessity for putting this referendum through on the next election date. The Association voted unanimously to raise \$200 through individual solicitation to help the Citizens Committee in this work.

Fred Watts, Chief of Farm Placement, New Jersey Department of Labor and Industry, spoke of the

Table 1. Hydra-headed Red Maple Number of Stems per Clump				
DBH	1	2-5	6-9	10*
	percent			
1" or less	9	42	20	29*
2-10"	31	50	6	13*

* Two of these clumps had 28 or more individual stems.

Table 2. Injector Results on Red Maple 7 Weeks after April Treatment				
DBH	Stems Killed	Crown Reduction percent	New Sprouts	Number in Sample
½" or less	98	99	1	305
1	98	99	0	40
2	100	100	0	3
3	69(1)	95	0	13
4-10"	30	58	0	10

(1) Most of these were completely dead when observed in late August.

efforts of his department, during the last four or five years, to recruit and better utilize local labor. He described courses given to train workers for jobs and estimated that in the past two years the quality of the worker had increased 15 to 20%. In surveying the cranberry situation he said he had been assured that foreign workers would not be needed.

"Tiny" Cranmer, well-known forster, spoke on killing weed trees around cranberry bogs. He described and demonstrated a tool which he has invented (Cran-Jector) for killing weed trees.

Assistant To Betty Buchan

Miss Margaret G. Clark of 177 Indian Head Street, Hanson, has joined the staff of Ocean Spray Cranberries, Inc., Hanson, as assistant to Miss Betty Buchan, publicity manager.

Miss Clark has been assistant to the society editor of the Brockton Enterprise for the past three years. She was publicity director of the Children's Museum, Boston, for six years and for Wheaton College, Norton, for five years. Her previous newspaper positions were with the Boston Evening Transcript and in the women's department of the Boston Herald-Traveler. She has also been publicity assistant at the New England Council, Boston, and Dartmouth College, Hanover, N.H.

She is a graduate of the College of Liberal Arts, Boston University and is a member of the New England Press Women's Association, the Anti-quarian Society, Plymouth, the Museum of Fine Arts, Boston, and the Congregational Church of Hanson.

Miss Clark is the daughter of Mrs. George E. Clark of Hanson and the late Mr. Clark who was manager of the Sea Cliff Inn, Nantucket, the Bryant Hotel, Brockton, the Taunton Inn, Taunton, and the Hotel Lenox and the former Westminster Hotel, of Boston.

READ CRANBERRIES

THE CRANBERRY

The cranberry is a part of Vacciniaceae family,
And the Oxycoccus genus according to taxonomy.
The macrocarpus specie comes from the U.S.A.,
And also known to come from Canada across the way.
Long known to the Indians as a fruit so good to eat,
The Pilgrims too considered it a palatable treat.
Its cultivation started on the shores of Old Cape Cod,
Then New Jersey, Wisconsin, Oregon, and Washington gave the nod.
From the native habitat men carried it far and near,
And gave it names like Beaver, Bell, Berlin, and even Ben Lear.
From the sunny Pacific Shores to the rocky New England Coast,
And even in cold Canadian Lands 'tis considered "just the most."
To Early Black and Howes, "The Cape" and Jersey are prone,
Searles in Wisconsin, McFarlin in Pacific States are grown.
False blossom, field and storage rots plague the industry,
So breeders seek varieties low in susceptibility.
Cranberries prepared as sauce, jelly, juice are favored generally,
And varieties of the future may be sweet and tasty, naturally.
These could be delightful, eaten fresh "right out of hand,"
Someday like popcorn, cranberries may be eaten in theatres across the land.
by Joyce C. Torio



(Editor's Note: This poem is the work of Mrs. Torio, a research assistant. She is a native of New England, having been born and raised in Saco, Maine. After receiving her B. S. degree in Botany from Douglass College, she assumed a full-time position in the Soil Testing Laboratory at the New Jersey Experiment Station, Rutgers University, New Brunswick. During this time she became a part-time graduate student at Rutgers, receiving her M.S. from Rutgers, and obtained a Research Assistantship in Cranberry Culture in Rutgers University Horticulture Department under the advisorship of Dr. Paul Eck.

At the present time as a Ph. D. thesis problem she is involved with a study of the interrelationship of nutrition and incidence of rots in cranberries. It is interesting to note that Dr. F. B. Chandler of the Mass. Cranberry Experiment Station has been interested in the possibility of producing a cranberry which could be sweet enough to be "eaten out of hand," like cherries.)

ADDITIONAL CASORON MADE AVAILABLE

The USDA has approved the release of a small additional amount of Casoron for use on cranberry bogs this fall. This release of additional herbicide is governed by the experimental or preliminary label granted last spring, but it does not mean that Casoron has been granted full approval. This is pointed out by Robert B. Ewing, Plymouth (Mass.) Agent-manager.

Because of the limited amount of

material available the formulating company, Thompson-Hayward is requesting that growers be restricted as to the amount that can be purchased, and that sales be limited to those growers who did not receive the herbicide last spring.

In Massachusetts Casoron is recommended at a rate of 125 to 150 pounds per acre after harvest through October. It is recommended that the bog should be allowed a week to recover from the harvesting operation before application.

Marketing Group Decides Cranberry "Set-Aside" Not Necessary This Year

COMMITTEE MAKES OWN SURVEY INDICATING LESSER PRODUCTION, AND TAKES SCHOOL LUNCH FRUIT INTO CONSIDERATION

Cranberry Marketing Order Committee meeting at Logan International Motel in Boston, Oct. 14 voted unanimously to reduce the previously voted "set-aside" of the U.S. cranberry crop from five percent to zero "set-aside." This means that no handler this year must have restricted berries, and in effect the cranberry crop is all "free" berries, exactly as if there was no marketing order. Last year, with a crop of 1,324,500 barrels the restricted pool was 12 percent and these berries could not be sold on the ordinary market, but were held for charity, experimental purposes, or to be "dumped".

This fall, with a crop estimated by the Committee as 1,197,593 barrels the members believed this crop can be sold in the ordinary channels of commerce. This is a smaller figure than the October USDA estimate of 1,327,600, smaller by 129,007 barrels. At the time of voting the five percent, the USDA had not made its decision to buy 70,000 barrels of fresh fruit for the school lunch program. It was decided that zero "set-aside" could still provide for the school lunch for the so-called "pipeline" of supply for processors and market demand.

The marketing order regulations went into effect last fall for the first time, and although there will be no restricted pool this fall, it was held that the order is proving a useful tool, when need arises. If there is no anticipated surplus, this "tool" need not be applied in any current year. However, Anthony R. Briggs, manager of the order says the order will still be in effect. "Next fall," he said there could be a crop of a million, 500 barrels (who knows now), and the restrictions might have to be applied again. The order is there if we need it."

All seven principals, including George C. P. Olsson chairman, and John C. Decas clerk, were present, with Massachusetts alternates, Maurice Makepeace and John N. Decas. Motion to vote zero "set-aside" was made by Behrend Pannkuk, president of Indian Trail, Inc. of Wisconsin Rapids and seconded by Anthony DeMarco of New Jersey, an "Ocean Spray" representative. Meeting opened at 9:30 and was concluded by noon.

It was pointed out the USDA estimates were started to be prepared a

number of days prior and the situation had changed then as picking had largely progressed and the size of the crop was better known. This information was obtained by telephone and other means, and was felt to be accurate.

Biggest discrepancies were found in the two largest states. Massachusetts reduced to 590,000 and Wisconsin to only 378,300. New Jersey estimate was actually upped a little from 73,000 to 74,293. Washington State was dropped from 121,000 to 110,000 and Oregon was left the same at 45,000 barrels.

Only a very few berries had already been disposed of from the current crop under the five percent "set-aside," and of course with no restricted berries the previously "buy back" figures will not be in effect.

Next meeting of the Committee is to be at Boston December 12. At that time there will be a review of the situation and any further amendments considered which it is believed will lead to a "smoother" better-functioning marketing order.

USDA October Estimate

October 14 USDA estimate of the cranberry crop of this fall is now given as a total of 1,327,600, up from the preliminary forecast of 1,324,500. This production is about the same as last year and ten percent above average.

Massachusetts is now given 660,000 barrels as against 778,000 last year. This is up 5 percent more than the August estimate, but 15 percent below 1962. Report is that soil moisture was adequate for good berry size and cool temperatures resulted in

good color and keeping quality.

Wisconsin is accorded 428,000 barrels, the same as the August forecast. Production last year was 360,000. Preliminary forecast for New Jersey was for 76,000 barrels, now lowered to 73,000, but down from the 103,000 barrels of last year. Yields were called variable. The current estimate is 29 percent less than last year and the smallest since 1956. Frost on September 24, 25 did some damage to unprotected bogs. Some of this loss is also attributed to spring frost damage, poor pollination and drought which retarded size development on many bogs. Quality is called very good, but size is smaller than normal.

Washington State is down to 121,000 barrels from the August forecast of 138,000 with some spring frost reduction, but is expected to be the second largest of record, exceeded only by the record 139,000 of 1961. Oregon is up from the 29,500 of last year to an estimated 45,600, the same as the August forecast.

U.S. average for the past five years is 1,208,880.

Berry "Buy-Back" Was Set At \$10.00

(Editor's Note: The committee action reported in the following is now redundant for this year in view of the zero set-aside. However, it is carried to show what the action was.)

Among the main matters acted upon at the second meeting this year of the Cranberry Marketing Order Committee at the O'Hara Hotel, Chicago, September 18 was the setting of the purchase release from withheld berries price, or more commonly known as the "buy-back" price. The figure was set at \$10 a barrel until November 15, from that date until December 1, \$10.50 and after December first \$11, with the provision made that a review of the price be made from time to time.

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Red Sox player Chuck Schilling and his wife harvest Cape Cod Cranberries, won last May when Chuck scored the first run of Cape Cod Day at Fenway Park, Boston, Mass. Yield from the 1 acre cran-berry bog was 88.85 barrels. The berries were delivered to Ocean Sprav and brought a net return of 888.50 which Chuck shared with Carl Yastrzemski, who knocked him in.

Red Sox Players Receive Their Berry "Awards"

Boston Red Sox star, "Chuck" Schilling and Mrs. Schilling shared in the harvest of a Cape cranberry bog Sept. 29, when they received a check for their cranberries harvested on the White Pine bog, Centerville, the property of Victor F. Adams, Ocean Spray director and chairman of the Barnstable Board of Selectmen, as well as grower.

The berries were the prize for the first home run, or runs, made on "Cape Cod Day" at Fenway Park, Boston, last May 12 when the Sox played the Washington Senators. There was no homer in the first game, and the award fell to the scorer of the first run, Schilling, and Carl Yastrzemski, who knocked him in.

A total of 88.85 barrels was gathered at the White Pine bog, a better than average—Mass. production and delivered to Ocean Spray for marketing. Based on Ocean Spray estimated net return to the grower on this number of berries, the amount split between the two was \$388.50. Checks for \$444.25 were presented at bogside by Executive Vice President and General Manager of Ocean Spray Edward Gelsthorpe. Schilling accepted for both players, the Schillings first trying their hand at scooping and mechanical picking.

Research Boosts Cranberry Juice Cocktail

The cranberry cocktail—a beverage made from cranberries, water and sugar with ascorbic acid added to provide vitamin C—is on its way to becoming tastier than ever.

Agricultural Experiment Station research at the University of Massachusetts has made it possible to control the choice of raw berries to produce a cocktail more uniform in color and flavor.

Since the color of the juice can also be measured, it is possible to predict the color of the cocktail from the color of the raw berries. A color measuring machine known as a colorimeter is used.

The study to determine the relation between color of cranberries and color and stability of juice was headed up by Dr. F. J. Francis in the department of food science and technology. Another part of the research was to develop methods of following

deterioration in quality of the juice during storage.

Dr. Francis and a co-worker found that the first noticeable change in quality for cocktail stored at room temperatures or above is a darkening in color. This color change is caused by a breakdown of red pigments and development of brown pigments. They followed this change by measuring the light absorbed at 415 and 515 millimicrons wavelength. The former value (415) increases as the brown pigments develop and the latter (515) decreases as the red pigments disappear. This makes the 415/515 ratio a good index of juice quality. An even better index of quality can be derived by combining this ratio with an index of overall redness as measured with a colorimeter. They found that the best way to minimize the color change during storage is to store the product at cool temperatures. ("Science News," University of Massachusetts.)

Fresh From The Fields

(Continued from Page 6)

recorded on five occasions in August, with total precipitation of 0.65 inches. There was the warmest weather during September, maximums of 88, 87 and 82 degrees being recorded.

Fruit Good Size, Color

Berries at both Long Beach and Grayland are reported as of fairly good color, good size and quality. There was, however, Dr. Doughty found, considerable field rot showing up in some areas, where vines were heavy or weeds and grass caused poor light and aeration. It is difficult to get enough fungicide sprays into the vines under such conditions.

Some Rot

Several fungicides provided good control of most rot organisms, these being, maneb, ferbam, captan and phaltan. The main problem Doughty finds is timing, i. e., making the application just prior to the time fungus infection occurs. This is sometimes difficult since not all of the rot organisms infect the berries at the same time. Experiments and observations have shown that one of the principal periods of fungus infection is during blossoming or shortly thereafter. There is some evidence now that infection of rot

organisms also takes place later in the growing season.

Fall Treatments

Dr. Doughty believes that successful control of storage rots by maneb dips at harvest also indicates some rot organisms do not enter the berries until after they are harvested. Additional treatments during this season may partially answer some of these questions, he feels.

In short it seems conditions were very favorable for a large Washington crop this fall, as was the case in 1961.

NEW JERSEY

September Coolest Month

The month of September was the coolest September in the thirty-five-year history of this weather station. The maximum temperature was 86 and there were 4 days when the shelter minimum temperatures were in the 30s, actually reaching down to 30° on the 25th, a new low for so early in the month. The average temperature for the month was 61.9°, 5.6° less than normal.

Heavy On Rain

Rainfall during the month was 6.04 inches, which was 2.42 inches more than the normal of 3.62 inches. Despite the fact that the rainfall has been ample for the latter part of August and the month of September, the drought was so severe during the summer months that the water in cranberry reservoirs is still much below normal.

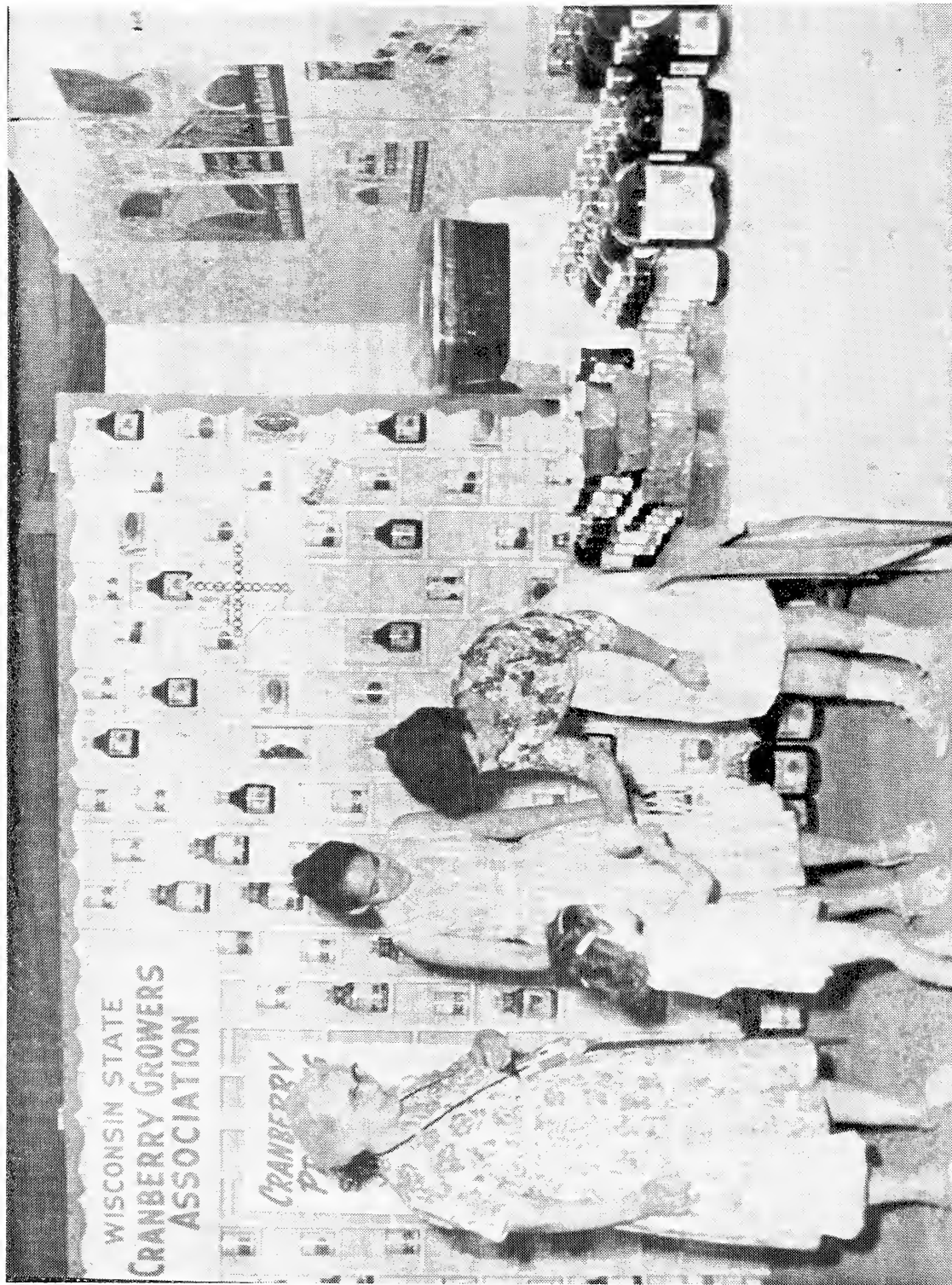
Severe Frost Loss

The severest frost spell so early in the season was experienced by cranberry growers on the nights of September 23rd, 24th and 25th. Temperatures as low as 14° (North Branch) were recorded. A few growers reported temperatures below 20° and several reported readings in the low 20s. There was widespread damage resulting from this frost, particularly in areas where there was a lack of water. No grower was caught unawares but not all had a sufficiency of water to protect their berries. There was complete destruction of cranberries on at least one small bog in the Sheep Pen Hill area.

Crop Outlook Very Poor

As of October 1st, the New Jersey

(Continued on page 20)



WISCONSIN STATE FAIR, 1963 (l. to r.), Mrs. Rosalie Donahue, Omaha; Neb., Cathy Donahue, Centralia, Ill., Mrs. William Donahue, Centralia, Kathy Klinghiel, Wauwatosa, Wis. Note display includes Ocean Spray and Indian Trail cranberry juice cocktail in gallons and half gallons. (Wisconsin Agriculturist Photograph)

A BETTER YEAR?

The big "news" of this month seems to be that the decision by the Cranberry Marketing Order Committee, meeting at Boston, October 14th, that there need be no berry "set-aside" this fall. This vote came about, after voting five percent restriction earlier, when it seemed the 1963 total U.S. crop would be considerably larger than it later appeared.

This, apparently, means that the cranberry industry in its crop marketing this fall, is just about as it used to be, that is all berries produced are "free" fruit, to be sold by the various distributors, exactly as if there was no marketing order in effect. It would seem that the committee acted wisely in removing this restriction as soon as it became apparent in view of actual conditions that restriction was not necessary. We do not see, at the moment, how there can be any quarrel with this decision, certainly not on the part of those who were strongly opposed to such an order in the first place.

It may be recalled that during the marketing order hearings, George C. P. Olsson, president of Ocean Spray and later chairman of the marketing committee, frequently referred to the order as a "bridge," to better marketing, which could be used when deemed necessary.

Others have referred to the order as an industry "tool," a tool which is there to be used, when and if needed. It might be likened to a spare tire on an automobile. When a spare is needed "on the road," it is really needed—and if not needed it is not used. Last year this "tool" was necessary in the opinion of the majority of the marketing order committee members. This year, it has been decided it is not. Next year, who knows at the present time, what the production will be, and if a restriction is necessary? The 1964 crop could turn out to be a million and a half barrels instead of the now estimated 1,197,000 or somewhere thereabouts.

Come another year, there may, or may not be a substantial purchase by the USDA of fresh cranberries for the school lunch program.

CLARENCE J. HALL

Editor and Publisher

EDITH S. HALL—Associate Editor

Wareham, Massachusetts

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CORRESPONDENTS—ADVISORS

Wisconsin

LEO A. SORENSON

Cranberry Consultant

Wisconsin Rapids

Wisconsin

Washington

Dr. CHARLES C. DOUGHTY

Cranberry Specialist

Long Beach, Wash.

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FRED HAGELSTEIN

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Massachusetts

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Director Mass. Cranberry Experiment Station

East Wareham, Mass.

New Jersey

P. E. MARUCCI

New Jersey Cranberry and Blueberry Station

Pemberton, New Jersey

One thing is certain, however, as is the case every year the weather cannot be predicted. One area may be hit by bad weather and other areas not, as seems to be the case in Wisconsin this past season. On the West Coast the weather was generally favorable and the crop is up.

But better controls, say, in frost protection, through sprinklers or other improved water resources, improved chemicals, constantly increasing "cranberry know-how" may steadily help reduce the weather hazards.

SERVING WISCONSIN

Fresh From The Fields

(Continued from page 17)

cranberry crop looks very poor. Some veteran cranberry growers are reporting the worst crop in many years. Growing conditions have been extremely bad all year. Many spring frosts, adverse weather during the pollination period, severe drought and early autumn frosts have been the main factors which have caused the poor crop.

Half Crop Wet Harvest

An estimate is made that this fall, that more than half of the New Jersey crop will be harvested wet, with "water wheels." It is reported that all of Haines and Haines, Lee Brothers and Arpin Cranberry Company will all be picked by this method; most of the property of Clarence Worth, Jeffrey's Branch Cranberry Company, Jac's Cranberry Company

and Anthony R. DeMarco, some of Ocean Berry, Joseph J. White, Theodore H. Budd, most of these being among the larger and more important growers.

Growers do not use aluminum dikes to divide bogs as is being done in Oregon, but where bogs are divided the owners are building new earth and turf dams.

The Bordentown plant of Ocean Spray, upon which extensive improvements have been made is functionally "beautifully," according to Ed Lipman, area manager.

OREGON

Bandon Expects 50,000

Harvest got underway in the Bandon area the first of October, and William T. Dufort, Oregon Ocean Spray manager said he anticipated a production of about 50,000 barrels

this fall, contrasted to 28,000 last year. There are about 130 grower members of Ocean Spray.

Packaging of fresh fruit began at that time; an average of 600 cases of the fresh product is packaged daily by about 30 employees. The fresh fruit is sold primarily on the Coast, in Oregon and California.

OREGON STUDIES

(Continued from Page 4)

evaluated under dry picked and water harvest conditions. Both refrigerated and non-refrigerated storages will also be compared. The incidents of storage rots will be determined for each treatment at the conclusion of the storage period.

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Where to *Stop*, *Look* and *Listen* for Ocean Spray Advertising

STOP and be tempted by the serving ideas for Cranberry Sauce in these magazines. October issues of *American Home* and *Good Housekeeping*, and November and December issues of *McCall's*, *Ladies' Home Journal*, *Good Housekeeping*, and *American Home*.

LOOK for Cranberry Juice Cocktail commercials along with these TV shows: on NBC Stations, *Loretta Young*, *Truth or Consequences*, *Merv Griffin's Shopping Spree*, *You Don't Say*, and *Match Game*. More later on.

AND LISTEN for the details of the Big Prize-Winning Fresh Cranberry Recipe Contest on *Arthur Godfrey Time* and the *Don McNeill Breakfast Club*. Both programs have a long record of effective selling! Arthur Godfrey is on 209 CBS Stations, and Don McNeill, 317 NBC Stations.

GODFREY TIME ON CAPE COD

was September 9, when the popular radio and TV star flew into Hyannis airport with his business manager to find out what cranberries are all about.

Arthur likes to know about the products he advertises, and what better way than to get down on his hands and knees in Bay View Bog in Hyannis and scoop a few cranberries. He found the mechanical picking much easier after receiving instruction from Ray Syrjala, bog manager.

He later helicoptered to Onset to view the screening, packaging and processing, and to sup some cranberry treats made by Janet Taylor. As he said, "They're loaded with flavor" and he carted off a cranberry jewel salad.

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ANNOUNCEMENT

Beginning with this, the November issue of CRANBERRIES Magazine, the Cranberry Institute, in accordance with its directors' vote last August, begins a new 12-month subscription to every known cranberry grower in the U.S. This will mark the second year the Institute has extended this group subscription as one of its services to the industry.

Therefore, every known U. S. grower, or perhaps more accurately put, every known U.S. cranberry property on the Institute list will receive the next 12 copies of this magazine. This does not mean that every grower will receive a copy, but as was the case last year, there will be one for each property. To provide a copy for each partner

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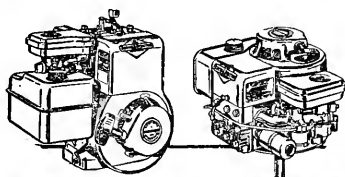
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or stockholder where there is more than one individual owner would make the cost of such subscription, even at a reduced group rate, prohibitive.

We believe our mailing list does include every "cranberry grower" or "property" at the present time. If any grower is not receiving a copy and feels he should be entitled to one, we hope we may be notified. Any grower, or other person interested in the cranberry industry may, of course, subscribe individually, at our regular rate, as many now do, in this and a few foreign countries, particularly Canada.

With this approximately 100 per-

cent coverage of the cranberry growers, we hope, as we trust we have been in the past year, to be the greatest possible value to all growers and others interested in the industry as a whole. We, on our part, will assuredly continue to do our best to provide the most informative, interesting and worthwhile cranberry publication we can produce.

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New Parasite Specie Named After Zuckerman

Researcher At Cranberry Station, East Wareham Re- ceives Honor

Soil samples from around the roots of cultivated cranberries on Cape Cod sent to a scientist in Poland have resulted in the honoring of a University of Massachusetts professor at the Cranberry Field Station, East Wareham.

The soil samples, sent by Dr. Bert M. Zuckerman to Dr. M. Brzeski, head, nematology section, Vegetable Research Institute, Skierniewice, contained many microscopic plant parasites called nematodes. The samples also contained—as Brzeski discovered—a new species of sheath nematode, a group known to scientists as Hemicycliophora de Man.

Result: Brzeski named the new species H. Zuckerman sp.n. to honor Dr. Zuckerman.

Dr. Brzeski officially named and classified the new species of nematode in an article appearing in the Bulletin of the Polish Academy of Sciences earlier this year. He sent a copy to Dr. Zuckerman, thanking him for his assistance.

Dr. Zuckerman, a noted nematologist, joined the College of Agriculture staff at East Wareham, in 1955. In addition to his work as a plant pathologist and nematologist at Wareham, he is a technical representative to NE-34, Northeastern Regional Research Committee in Nematology, and served as chairman in 1961; was associate director of the advanced course in plant nematology sponsored by the National Science Foundation last summer at

(Continued on Page 3)

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Dr. Anderson, left and Laboratory Assistant Bassett are shown dipping fresh cranberries in warm water test at Cranberry Station, East Wareham
(Courier Photo)

Hope For Greater "Keeping Quality" From Fresh Fruit Dip Tests Being Conducted

A series of tests, which if they bring successful results, could prove of great benefit to the fresh fruit cranberry market were begun at the Massachusetts Experiment Station, East Wareham, and are continuing at the USDA station at Beltsville, Maryland. This is an experiment to determine if dipping cranberries in warm water for certain periods of time will help control certain fungi spots, which break down fresh fruit in storage and in "shelf-life."

If the tests prove this new process can be applied to fresh cranberries and freshness in storage can be prolonged for a considerable period, this could be of great importance in fresh cranberry sales. The process was developed by Dr. Wilson Smith of the United States Department of Agriculture, who with others was at East Wareham in August. This process has been tried out with success

on sweet potatoes, sweet peppers and especially peaches.

Some preliminary tests were made last fall and results indicated the process might be applied to cranberries with good results. Dr. Raymond E. Anderson of Beltsville, with Ronald Bassett, were at the East Wareham Cranberry Station last month and made a few tests. Dr. Anderson explained that this is a "time and temperature" experiment. Good-quality, freshly screened Late Howes were available and some tests were made on the spot. The bulk of the experiment will be at Beltsville. About 500 pounds of cranberries were made available, enough according to Dr. C. E. Cross director of the East Wareham Station, for about 300 repetitive tests.

In one test, berries were dipped in water heated to a temperature of 115 degrees for a period of ten minutes. In another, water was heat-

ed to 125 degrees and the berries dipped for a period of 2½ minutes. This is not hot water, which at sea level is "boiling" at 212 degrees. After the dipping the berries are immediately dried and placed in refrigerated storage where they will be held for periods varying from three to five months. Some are in temperature-controlled storage at East Wareham and others will be held at Beltsville at a temperature of 33 degrees.

It is understood that a sufficient number of varying tests will be run to determine whether or not this process can, or cannot be used with cranberries. For the time being the activity is strictly experimental. Prolonged good keeping of fresh cranberries in storage and on the shelves of markets could greatly assist the sales of fresh cranberries, even though not perhaps removing cranberries from the "perishable" list of fruits.

Zuckerman

(Continued from Page 2)

Cornell University; and a guest research scientist in the department of plant nematology, National and University Institute of Agriculture, Bel Dagon, Israel, from Oct. of 1962 to April of 1963.

Dr. Zuckerman also gave a paper at the Fifth International Nematology Symposium, Ghent, Belgium, in July of 1961, and spent six weeks visiting nematology laboratories in England, Holland and Poland.

Dr. Brzeski is to spend a year in the United States, and will spend ten months of that time at the Cranberry Station, working with Dr. Zuckerman. He is expected to arrive Dec. 5. After that he will spend two months in Florida before going back to Poland.

Foot Of October Rain At Peninsula

October, at the Long Beach Peninsula was very liberal with rain, there being a total of 12.01 inches or a foot of precipitation as measured at Cranguyma Farms. However, the total rainfall for the area this year has been very light in comparison to most years as it has reached only to a total of 49.09 inches—average rainfall falls within the 65-70 inch figures.

High temperatures for October reached 70 degrees on two occasions with a minimum of 30 on the 19th.

Mass. Cranberry Station and Field Notes

by CHESTER E. CROSS
Director

This will be my last effort in this department, at least for several months, for I leave November 30 for a 5½ months visit in the British Isles. Your publisher has asked that I write a bit about this.

Sabbatic leave is a term used chiefly by colleges and universities to describe a rather special change in the work of its faculty members. After seven or more years of satisfactory service as a teacher or researcher, a faculty member is eligible for a leave-of-absence to pursue some particular study or work, which is in essence a form of professional improvement. The University of Massachusetts, when it grants sabbatic leave to one of its members, pays his full salary for five months or half-salary for ten months. In practice, those returning from sabbatic leave appear to

have new enthusiasm, new ideas, new techniques for solving problems—much of this from personal contact with other scholars in a different environment—and the refreshed faculty man becomes more valuable to his institution.

I go to Great Britain to visit a dozen or more of its agricultural research stations, to confer with research scientists and administrators to see how they do their work, under what policies, and to compare these with operations here in Massachusetts and U.S.A. In particular, of course, I want to know about their pesticide work, how they control and police the use of agricultural chemicals. I will visit some of the agricultural engineering centers like that at Silsoe, Hertfordshire.

The above is general, but I will go to East Malling in Kent where the famous dwarf apple rootstocks were developed, Cambridge University where they have some cranberry cuttings I sent them, Rothamsted where on some plots the same crop has been raised each year for over a century. I will visit the weed research laboratories at Oxford University. Probably in March, 1964, I will spend three weeks at the Ministry of Agriculture in Southern

Ireland. This agency has, I believe, seventeen small field stations about half of which are doing horticultural and points of historic interest. I will visit research centers in Northern Ireland and in Scotland.

The last two weeks of my leave will be spent visiting Kew Gardens and points of historic interest. I will fly home to cranberries about May 15th.

The Wind Machines In Wisconsin

The wind machines at the Marvin Hewitt marsh yielded some valuable information. Warren Fallis of the Frost Warning Service was computing the data from the thermocouple machine located on the inversion tower and from the thermograph machines. His report will be available as soon as he has returned to Florida and finishes compiling the data. From all indications the machines worked very favorably and have a definite place in cranberry cultural. A detailed report on the machines work will appear in Cranberries Magazine later in the year.

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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of November 1963 — Vol. 28 No. 7

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Second Class Postage Paid at Wareham, Massachusetts Post Office.

FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

October Drought

October continued a remarkable month for temperatures into the middle of the month, and extremely dry. To the 18th there had been only .2 inches of rain as recorded at State Bog. Temperature ranged into the 80's and it was real "Indian summer". A few donned bathing suits on the Cape and went to the beaches. The dryness by the 16th was causing concern among local and state fire officials, with the burning index of the woodlands more than 100.

Woodlands Closed

On October 17 the Massachusetts governor ordered the woodlands of the state closed as on the previous day there were reported nearly 150 woods fires burning in various areas. Temperature departure to that date was a plus 40.

Summer Heat

The explosive conditions of the woodlands continued unabated as there was absolutely no rain and there were numerous fires throughout Massachusetts and New England. By the 24th the departure from normal had reached a plus of 9 in one of the most beautiful, if

drought dangerous "Indian Summers" on record.

Hurricane Watch

Weather turned abruptly colder on the 22nd as a cold front moved in and the area watched with considerable anxiety the progress of "Ginny" the 7th hurricane of the season as it churned off the North Carolina coast. This storm, the most New England threatening one of the season, brought gale warnings as far north as Provincetown at the tip of the Cape.

Real Hot

Cold front was short lived and brought no rain, woodland conditions continued "explosive" and by the 25th the plus temperature (Boston) was 104 and on the 28th, 164. All-time heat records for those late October dates were broken

with highs in the upper 70's and low 80's. Motorists trooped out of the cities as in summer and Cape roads were filled. Motel business prospered, fall hunting supply shops suffered, buying of fall clothing fell off. Pussy willows swelled.

Ginny Skirts Cape

On the 28th the plus for the month had reached 175 degrees (Boston) or more than six degrees above normal. On that night "Gyrating Ginny", the erratic, late, late hurricane, in its ninth day, passed dangerously close to Cape Cod, about 160 miles southeast of Nantucket Island. She brought winds in gusts up to 80 miles an hour at Cape Cod Canal, some rising of tides above normal and varying amounts of drenching rain. This varied from one inch to three inches at points near Boston and some points on the

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Cape. However, only .92th of an inch was recorded at East Wareham Cranberry Station. There was little damage from wind or water, but much apprehension and the storm clobbered Nova Scotia to die off the Gulf of St. Lawrence.

Snow

With the hurricane and chill polar air coming in temperatures dropped abruptly from summer weather to chilly 30's and 40's, and there was again rain on the 29th, and of all things, considerable snow over the Cape on the morning of the 30th. This rain turning to snow, less than an inch, with the melted snow, added another .43 to the month's precipitation.

Could Be Cranberry Damage

The October drought was called the worst in 13 years and Dr. Cross of the Cranberry Station said this may have had some adverse effect on the 1964 crop. With the almost complete lack of rain and many growers could not put on the usual "after-harvest clean-up" flow. He said he felt this reviving moisture was necessary after the abuse of the harvesting, and it had not generally been provided this year. He said there were many dead vines and twigs. At that time he said it was too early to tell for sure. Of course, the problem of the winter flood loomed up, but he anticipated there would probably be sufficient rains by that time to replenish to at least some degree the low water supplies.

October "Weirdie"

Thus October 1963 went into the weather records as a real "weirdie." Summer heat during most of October, a terrific drought, there had been much fog nights and mornings, thick "London type," some smog, a rarity in Massachusetts, a hurricane fringe brush, a snow storm, and earlier in the month the Cape was shaken by tremors from an earthquake located somewhere in the ocean between Provincetown and Gloucester.

Thus the month ended with precipitation of 1.36 inches, normal, 3.57 and temperatures despite the frigid month ending much above normal for the 31 day period, 154 degrees.

Good Rains

November started out rather cold

with rain the first two days, then there was a continuous northeaster from Nov. 6 to November 11, this brought the total rain for the month to that date to 2.36. Reservoirs, which had been way down were being replenished.

Temperatures were rather on the mild side, there being more than a degree a day plus to the 15th.

WISCONSIN

Month Hot, Dry

October was very sunny, warm and dry throughout the state with many new maximum records broken or tied. Had the last few days of the month held up an all time record for heat and drought would have been set. The average temperature was about eight degrees above normal and precipitation in most areas was below one inch. Statistically wise it was the 3rd warmest October on record and the fifth driest. Warmest day was the 6th when temperatures went to 90 degrees setting a new record for that date and also the highest on record for October. Numerous readings of over eighty were recorded all through the month. Precipitation fell slightly on the 15th and again in heavier amounts on the 29th. Cold Canadian air followed the last storm giving the entire state its first freeze of the season.

The high temperatures during the month boosted the total heat units to about a plus 150, but precipitation was about nine inches below normal except in the west central area where rainfall was almost normal. No one was being concerned with any shortages for their winter floods. The outlook for November called for temperatures to be about normal and precipitation slightly below normal.

Record Time Harvest

The beautiful weather enabled harvesting to be completed in record time with no time lost to rain and little if any heat needed in drying. A few growers waited until the first of the month to start harvest and all marshes were reported finished by the 19th. Practically every grower had wished to have waited longer before harvesting in view of the weather experienced. It would have been most ideal for sizing berries if the October weather would have occurred in September.

Crop Figures Drop

Crop figures continued to drop as the harvest drew to a close. Everyone was concerned as to what had happened to a good potential crop. First of the several hailstorms in the southwest took a heavy toll of berries. In the northwest the set was affected by drought and cold. In the other areas the cold of June

(Continued on Page 17)

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The Alpine Peaks of the Olympics tower, snow-clad not far to the north of Grayland. This view was taken from famous mile-high "Hurricane Ridge." (CRANBERRIES Photo)

Grayland, Washington A Unique Cranberry Region With Bogs In A Single Vast Swamp

Growers Have Individual Sections of This—Many Build Sumps in the Bog —Harvest Dry—Sell Considerable Fresh —Hope to Increase Holdings—Area Had Strong Scandinavian Atmosphere.

by

Clarence J. Hall

Grayland was our first stop in Washington on our West Coast trip, flying from Seattle to Aberdeen-Hoquiam airport by West Coast Airlines, and there we were met by David E. Pryde, a leading grower, who drove us the 30 miles or so south to Grayland. There he placed us in Sunset Cabins of Mr. and Mrs. Willard Coates, who are also cranberry growers. These cabins are directly on the open Pacific, where the surf crashed and the gulls screamed noisily, as we arrived at dusk. (There will be a story about Mr. and Mrs. Coates and their cranberry growing, later.)

Grayland is an un-incorporated community, as it is in two counties, one third in Grays Harbor County and two-thirds in Pacific County. It is a small village of, perhaps, 400-500, but in the summer its population swells to as many as 30,000 with summer visitors who come to the seashore from Seattle, Spokane and 15,000 more from elsewhere. In this respect it is like the coastal cranberry towns in Massachusetts, New Jersey and say, Eagle River area, a cranberry resort community in northern Wisconsin.

A Sea Coast Town

Business in this small community is the growing of cranberries, commercial and sports fishing in the Pacific on hundreds of charter boats; also some crab fishing and there is still logging. In the summer the visitors come to the beach—to sun, to swim, to surf cast and a major sport, digging razor clams. At maturity this clam attains a length of 4-5 inches. Rapid movement of the razor clam is its chief protection

from man. It submerges in the sand at a rate of up to 9 inches a minute. The digging of these clams is considered a fine family sport, and indeed it is. The most impressive hard shell clam on the Pacific Coast is the "gooduc," locally known as the "goeeyduck," although this shellfish is not nearly as plentiful as it once was. The name "gooduc," believed to be Indian in origin, has been corrupted to the "goeeyduck," because

the clam with its long snout somewhat resembled a duck.

The shellfish is found in the sand in depths varying from 18 inches to two feet. The clam is wholly edible. They are hard to dig and so devices have been made to get them out. There are signs all through Grayland, saying "Clam Guns," or "Clam Shovels," for sale or rent. The gun does not shoot despite its title.

Westport, where a few cranberry growers live is only a few miles from Grayland and this is nationally known as are two or three other Washington coastal communities, for commercial and sport deep-sea fishing. There is a great fishing fleet at Westport.

Rock and Driftwood Gathering

All along the Coast from Vancouver to south of Bandon, Oregon a favorite hobby is rock gathering, and also the gathering of driftwood in its fantastic shapes. The "Rock Hounds," a group which includes many cranberry growers hunt and polish these stones of various composition into beautiful pieces, many almost jewel-like in their beauty, some semi-precious. The driftwood is used for all sorts of purposes, even to the building of fences of odd shape around the home and for making



VETERAN PIONEER GROWER JOHN NIEMI mows a dike with a hand scythe at Grayland. (CRANBERRIES PHOTO)

doorways, lamps and other objects.

This driftwood on the Pacific Coast is no puny affair as along the coasts of the eastern cranberry region; there are great logs, whole trees, giant limbs, and both the gathering of these pieces which litter the gray, sandy beaches and the gathering of the stones are really great hobbies along the Coast.

I found I did not care much for the taste of the razor clam, either in chowder or fried, and, being a Cape Codder, much preferred the Cape Cod clam. But I found Pacific oyster gathered and the native dun-

geness crab delicious.

All of which has nothing to do with cranberries, but as was stated in the opening article this stories would attempt to tell not only of how our West Coast neighbors grow cranberries, but would attempt also to tell of the spectacular part of the country in which they live and of how they live.

A Single, Vast Swamp

To return to cranberries, as said before, nearly all the bog acreage at Grayland is in the single great peat swamp, a swale, between sand dunes running parallel to the coast; this is

all but on the seashore itself. This immense peat bed is 7-8 miles long and in width varies from a half to a mile. There the individual holdings run from 1, 2, 3 acres to the largest which is about 15. The holdings are undivided except for a cross ditch or low dike, and it is obvious that a grower who does not do his best to control his weeds and insects is not too popular with his neighbors, as these pests spread.

This is a totally different concept of cranberry growing than any other the single vast swamp, the roads mostly running along so-called "sane

ridges," the houses set close to bog side, often at the head of the piece owned by each grower. It is a communal cranberry enterprise, but certainly not to be confused with a "communistic" taint, as each grower seems to be distinctly individual in his cranberry growing, even to the extent of owning his own equipment.

Most Growers Not Full-Time

Most of the cranberry growers have not yet achieved a full-time status as cranberry growers, many working at various other occupations. But, as has been stated it is more and more the current ambition to consolidate their holdings as rapidly as possible, even though the holdings may not be adjacent, but scattered by two or three bogs of others. Most would like to be fully self-supporting cranberry growers and that achievement is what many are working for, with more getting there every year.

In our first visit to Grayland in 1949 we found that at least one third or more were either born in Finland or of Finnish stock, and, as is well known Finnish people are usually excellent cranberry growers. Now the Finnish people make up only about a fifth and this is no longer a noticeably Finnish community, but the Scandinavian influence is still very strong, although there are now a number of other nationalities.

As stated, these growers are zealous in owning their own equipment and many have their own spray rigs, which operate on standard gauge railroad track. Often between the tracks there is a narrow cross ditch, which is boarded over, so that a grower may go out on his bog for inspection and not have to step on the vines. All growers also own either Myers, Bean, Hardie, or other conventional sprayers. So bog pieces have narrow margin ditches and some of these are side-boarded.

Hard Workers

Most of the growers are extremely hard working, those who are not full time, getting in a few licks before going to their other occupations and late afternoons, early evenings and weekends and holidays. This also goes for many of the wives of the growers, although not nearly as much as formerly, weed or do other bog work, as also do other members of

the family, while their husbands are at their occupations.

A number of the growers go commercial fishing, even to Alaska, some run service businesses, some engage in logging or work in saw mills, others cater to the tourists' business. Some of these growers first came out from the nearby cities, chiefly Aberdeen and Hoquiam, the twin-cities on Grays Harbor and became what was known as "Sunday" cranberry growers, while still living in the cities. Many of these now have their home at Grayland and only work part-time elsewhere.

Dr. Charles C. Doughty, director of the Experiment Station has estimated there are about 135 growers in the Grayland area, and of total Washington acreage of about 1,000 something like 600 would probably be in the so-called "Grayland District."

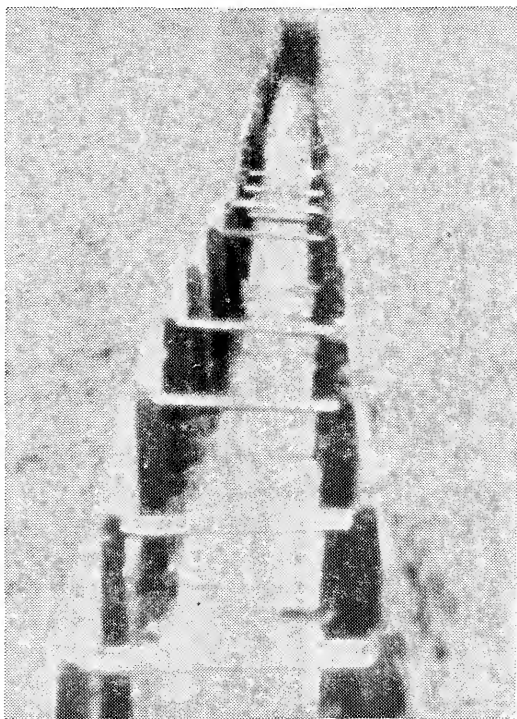
Bogs Sprinkled

Dr. Chandler in his Washington survey of 1956 stated that 57.4 percent of the Grayland acreage is covered by sprinkler systems and this percentage has increased since then. He reported there were about 600 acres on the Grayland area. There is some abandoned bog, some

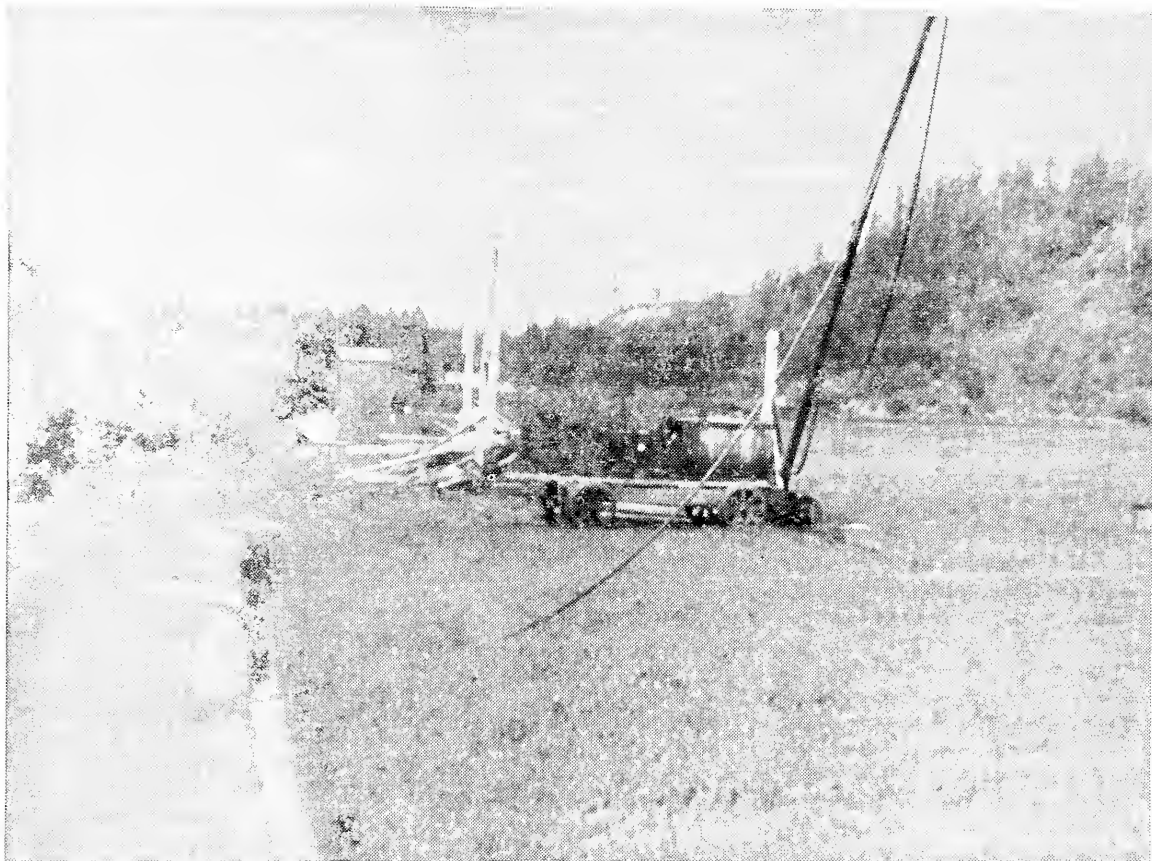
new is going and has gone in.

The most common style of sprinkler alarm system has a bimetallic strip which makes contact for high or low temperatures. Others have electrodes enclosed in glass. Some growers have an automatic alarm in their homes; however, most Grayland growers spend most of a frost night at their bogs in case something in the mechanics might fail. Many of the alarms are covered and Dr. Chandler felt this might account for some of the frost damage as temperatures under cover would be higher than the actual reading in the vines. Sprinklers are used for "heats" as well as frost control and of course for irrigation and for the application of some agricultural chemicals.

In general there is not an unlimited water supply at Grayland. Some of the Grayland bogs are covered with a winter flood. The vines go somewhat dormant in the winter, but not as dormant as in some other cranberry areas which have a colder climate. Sprinkling for cold spells in the winter months has been tried experimentally, but this did not work out—for one thing growers ran out of water.



A side-boarded ditch at a Grayland Bog. (CRANBERRIES Photo)



A TYPICAL SPRAY RIG at a Grayland Bog.

(CRANBERRIES Photo.)

Grayland Dry Harvests

Some years ago the vacuum picker was very commonly used for harvest, but now this is used only now and then for ditch edge and between bog track. Growers harvest dry with Western Picker and the Furford, which prunes more than the Western and is manufactured in Grayland. (The Furford was on display at the Cape Cod Cranberry Growers' Association annual meeting at East Wareham the past two years).

There is one small bog of 2½ acres at Ocosta, near Grayland owned by Herbert Grossman which is picked by water reel, the water supply coming from a small creek. Grayland harvest starts about the last week in September and lasts through October and sometimes into November.

It would be difficult to actually determine the average production per acre at Grayland, but it has been estimated at about 70 barrels, or considerably more than that in the Long Beach District. In the big year of 1961 the State produced 139,000 barrels or 126.4 per acre. Washington

in that year sold 23,000 of these fresh with all these being grown at Grayland. I was told that with the bettered facilities at the Ocean Spray plant at Markham Grayland may soon be disposing of as many as 30,000 barrels in fresh form.

To Gain In Production

Some believe Grayland may be losing in acreage, through abandonment, while others think this is being made up by new planting. One source said that the acreage and improvements which have gone in recently will up Grayland production by 10 percent in the next four or five years. About 95 percent of the Grayland growers have their own screening facilities for the processed market.

Incidentally, I was told that Grayland as a community is expanding in other interests than cranberry growing, principally through sports fishing, service to tourists. But, to return to cranberries as some of the grower gets older and get a little more money they are adding to bog holding.

Probably the top cropper of Grayland in recent years is Ralph Williams (whom I did not get a chance to visit.) In the big year of 1961 he grew 3,000 barrels on about 11 acres.

Many Weeds

Grayland growers say there are dozens of different weeds, of which probably the worst is horsetail. For control there is the hand weeding "paint thinner," the various herbicides including the new ones as they come along. It is felt the use of sand in building and in re-sanding programs help keep the weeds down and, of course the sand raises the bog temperatures on a frost night as in all areas. Some growers erect bird houses as an aid to insect control.

Some use a balanced fertilizer and most make conscientious use of fungicides.

Sumps In Bogs

Sumps for water source are often built right in, as a part of the bog others are "on shore." Water underlies the whole district. Many of the ditches are boarded with costly cedar planking as are some of the sumps.

Cultural assistance is given to the Grayland growers upon occasion by Dr. Doughty of the Long Beach Station. Frequently by Pacific County Agent Andrew Kruiswyk, Jr. who comes down from South Bend and there is also research assistance from the Washington State University at Pullman which has several branch stations.

Snow Rare

Summer temperatures sometimes rise to 95, but only occasionally and in the winter temperatures can drop to as low as 9 above, but this is rare. Sometimes there is a little snow, some of which may linger for as long as three weeks.

The great majority of the growers produce the McFarlin variety, which is true of all the Coast.

Growers' Association

There is a Grayland Cranberry Growers' Association, and originally this was a selling co-op before Ocean Spray arrived on the Coast. This unit was entirely independent of any other organization. Fruit was sold under the brand label of "Mist-Kist." Most growers then picked by hand and nearly all of the crop was sold as fresh fruit. With the coming of Ocean Spray the Association was changed to a non-profit organization and it became a unit which discussed cultural problems, mostly as do similar groups in the other areas. This has a membership of about 98 percent of the growers. Its officers are the same as those for the Grayland unit of the West Coast Advisory Board. (The operations of this board have already been explained in the August issue.)

The officers both for 1963 are John R. O'Hagan, president, Cecil Richards, vice president; Martin Paulson, secretary, Robert Lindstrom, treasurer and the directors include Robert Quimby, Ero Erickson and Matt Waara. Working in conjunction with the Board, Ocean Spray director Dave Pryde sends a letter to all Grayland growers after each directors' meeting at Hanson, setting forth in detail what has taken place and thus they are kept well informed of cooperative plans and affairs.

A further note on Grayland growing, growers say the honeybee does not work well in pollination, as the growing season temperatures are not

high enough. It is the bumble bee which is most depended upon.

First sprinklers were put in at Grayland in 1937 by Reeves & Busby. The first grower of any size was "Ed" Benn, son of the founder of Aberdeen City. There were enough growers by as far back as 1919 to form the first association of growers. Benn is generally considered as the true "father" of the Grayland cranberry industry.

Pioneer John Niemi

One of the earlier pioneers is still active. He is lanky, spirited, friendly and hardworking John Niemi who was 72 in June. We had met Mr. Niemi on previous visits and the morning we saw him he was out, bright and early, scything weeds on his bog side. Niemi was born on a farm near an industrial city in the center of Finland. He first came to the U.S. in 1912, when he worked in the sawmills, at longshoring and went fishing. He then returned to Finland in 1920. Coming back he bought a small piece of bog at Grayland which was started in 1929. It is a bog of about 3 acres, and he has 10 acres more of potential bog land. He was a leader among the Grayland group, taking part in the community meetings. One reason was because he spoke a little better English than some of the others.

A Sea Fisherman

While waiting for his crops, he went salmon fishing in Alaska, "gill netting"; he went in "windjammers" on 52 day trips, from famous Cape Flattery, Bristol Bay and the Bering Sea. "Two men to an open dory," he told me, "with a piece of sail and oars, mean weather in the Bering Sea, cold, cold, the south wind turns bad."

Mr. and Mrs. Niemi have two daughters, Sylvia, who is Mrs. Robert Wall and Gertrude, who is Mrs. Thompson. He has five grandchildren. Both of his daughters he sent to college, and Sylvia has a masters degree.

The substantial house at bogside in which Mr. and Mrs. Niemi live attests to the success they have found in America and in cranberry growing.

As a final note, Grayland at the present time is a prosperous little community, with its cranberry grow-

ing, but more of this prosperity being due to its fishing and tourist industry.

In following issues there will be stories concerning, Mr. Pryde, who was our chief mentor at Grayland, Mr. O'Hagan, Mr. Richards and others.

CRANBERRIES AGAIN ON USDA PLENTIFUL FOOD NOV. LIST

Cranberries and turkeys are featured in the USDA Plentiful Foods list again for November, as cranberries were in October, according to notification from DeVoe H. Willard, acting chief food and trade branch, to the Cranberry Institute. This list reports cranberries to be abundantly available in various forms, fresh, canned whole sauce, jellied sauce, bottled juice.

The USDA "Menu of the Month" features cranberry juice for breakfast cranberry pie at lunch and cranberry relish at dinner. For the week of November 17 the department gave extra emphasis to cranberries in releases to press, radio and television.

The USDA urged merchants to feature cranberries and turkeys for Thanksgiving and also urged that cranberry cocktail is becoming "a demand item in many grocery stores," and said "spot hefty stock" right in the juice aisle.

Late Howes At \$4.40 A Quarter

Ocean Spray has set its opening price for late Howes at \$4.40 a quarter, Early Blacks and MacFarlins having been selling at \$4.25. Fresh fruit sales have been slow, up to the first week of November, due in considerable measure to the unseasonal heat over most of the country during October. However, with the week beginning Nov. 11 there was an increase in demand, according to President George C. P. Olsson and it is also pointed out that this year Thanksgiving comes a week later than last year, giving an extra week for the Thanksgiving trade.

All Massachusetts blacks were sold out by October 12, as were the

Oregon McFarlins. About 50 percent of the school lunch fruit had been shipped out by that date also.

Up to the last week in October fresh cranberry shipments, according to the Agricultural Marketing News, USDA, Boston, 43,750 cars had been shipped from the Bay State as compared to 63,500 in 1932.

Ocean Spray directors were meeting the week of November 11 and it was expected the price for the 1962 pool would be set and that it would be higher than last year.

CRANBERRY MEN IN MASSACHUSETTS BANKING

Director Chester E. Cross, Sandwich, of the Massachusetts Cranberry Experiment Station has been named vice president of the Sandwich Co-operative Bank by its Board of Directors. Dr. Cross has been a director since 1953.

The bank this fall is completing a new branch office at Buzzards Bay.

A merger between the Hyannis Trust and the Cape Cod Trust has been proposed and of which Russell Makepeace of Marion of the A.D. Makepeace Company will be chairman of the board if the merger is completed. Mr. Makepeace has been chairman of the board of the Hyannis Trust for a number of years. The merger bank is to be known as the Cape Cod Trust, the decision to merge now being before the stockholders of the two banks.

West Coast Tidal Wave Subsides

Cranberry growers and others of the coastal Washington area were alarmed by reports of a tidal wave late last month. Radio warnings had been given and the Coast Guard followed the progress of a tidal wave which was started by an earthquake in the South Pacific. A four-foot wave had subsided to less than three when it reached Hawaii, and there was no noticeable wave along the Long Beach Peninsula and other coastal Washington areas. However, some residents in Oregon scrambled to higher locations.

GROWER ON COMMITTEE

The 43rd annual meeting of the Massachusetts Farm Bureau Federa-



Lovely, blonde Donna Tucker is the new queen of the Bandon (Oregon) Cranberry Festival. She is the daughter of Mr. and Mrs. Howard Tucker. She is the 17th such girl to be chosen and she was sponsored by the Bandon Lions Club.

(Photo Western World, Bandon)

tion was held November 5, 6, at the Schine Inn, Chicopee, Mass. On the resolutions committee was Robert C. Hammond, cranberry grower of East Wareham.

CRANBERRY CONSUMPTION

Per capita consumption of fresh cranberries was .3 lb. in 1961, the highest figure was .7 in 1914 and per capita consumption has averaged for 1952-1961, .3 lbs. Consumers used one pound of canned cranberries in 1961, which is the highest recorded figure. (New England Homestead).

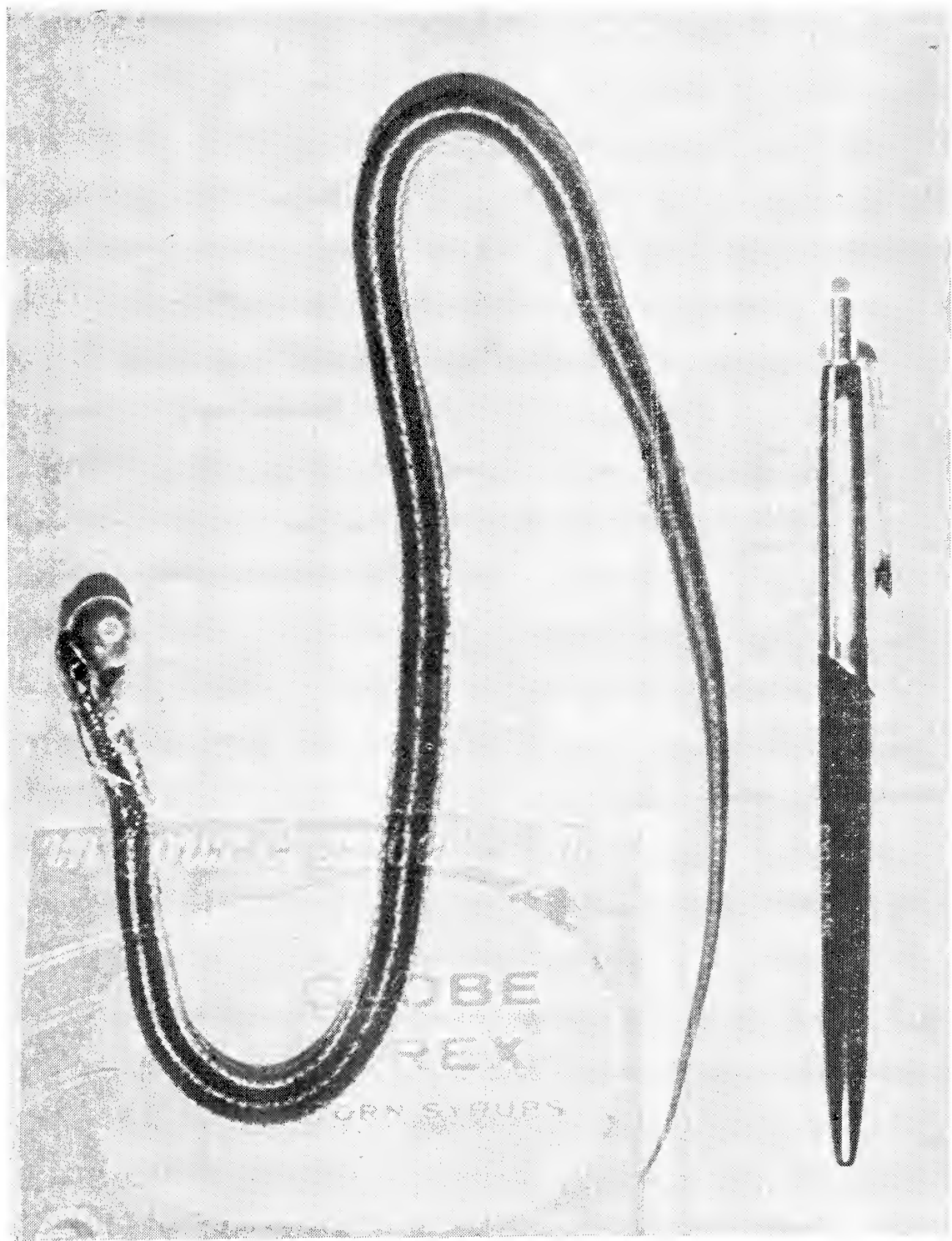
Latest USDA Crop Estimate

November 13, USDA estimate of the cranberry crop gives a total of 1,301,600 barrels, down 26,000 from a month ago and two percent under last year, but still six percent above average.

Massachusetts is still accorded 660,000; New Jersey is down to 65,000 from last year's 103,000; Wisconsin 410,000; Washington 121,000 and Oregon 45,600.



Marilyn Draeger, Fort Atkinson, Wisconsin's 1963 "Alice in Dairyland," views a display of cranberry products shown by Ben Pannkuk, president of Indian Trail, Inc. "Alice was in the cranberry area for several days for a tour of marshes and visits to Red Owl and IGA stores.



The tale of a snake and a cranberry or a cranberry : and a snake (see opposite page).

Did Cranberry Choke Snake?

**A Cranberry - Snake Story
From Bandon, Oregon, With
No Apparent Moral**

HERE'S ONE to excite your
agination . . .

Fact: This (opposite page) garter
snake was found dead with a cran-
berry tightly wedged between its
jaws.

Question: How did the cranberry
get into the snake's mouth? Was
this the cause of death?

The snake (shown slightly larger
than actual size) was found at
the Dale Terp cranberry bog. It had
been picked up by the Western
picker machine and deposited
among cranberries being harvested
from the vines.

Mrs. Terp, who teaches a first
grade class at Bandon Heights
School, remarked that this evidence
was probably not sufficient to cause
cranberry growers to make war on
the snake population, since she
could not determine whether the
snake had choked while trying to
devour the berry or whether some
weak action of the machine had
caused the phenomenon. The snake's
neck appears to have been crushed,
as can be seen in the photo.

Although the insect-eating snake
has no teeth, the berry was wedged
so firmly it remained in place
during handling by the photographer
whose irrelevant conclusion was
that perhaps cranberry juice is
the real remedy for snake-bite!

Western World, Bandon, Ore.



An untitled, but intriguing "shot" of Alice on a Wisconsin marsh. Photo shows the fibre-glass boat used by many in harvest in Wisconsin.

Add Oddities

While a snake seemingly choked
to death on a cranberry, was found
on the West Coast in Oregon, there
were a couple of oddities in the
cranberry area of Massachusetts
last month. Hurricane Ginny ap-
parently blew down a bewildered
arctic gannet, the bird being found
loozedly wandering around in a yard
in North Eastham on the Cape.

At Yarmouth a fish was found in
a holly tree in a backyard. Fish was
believed to be a sea robin and it
was believed it might have "flown"
to the tree, or been flipped off
the top of a wave by a gaint gust of

wind during the storm. In any
event, it was a very dead fish.

Meantime to return to the Oregon
cranberry-eating snake, if that is
what it was, the Western World has
been advised that such snakes do
have teeth, contrary to its first
story, which would seem only to
add to the confusion of the whole
queer nature business in October.

DR. DOUGHTY HEADS LONG BEACH KIWANIS

Dr. Charles C. Doughty, director

of the Coastal Washington Experi-
ment Station has been elected presi-
dent of the Long Beach, Washing-
ton Kiwanis. Dr. Doughty will take
office the first of January.

Dr. J. Harold Clarke, former
manager of Cranguyma Farms is a
member of the Board of Directors
as also is Leonard Morris, cran-
berry grower. At a recent meeting,
Dr. Clarke, chairman of the club's
international relations committee
gave a summary of the "political
hot spots" of the world.

"Markie" Urann Resigns From Institute

Cites Increased Duties Since Death of His Uncle, M. L. Urann and Press of Other Duties

Marcus M. Urann of Duxbury, Mass. who has been serving as secretary-treasurer of Cranberry Institute has sent his resignation to President Orrin G. Colley. Mr. Urann has been serving as a representative of Ocean Spray on the board of directors.

"Markie," in submitting his resignation said he regretted the step very much, but this was compelled by a press of other duties. He is president and general manager of United Cape Cod Cranberry Company of Hanson, one of the largest producing cranberry operators in the country. He is also president of Ocean Spray Cranberries Ltd. of Canada, the wholly-owned subsidiary of Ocean Spray.

In his resignation he stressed his increased duties since the death of his uncle, Marcus L. Urann, former president of United Cape Cod and he also said he wishes to be able to devote more time and attention to the Canadian affiliate, in which he has become very interested.

President Colley in commenting on the resignation said he was very sorry to learn of "Markie's" decision as he has always been an ardent, hard-working, "aggressive" and clear-thinking director of the Institute, but that he sympathized with the increased pressure on his time, since the death of his uncle.

Urann's letter of resignation:

Mr. Orrin G. Colley
President--
Cranberry Institute
Halls Corner, Duxbury, Mass.
Dear Orrin:

It is with deepest regret that I must tender my resignation as Secretary-Treasurer of the Cranberry Institute.

Heretofor my duties at the United Cape Cod Cranberry Company were concerned only with the growing end of our business. Since the recent death of my uncle many new responsibilities have been added to my job.

I now will have the policy making decisions of United and will be busier in the Fishing Division. The time is just not available for these outside duties.

Many pleasant memories will remain with me when I recall some of the desperately busy hours worked when there appeared no possible chance to improve the lot of our growers large and small, Cooperative and Independent.

I have rarely worked so closely with such dedicated persons as you, Orrin, and George Olsson. The people on our Board who gave of their time and judgement in a crusade for justice will also be fondly and respectfully honored in my memories.

If, in the future, I may again be of any service to the industry as a whole please count on my whole-hearted support.

Most sincerely
Markie
Marcus M. Urann

Cranberries Go Abroad This Fall

Cranberries this fall are continuing to be shipped overseas, in small, but increasing quantities. This fall some 12,000 to 13,000 cases of sauce were shipped to England and Scotland. The whole berry sauce seems to be preferred by the English and the Scottish. Some whole berry sauce was also sent this fall to Stockholm, Sweden. Some 3000 cases of sauce were also shipped to Belgium and Holland.

Shipping tags on a recent consignment of 3,600 barrels of cranberries from the United States read, Belgium, Amsterdam, England, Ireland and Scotland. Fresh cranberries have also been shipped to Bermuda. A recent appearance of cranberries was an exhibit among other products at the Third Pacific International Trade Fair in Lima, Peru. Senator Warren G. Magnuson of Washington State, where, of course cranberries are grown, was present as the representative of the United States. Sen. Magnuson is chairman of the Senate Commerce Committee.

The Institute reports that cranberry juice has become so much a part of daily life of some Americans

that a family enroute from Chicago to Ireland sent as "SOS" to Ocean Spray at Hanson and juice was awaiting the family when it put down at Shannon, Ireland, airport.

A Scottish connoisseur of cranberries recently wrote to Cranberry Institute at South Duxbury, saying he wished to try cranberry juice, but was unable to find any in his native Edinburgh.

Cranberry sauce is especially in demand during the hunting season in the United Kingdom as a tart sauce to go with game. At Thanksgiving, cranberry sauce will be served to every U.S. GI, wherever he may be, the Institute reports. The cranberry story is being told abroad as it is in this country by the film, "Heritage of Flavor." In London this film is available from Robert Anderson, agricultural attache, U.S. Embassy.

Fourth Project Report On The Foreign Market Institute Reports European Sales

A summary of the foreign market project for cranberries (Foreign Agricultural Service, USDA), for the period ending this fall has been made by Cranberry Institute, prepared by Orrin G. Colley, president. This is the fourth report.

Report mainly concerns the promotion of canned cranberry sauce in the United Kingdom. It states that tie-in arrangements were made with McFisheries Food Centers, one of England's largest supermarket chains, with smaller displans in such famed stores as Selfridges, Harrods, Gamages in London and other English cities. A limited number of supermarkets such as Food Fair also stocked cranberry sauce.

The objective had been to market cranberries the whole year around.

Sales of fresh cranberries in Belgium and Holland in prior years. "the report continues have been encouraging. West Germany remains pretty much untapped in respect to sales of U.S. cranberries but surveys by cranberry representatives and connections in the distributing trade indicate real sales opportunity once it is determined in

what form eventually U.S. cranberries could best be imported into Germany in order to sell at a price competitive with other imported brands of cranberry preserves.

A Swiss concern has been experimenting with a new type of pectin. Cranberry cooperator funds were being used to extend this to include cranberries.

During this past year the FAS project was amended to provide for the introduction, test marketing and utilization of dehydrated cranberries as a more efficient and more economical form for export than those now available. Considerable research along this line has been and is continuing to be done.

Mr. Colley reports that cranberry sales in the United Kingdom, Holland and Belgium continue but only so far on a modest scale.

Institute Invited To Amsterdam Fair

Orrin G. Colley as president of the Cranberry Institute has received an invitation, signed byerville G. Freeman, U.S. Secretary of Agriculture, to participate in the international symposium on the subject of European-American trade relations at Amsterdam, the Netherlands, from November 11 to the 15th, this being conducted in connection with the largest food trade fair ever developed by the United States Department of Agriculture, held from November 7 through the 24th.

Sec. Freeman wrote: "During the past year or so, many of us on both sides of the Atlantic have been striving to bring about a better understanding between European and American people on issues affecting international trade. While continuous negotiations are carried on between the United States and European sections on agricultural trade, issues of common concern, these negotiations are conducted on a formal basis by government officials. Leaders in Europe and America have increasingly recognized the need for supporting these government discussion with informal, constructive, non-official discussion which help to clarify the issues for the public."

He continued, this is the reason why the USDA is taking part in this European-American symposium and has invited recognized American and European leaders, representing industry, labor, consumers, science, education, economics government and agriculture to take part.

In conclusion the letter stated the Secretary was hopeful of Mr. Colley's and other Institute key members attendance at the Symposium, even though the writer was aware that November is an especially busy month for "you here at home."

Held in conjunction with the Fair was a supermarket set up under the sponsorship of the Grovery Manufacturing Association of America. Cranberries, both fresh and processed on exhibit and for sale. This display is put on in conjunction with the USDA.

Mr. Colley was unable to attend, but Joseph O. Parker of Washington, counsel for the Institute represented the cranberry industry at the event.

BELIEF WISCONSIN HIGH TEMPS HAVEN'T HARMED

There has been some apprehension expressed by Vernon Goldworthy of Eagle River, Wisconsin and some others that high temperatures in Wisconsin may have started bud swelling and that this might result in severe winterkill. Prof. George C. Klingbeil, Extension specialist in fruit production has made a trip through Western Vilas, parts of Jackson, Wood and Monroe counties, and has checked a number of marshes where he observed budding and bud development.

He is of the opinion that generally the buds are only in limited locations swelled to the point where they might be disposed to some winter damage. He reported that budding would appear to be not extremely high, and counts indicate they could be higher.

He reported the accumulative hours below 40 degrees have not been greatly less than in many other years, even though average temperatures, even though average temperatures, His conclusion, "I am seriously questioning whether we will see a great deal of winter damage that could be directly the result of warm fall temperatures."

Long Beach Notes

While the East Coast cranberry area and the mid-west were basking in summer-like temperatures (and before Hurricane Ginny's fringe battered Cape Cod) the West Coast cranberry area was hit by two bad storms. In one, winds of 74 miles an hour were recorded at Cape Disappointment, near Long Beach, Washington and in the second 80 miles an hour winds were reported at the Cape.

There were heavy rains with Cranguyma Farms reporting 4.71 inches of precipitation in five days. Cranberry harvest had been held up for a time because of lack of water for wet reel raking, but after the storm of the 14th and the 16th harvesting was resumed. Ilwaco reported wind gusts of 92 miles per hour.

By the week of the 21st Long Beach Peninsula harvest was reported about 75 percent completed, about 20 tons of berries a day leaving the Long Beach Warehouse for the Ocean Spray plant at Markham. Peninsula bogs were reported as yielding from 100 to 250 barrels an acre, an average of about twice that of 1962, even though the Washington State crop is now estimated at about 110,000 barrels.

Fresh From The Fields

(Continued from Page 6)

19th in the hook stage, followed with chilling weather during bloom along with two record breaking cold nights in August and September all helped to reduce the crop and also the size of the berries. It is doubtful as reported in the last months news if the state will go 350,000 barrels. In other words what started out as a most promising season in May and June ended in poor growing season, but wonderful harvesting weather.

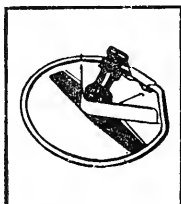
Keeping Quality

The extreme heat was having an adverse effect on the keeping quality as temperatures soared in the warehouses. Storage rots were activated with considerable end rot and black rot showing up in late October or about two weeks early. With Thanksgiving late this year it was doubtful if there would be any Searles left for fresh in the state after Thanksgiving, with only small

(Continue on Page 20)



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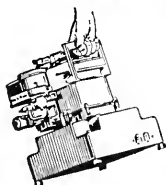


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THANKSGIVING

This is the time of Thanksgiving, which has always had a traditional involvement with cranberries and, of course, turkey. And as this holiday approaches it does seem as if the industry has more to be thankful for than in some years past. We find a better feeling, somehow, in most cranberry growers in their conversation.

We had the marketing order this year, but decided it was not necessary to make a "set-aside." As this issue goes to press, we understand that Ocean Spray may pay a better price on the 1962 pool, of which crop, you will remember, 12 percent was restricted.

IMPORTANT EXPERIMENT

The experiment by the United States Department of Agriculture to prolong the shelf and storage life of fresh cranberries, through dipping in warm water at varying temperatures and for a varying period is something which may be watched by the industry with considerable interest. The purpose is to help control certain fungus rots.

First, however, it must be borne in mind that this is only an "experiment." And an experiment may or may not bring about the hoped-for results. Nothing can be promised until the tests turn out successfully.

However this "time and temperature" dip in warm water has proven successful in peaches, sweet potatoes and sweet peppers, and some preliminary tests last fall gave indication the process might be of value in fresh cranberries. A stronger and larger fresh market would be of great aid to cranberry growers and there has been much interest in recent years in all areas in improving the quality of fresh fruit. If a better quality pack of fresh cranberries could be placed on the market, and then kept there longer without much spoilage this could go a long way toward increasing sales and repeat sales—and possibly at a better price.

We cannot but help feel flattered and honored by the fact that for the second year the directors of the Cranberry Institute have voted a group subscription to every known cranberry grower, or more ac-

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Editor and Publisher

EDITH S. HALL—Associate Editor
Wareham, Massachusetts

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curately every known cranberry property in the United States. If the directors had not felt that our publication was of value to you as a grower they would not have done this again.

This action can only put us on our mettle to merit this confidence and help us to provide for you the very best publication for cranberry growers the country - over that we can. If you have any suggestions as to how we may improve CRANBERRIES we would be pleased to receive them.

SERVING WISCONSIN

Fresh From The Fields

(Continue from Page 17)

amounts of McFarlins and Howes. Here again except for the hailed berries, the crop going into storage appeared to be of excellent quality, but the hot weather took its toll. Some mechanical damage was also noted on the berries, which should call for some needed changes in harvesting and drying.

NEW JERSEY

Extreme Variation

The month of October was one of extreme temperatures. It was the fourth warmest October in the 35-year history of this weather station, the maximum average being 72.4 degrees, exceeded only by 75.5 degrees in 1947, 72.6 degrees in 1946, and 73.6 degrees in 1941. There was

a prolonged Indian Summer with balmy temperatures, but cold snaps were also frequent. The maximum temperature was 83 degrees and there were 6 days with temperatures of 80 degrees or over during the month.

Cranberry growers were issued frost calls on 13 separate nights and in some instances, because of the lack of water, there was frost damage to fruit. Cranberry bog temperatures as low as 18 degrees were reported and several times in the low 20s. On the upland there were 13 nights when the minimum temperatures were in the 30s. The average minimum temperature was 42.4 degrees, making it the ninth coldest month. The mean average temperature for the month was 57.4 degrees, 0.8 degrees above normal.

Driest October

Precipitation during the month was

only .26 of an inch, almost 3 inches below the normal for October, making it the driest October in this weather station's 35-year history, and the fourth driest month of all. The three drier months were .14 of an inch in June, 1949; .18 in July, 1955; and .21 in September, 1941. Total rainfall from January through October was 26.51 inches, about 10 inches shy of the normal.

DIGEST CRANBERRY COVER

Reader's Digest, with its high circulation for its November cover had a Pilgrim picture, an hour glass, fall produce and an old-fashioned cranberry scoop spilling over with red berries.

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CRANBERRIES M a g a z i n e

Ocean Spray News

PUBLISHED MONTHLY

Ocean Spray is Testing New Products for National Market in 1964

Ocean Spray fervently believes that new products will play an important role in the future of the cranberry business, broadening the usage and consumption of cranberries, expanding the market and increasing returns per barrel.

Currently, Ocean Spray has two new products in test markets and three new products being tried by homemakers across the country. From this research, the cooperative aims to have a minimum of one new product on the national market in 1964.

Ocean Spray Cranberries take the Spotlight

OVERSEAS, cranberries are catching on. In Saudi Arabia, they are served at feasts put on by the U.S. oil companies to entertain Near East princes.

Ocean Spray has also shipped cranberries and cranberry products to Belgium, Holland, England, Ireland, Scotland and Bermuda.

AT HOME, impressive results from the UMI Fresh Cranberry Campaign are showing up in important publications, many of them in color.

Baking Industry featured cranberries in color on the September cover with 8 full pages inside of cranberry recipes. Other institutional magazines carrying cranberry recipes are School & College Feeding, Hospital & Nursing Home Feeding, Drive-In Management.

The New York Times Magazine did cranberries up in color, and features are scheduled in Washington Post, Milwaukee Journal, Spokane Review, Philadelphia Inquirer, to name a few, and in LOOK Magazine soon, Cranberry Relish Grand Marnier.

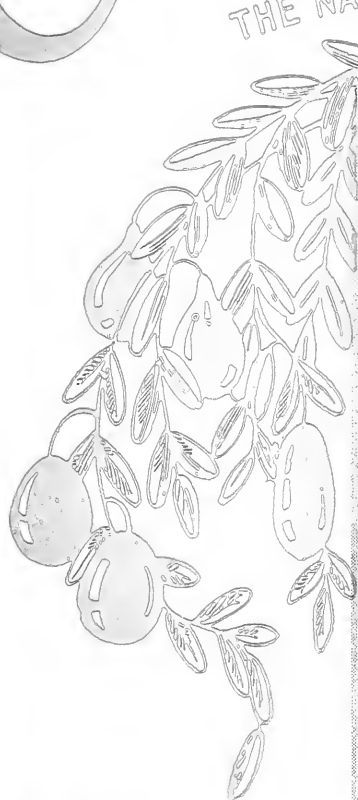
IN DEPARTMENT STORES, cranberry sauce, cranberry juice and fresh cranberries, along with Ocean Spray posters, have been prominently linked with Cranberry Red Fashions. Over 200 stores have featured Ocean Spray in window displays and many have served Cranberry Juice to Cranberry Red shoppers.

IN HOMES, Ocean Spray's new Fresh Cranberry Recipe Book is very much in demand. In the month of October, alone, the Cranberry Kitchen sent out 40,000 cookbooks in answer to requests. Many came from the coupon on the bags and others from announcements by Good Housekeeping, utility companies and TV.

Also reaching homemakers with new ways to serve cranberries are 78 different food demonstrations on TV or in utility company classes. In time for the Holidays will be a special 3-product demonstration kit for telecasters put out by Washington State Apple Commission, the Wine Institute, and Ocean Spray's Cranberry Kitchen.

Cranberries

THE NATIONAL CRANBERRY MAGAZINE



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Good Fresh Fruit Clean-Up

There seems little question but there will be a good fresh fruit clean-up with the ending of the Christmas market. "Gibby" Beaton, fresh fruit sales of Ocean Spray says shipments were slow in October (extremely warm weather) but brisk through November and December and latter sales were all at \$4.65 FOB.

From independents and Ocean Spray comes the word all fresh fruit will be cleaned up by the first of the year.

Yet barrels shipped from Massachusetts in fresh form have been down from last year, the figure for December first was 212,885 in 1962 and 116,675 this year. Beaton said that of these shipments Ocean Spray had sent about the same volume as last year. A very considerable amount of quality fresh has been

set aside by Ocean Spray for cocktail, demand and sales for which are reported "zooming," reflecting for one thing, Ocean Spray's national distribution and advertising of this popular product.

The outlook at the present time, Beaton said, is that fruit in the freezers will be considerable less than last year by next August.

New highs were reached in October sales for Ocean Spray sales of processed goods as represented by cases actually sold and invoiced.

Ocean Spray Closes 1962 Pool at \$9.41

Ocean Spray directors have reported the final payment on the 1962 pool of \$9.41, cash, plus a retain of 25 cents in stock. This is based on

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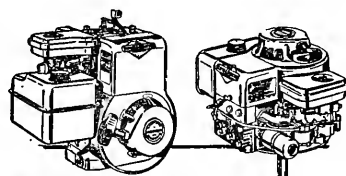
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the entire crop, which that year had the 12 percent "set-aside;" actual payment on the 88 percent sold would be \$10.69 per barrel. The 1961 pool was closed at \$8.14 in cash with a stock retain of 23 cents.

The Board of Directors also voted to make a second payment of \$1.50 per barrel on the 1963 pool and this will be made by the end of January.



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Ocean Spray Notes

NEW DIRECTOR of research and development at Ocean Spray, Stanley I. Skelskie, has an excellent background of more than ten years experience with another cooperative, the Welch Company, which has made tremendous progress in new products in the past decade. Most recently Mr. Skelskie has been with the Loblaw food chain in charge of research and quality control in their private label products.

NEW COOKBOOK of 22 Fresh Cranberry Recipes is a hot contender for the top spot on book popularity polls. As of November 22, the Cranberry Kitchen had sent out over 70,000 of these Ocean Spray recipe books and some 10,000 requests were in the process of being filled. Requests are coming in from the berry bags, TV and utility companies and the October Good Housekeeping. An additional 10,000 has been sent out by the Publicity Department bringing present total above 90,000.

NEW RECORD is reached for percentage of cranberries in Ocean Spray freezers as compared to berries in outside freezers. Increased freezer capacity in the Bordentown, N.J. plant, North Chicago and Hanson plants ups the percentage of berries in Ocean Spray freezers as compared with those in outside freezers to the highest figure in the cooperative's history. This means a substantial saving to Ocean Spray as the cost of outside freezers is larger than the cost of the cooperative's own freezers.

Cranberries And "Cranberry Glass"

A full-page color spread concerning cranberries appeared recently in the Wisconsin Capital Times, Madison, prepared by Mrs. Mary B. Hopkins, wife of James D. Hopkins, of the Hopkins Agricultural Chemical company of Madison, a formulator and distributors of agricultural chemicals to Wisconsin cranberry growers. Mrs. Hopkins, among her other activities, is food editor for the Times.

Mrs. Hopkins writes of two sym-

bols of elegance on the American dinner table cranberries and cranberry glass "both take our thoughts immediately to wind-swept, wave-washed Cape Cod.

"Cranberries, because they've been growing them for unknown centuries, long before the coming of European settlers, Cranberry glass, because the beautiful light-ruby glass was blown in Sandwich, Massachusetts on the Cape, not far from the cranberry bogs, from 1830 to 1888. In the mid-19 Century, both of these products were on the costly side. Of cranberries it was said in 1859 ". . . there are those who are willing to pay an almost fabulous price for the berry. . . it is the rage among the rich."

Mrs. Hopkins continues that cranberry glass was probably the most expensive glass made in 19th Century America, one reason being that a full ounce of gold had to be added to the vat of "cooking" glass in a very complex process; that on one century-old price list a cranberry glass epergne was offered at eighteen dollars, a great deal of money in those days. Today authentic cranberry glass has become even more precious as an antique.

She adds that while cranberries although still "elegant" are now fare for any budget. She then tells how cranberries today are available the year-round and concludes with three cranberry recipes.

Lulu Island Crop Double Crop 1962

The total cranberry crop of the Lulu Island and Vancouver, British Columbia area this fall has now been established at 800,269 pounds which is about double any previous production by British Columbia growers. Of this production it is reported Big Red Cranberry Company, Ltd. has close to 6000 barrels.

Northern Peat Moss Company, Ltd. second largest producer is arranging to obtain additional varieties of cranberries, including some of the hybrids and early varieties to spread the harvest season, and to provide berries for the fresh fruit market. One variety requested from Vernon Goldworthy of Eagle River, Wisconsin was for Ben Lears.

Mass. Cranberry Station and Field Notes

by Prof. William E. Tomlinson

Dr. Cross's Journey

A letter from Dr. Cross mailed from Edinburgh, Scotland on December 2 was received by the Cranberry Station "gang" on December 6 reporting on the trip over and his safe arrival in the British Isles. Dr. and Mrs. Cross and Tim Cross set out from Boston to New York by plane on the morning of November 30 and if you remember how the wind howled that morning you can imagine that it was far from a smooth flight.

They left New York at 6 p.m. Saturday with better flying conditions than earlier in the day. Refueled at Gander, Newfoundland and then on to Iceland where they stopped for a day. They flew over the new volcanic island that recently formed just off the coast of Iceland on their trip to Scotland from Reykjavik.

Water Still Scarce

Getting back to Cape Cod and cranberry growing it is time to consider winter flooding. In spite of adequate rainfall in recent weeks, the precipitation deficiency of the summer and early fall has not been overcome. The water table is still lower than normal so that water for winter flooding is still a problem in some instances.

Because of this, advantage should be taken of all precipitation from now on to insure protection from winterkilling conditions that may soon be with us. Get the planks in and collect all the rain that comes. It will reduce the amount of pumping required later.

Committee Meeting

The Cranberry Extension Advisory Committee will meet at the Cranberry Station on December 23 to formulate plans for the winter cranberry club meetings.

Polish Scientist

For the next 10 months Dr. Michal Brzeski of Poland will be at the Cranberry Station working with Dr. Zuckerman on nematode projects. Dr. Brzeski received his doctorate at the University of Warsaw. He is married and the father of one son.

Cranberries Are Again On Plenty Foods List

For the third consecutive month cranberries are on the Plentiful Food list of the USDA. Cranberry Juice is on the breakfast menu of the month and cranberry sauce is on the dinner menu.

"Cranberries," reads the USDA monthly bulletin, "bright, red cranberries are in tune with Christmas fare. Use this captivating fruit as a relish, in salads, desserts, cranberries bouillion, spicy fruit shrubs. Make a cranberry parfait by stirring whole cranberry sauce into vanilla ice cream, or add some of the whole berries to tossed salads for crunchy goodness."

There is a recipe for Cranberry Fruit Bread — "To prepare 8 loaves, 9½X5X3½ inches; sift together four pounds all-purpose flour, four pounds sugar, ¼ cup baking powder, four teaspoons baking soda and eight teaspoons salt. Grate eight medium oranges, and add to dry ingredients. Squeeze juice from oranges, and add to dry ingredients, Squeeze juice from oranges, pour into large measure.

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add one cup peanut oil and enough boiling water to bring liquid measure to 5½ cups.

Make a "well" center of dry ingredients and pour in liquid. Add eight eggs, well beaten. Stir only until dry ingredients are dampened. Fold in one quart chopped walnuts and three quarts coarsely chopped fresh cranberries. Divide batter between eight greased and wax paper lined loaf pans. Bake in moderate oven (350 degrees F.) one hour or until toothpick inserted in center comes out clean and bread is golden brown. Remove bread from pans

and cool. For easy slicing wrap and store overnight in refrigerator."

Hints to cranberry merchandisers include; a small display of cranberries at every likely tie-in item point; such as in the poultry, meat, seafood and baking ingredients departments; central cranberry displays; hanging "Cranberry Chains" at fresh display points, and/or trim store windows with chains; give shoppers a big stock to choose from; also remember frozen cranberry products will also be on the move — give these a prominent spot.

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Cranberry Dainties

(as pictured in Ocean Spray Christmas Greeting on Back Cover)

Festive and different for holiday time, Cranberry Dainties are easy to make. Just follow the simple recipe from Ocean Spray's Cranberry Kitchen.

- 1 one-pound can jellied cranberry sauce
- 2 packages orange flavored or red flavored gelatin
- 1 cup granulated sugar
- ¾ cup chopped nuts

Beat cranberry sauce until smooth and then heat. Dissolve gelatin in hot cranberry sauce. Add 1 cup sugar and stir over low heat until dissolved. Add nuts. Pour into a greased 9 x 5 x 3 loaf pan. Refrigerate until firm. Cut into 1 inch squares; roll in granulated sugar. After 24 hours, sugar again. Makes approximately 3 dozen 1-inch jelly squares.

For a larger amount use 3 cans of jellied sauce, 6 packages gelatin, 3 cups sugar and 2 cups chopped nuts. Pour into 3 loaf pans and proceed as above directions.

For other cranberry serving ideas, write Ocean Spray, Hanson, Mass.

Ocean Spray Meets January 8th

Annual meeting of stockholders of Ocean Spray is to be January 8th at Hanson, Mass., from 2 to 5 p.m. This will be the first winter meeting of the cooperative, it previously having been held in August. The by-laws to permit this were changed. This will be the first such meeting for Edward Gelsthorpe, executive general manager appointed last spring. There will be, among other matters the report of the fiscal year which ended August 31, 1963.

At the meeting of the directors, all were renominated with the exception of veteran director David Pryde, of Grayland, who declined to stand for renomination from the West Coast. Cecil Richards, also of Grayland is the new nominee, the board to be elected at the annual meeting in January.

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of December 1963 — Vol. 28 No. 8

Published monthly at The Courier Print Shop, Main St., Wareham, Massachusetts. Subscriptions \$4.00, Foreign, \$5.00 per year
Second Class Postage Paid at Wareham, Massachusetts Post Office.

FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Month Was Warm

The month of November was on the warm side, but not the beautiful Indian Summer weather of October. By the 21 the plus degrees totalled 57. The 22nd, the day of the assassination of President Kennedy was an extremely beautiful early winter day but this was followed by a blustery southeaster the following day which added much to the rainfall on the period.

On the 25th the weather turned sharply colder.

End, Wild "Hurricane"

November ended on a wild note when a violent southwest gale blew in raising tides and causing extensive flooding over many parts of Plymouth and Barnstable Counties. The morning tide, high at 8:03 a.m. rose to a point of 9.5 feet, which is 5.5 feet above normal, although a weather bureau warning to Army Engineers had indicated a rise of 4.7 above normal. From four a.m. until 10, the wind velocity average was 70 miles an hour (75 is hurricane force) and there were frequent and steady bursts of 80 miles an hour.

Wareham Low Places Flooded

Wareham's lower Main Street was flooded, water sweeping entirely over a state highway bridge, the flood rising in a number of the business establishment (including the Wareham Courier, where CRANBERRIES Magazine is printed) causing considerable damage. Boats swept ashore, some low-located industrial business suffered loss, highways washed out, cottages on waterfronts wrecked or moved.

Although the rain seemed heavy in its violence, only .97 inch fell as recorded at Cranberry Station, East Wareham, although there was up to three at various points.

The storm was alarming in its sudden unexpected violence, just as many people were arising, and it had all the effects of a minor hurricane,

and was the worst storm since Hurricane Carol, nine years ago. Area loss from Connecticut to Maine was estimated at a half million dollars.

This storm brought the rainfall total to the month to 5.63, with the average being 3.89 inches, the month was unusual in a number of ways. The monthly temperature excess reached a total of 103 degrees or more than 3 degrees a day. The ground had not been frozen at all during November. November was unusually cloudy and rainy; this following an October which had the record number of sunshine hours with 82 percent of the possible hours.

December Starts Cold

December began with bitter cold, 18 being reached at the Cranberry Station, Dec. 2 the lowest reading of the season to that date.

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December Starts Cold

The first five days of December were definitely winterish—with a few snow flurries in the cranberry areas, considerable snow to the north in New England. Temperatures at the end of that period were 31 plus.

Some Bogs Winter-flooded

By the 13th the minus was still 31, the ground was beginning to freeze up slightly even though there was no ice, or at least very little. Some bogs were flowing up for winter, although in some instances this was slow as water supplies have not yet recovered to normal.

First Real Snow

The 12th brought the first real snow of the winter, although official winter was nine days away. This brought from three to six inches and more of snow in parts of New England, but only one inch was measured at the State Bog, East Wareham. Temperature the following morning was down to 22. Rainfall, to that date, not counting the snow was only 1.44 inches, with the normal for December 3.90.

WISCONSIN

Precipitation Low

For the second consecutive month, November was above normal in temperature and below normal in precipitation. Temperatures averaged from four to seven degrees above normal, with the west central part of the state being the warmest. Precipitation totalled near the normal in the central and north, but below in the east and south. Normal for the month being about 2 inches. In the far north a freak snowstorm on the 12th and 13th, dumped over a foot of wet snow in a belt 40 miles deep and 100 miles across. This was caused by cold north winds blowing over a rather warm Lake Superior. Soil moisture remained low throughout the state, water tables were the lowest in years and lake and river levels were the lowest since the drought years, especially so in the northwest. There was little hope for any appreciable amount of precipitation in December as the extended forecast called for temperatures to be above normal and precipitation below normal.

Nov. Bad for Storage Rots

The second month of above normal temperatures was poor for berry storage. Storage rots were prevalent in all areas and more mechanical bruising than normal was in evidence, caused by berries being in deep vines and bruised as they were forced through the heavy leaves and stems. For the second consecutive year it appeared as if shrinkage will average between 15 to 20 per cent.

Could Have Sold More

Only a few thousand barrels of berries remained in the state after the end of the month. Fresh berries moved well for Thanksgiving and all handlers reported they could have sold substantially more fruit. There will not be any fresh berries in the state for the Xmas season, a condition which is not good for the mid western housewife who likes Wisconsin berries.

Much Work

Growers were able to do considerable extra marsh work due to the good outdoor weather. Some bed renovation work was underway and considerable bulkhead and dyke work was done.

NEW JERSEY

Equalization

Nature's equalization process was in evidence in November as an excess of precipitation occurred to make up for the extreme dryness of the previous month. A total of 6.33 inches of rain, about 3 inches more than normal and the second wettest November on record, followed the driest October on record, only 0.26 of an inch. Rain occurred on 10 of the 30 days in November. From the 6th to the 8th of the month a total of 3.14 inches of rain occurred. This was the largest single rainfall ever in November and one of the largest for so late in the year.

Total Rainfall

The total rainfall for the first 11 months of 1963 is only 32.89, or about 7 inches less than normal. The total annual rainfall averages 43.16 inches at the New Lisbon Weather Station so it is almost certain that this year the total will be below normal. The driest years recorded were 33.24 in 1930 and 34.04 in 1955, so it does not

appear that 1963 will be a record dry year.

Weather "Balmy"

In regard to temperature, the month was almost balmy. There were 12 days in the 60s and one summer-like day of 73°. The average temperature for the month was 48.7°, or 2.5° warmer than normal. The abundant rain and warm weather forced an unusual amount of freakish blossoming of various plants. Some blueberry growers reported not only blossoming but actual setting of fruit and even some ripening. Strawberries also were tricked into blooming and fruiting. At Hammonton several thousand pints of strawberries were picked and sold.

WASHINGTON

1963 Crop 110,000

The Washington cranberry crop turned out to be the second highest on record, the berries turned into Ocean Spray totalling 110,000 barrels. This accounts for about 98 to 99 percent of the crop. In the first part of the season berries were of good quality and nice size. However, as the season advanced the fruit which was left on the vines showed a very rapid and very high percentage of rot.

Vapor Rot

Dr. Doughty reports that the plant Pathologist, Dr. Folke Johnson of the Western Washington Experiment Station has been checking into the causes of the rapid breakdown. It appeared that this is due primarily to the volatile gasses given off by the berries themselves. Indication was that the longer the berries stay on the vines after they reach their peak of maturity, the greater is the amount of these gasses that are produced after the berries are harvested. After harvest when the berries were placed in containers where the gasses are confined with the berries they apparently cause them to break down very quickly.

Problem Being Studied

This problem is being studied and several promising leads are being discovered, Dr. Doughty believes, and it is hoped to have information by next harvest so that the problem can be prevented from occurring

(Continued on Page 20)

Techniques That Sell United States Products Aboard

Editor's Note: The following is a partial reprint of an article in the November 18 issue of "Foreign Markets, a USDA publication. It tells how agricultural crops of this country, including cranberries, even though not mentioned by name, are introduced into over-seas sales, and this field is one of the important directions in which the Cranberry Institute, in the interest of all the industry is directing its efforts.)

By JAMES O. HOWARD, Director Trade Projects Division, FAS

The joint industry-government program to promote the sale of U.S. farm products in foreign markets has been a new venture for American agriculture, but some of the basic principles and techniques had already been established through years of experience by business and promotional concerns in the United States. The trade and government personnel cooperating in market development have benefited from this experience and have been able to borrow and adapt a number of time-tested techniques for market promotion overseas, as well as develop new techniques.

Like promotion in the United States, foreign market development starts with an analysis of the problem and the markets it wants to reach. The first step has often been made by study teams staffed by the cooperating trade associations and the Foreign Agricultural Service. These teams visit the countries, confer with the agricultural attaches, and talk with government officials, and various agricultural and industry groups to get all available information on the problems and opportunities in each area. When more detailed information is needed, private research firms are often employed.

Careful pre-planing

Before specific plans are decided on, target groups are selected and the amount of promotional money to be made available is determined. The market development expenditures of government and industry add up to several millions of dollars, but the amount available for any

one commodity shrinks perceptibly when the total has to be divided and subdivided for many commodity programs in a dozen principal markets and many lesser markets. It thus becomes essential to target the efforts and to select techniques where maximum results can be expected with a minimum of expenditure of market development funds. Achieving a multiplier effect has to be emphasized.

A successful and relatively inexpensive technique, particularly for new programs, has been bringing teams of key leaders of foreign governments, trade associations, and business firms to this country to show them how our commodities are produced and marketed. They return home with a much better understanding of what to buy and where.

Trade team visits

The reverse of this technique has been visits to foreign countries by U.S. industry groups. Our poultry industry has found it quite useful.

An important phase of the market development program is in serving the overseas trade. Technicians of the cooperating associations and FAS visit foreign users and through group meetings and visits to individual plants help solve technical problems in the use of U.S. products.

Informing and servicing the trade takes many forms. The feed grains industry has frequently teamed up with the soybean meal and tallow promoters in educational programs to inform feed users and manufacturers about the science of feeding and how the ingredients should be mixed and used for optimum production of live-stock. There are also baker training schools, and instruction in the manufacture of noodles, milk products, soybean products, and other food products making use of U.S. agricultural commodities.

One of the most effective means of introducing and publicizing U.S. agricultural products has been through exhibits at international trade fairs and other special events attended by an estimated 50 million persons. A large number of business contacts are made at these exhibits, and the agricultural trade exhibitions make news that is widely featured by informational media overseas.

The cooperating U.S. trade asso-

ciations have their own exhibits and demonstrations of agricultural products, sometimes in conjunction with international trade fairs. Others are held at trade meetings and promotional programs in key distribution and consuming centers.

Newsmaking activities

The technique for producing newsworthy events for promotion of agricultural products has been used with great effectiveness by several of our cooperators.

Introducing new products to foreign consumers has been one of the most interesting phases of market development. A wheat team from Japan took time out to watch an American baseball game. They liked the hot dogs that were sold there, and upon returning to Japan helped introduce this American custom into the Nipponese ball parks. American doughnuts are being introduced to Africa and Asia, and "American" pizza in Japan.

Consumer information

Educating consumers is an essential part of the market development job in many countries. In Japan, the U.S. Wheat Associates designed kitchen busses to demonstrate the uses and advantages of wheat products. The program worked out so successfully that the busses have been taken over by the Japanese Government to teach nutritional education.

Movies, film strips, slides, radio, television, leaflets, and newspaper releases have also been used with telling effect by several of the cooperating associations. These usually bring out points of information and interest that will help condition the minds of foreign consumers to expanded purchases of U.S. agricultural products.

Direct advertising plays an important role in the promotion of U.S. tobacco. The U.S. tobacco associations work with foreign cigarette manufacturers and contribute part of the advertising cost for brands using a high percentage of U.S. tobacco. These campaigns have been successful in Japan and several other countries.

A good start has been made in developing techniques for the promotion of agricultural products, but more ingenuity and hard work are

(Continued on Page 20)

The Wisconsin Cranberry Season

1963

by

**Dr. George L. Peltier,
Cranberry Consultant
Wisconsin Rapids, Wisc.**

The winter was one of the coldest in years, with temperatures below zero for weeks on end. Winter floods were put on in mid-December when temperatures dropped to -15° F. The lowest temperatures recorded on the bogs was an official -38°. Below zero temperature persisted off and on until March.

Since March of 1962 a cycle of dry weather has been in the making and so the winter was characterized by a lack of snow cover, which favored sanding, altho it was a mighty cold task.

Frost reached depths of four feet or more. By mid-April frost was gone and with milder temperatures the winter floods were removed mostly by the third week in the month. Generally the vines came through the frigid winter in good shape and with a good fall budding the vines made a good start in May when temperatures ranged from the mid-eighties to a low of 18° in the Cranmoor area. Temperatures of 28° or below was recorded on 15 days in the month so at times the vines were under water. Only two showers of an inch or more occurred during the month, and as a consequence 24 clear days prevailed.

June Starts Off Well

June started off with a bang, with temperatures in the high eighties and low temperatures in the sixties for a period of nine days which pushed the growth of the vines. However, by the third week bog temperatures for four nights ranged from 28° to 24° F, which may have been responsible in part for injury to the developing hooks and early blossoms. The injury apparently was not so much the freezing temperatures, as it was the height of the flood (over the vines), which in some instances stayed on for two or more days. It was immediately followed by a week of temperatures in the high eighties and with minimum temperatures in the sixties, enhancing flowering. Full bloom for most varieties in the central area occurred the first week in

July. Again only two showers of an inch or more occurred in June, with 24 clear days.

Poor Setting

Thus while condions for pollination prevailed the crux of the subsequent poor setting may have been due to height and length of the flooding from June 20th through the 24th. Another factor which may have contributed to the poor set was the prevailing hot dry weather which seems to have had an effect on nectar production and in turn on the activities of the bees.

Both July and August were fairly ideal temperature-wise, with temperatures in the eighties altho in the main minimum temperatures were rather low, altho not at any time below freezing in July and on only two night in August. Rainfall, however, was deficient as again only two showers were recorded in July, and only one in August of one inch or more, while sunny days prevailed.

Water Low

In some areas as reservoirs were gradually depleted from lack of rain and excessively high evaporation during the summer, there appeared to be a tendency to neglect proper irrigation of the beds and this may have contributed in part to the final yields. In the Cranmoor area considerably more water was pumped from the Wisconsin River to the cranberry ditch than for many previous years. By the end of August the top berries were beginning to take on some color.

Flooding was necessary during three periods with minimums ranging from 23° to 29° F. The month was sunny and only one inch shower fell. Berries colored up well and harvest started a week early due to dwindling amounts of water. Growers, much to their surprise, found yields on some bogs were down as much as 25%. Thus, all estimates made previous to the harvest were on the high side.

October Too Warm

October was too warm and broke all previous records. No rain occurred during the first three weeks so that ideal conditions for harvest prevailed, which was completed for the most part by the 15th. Altho yields

were disappointing to many growers the berries as they went into storage were of superior quality.

However, the continued high day and night temperatures during October were extremely unfavorable for storage and as a consequence in spite of the good quality berries, shrinkage in some warehouses was terrific, which added to the task of packing a Grade A fruit.

To summarize temperature-wise, maximums were near normal, while minimum, mean, and bog temperatures were below normal for the entire growing season in the Cranmoor area. Likewise the total degree days (50° F) were below normal. The growing season was characterized by the fewest rainy days on record, with periods of 14 to 40 days without any appreciable rainfall, the latter period running from August 3 to September 12.

Temperatures above normal and lack of precipitation is becoming more serious with the approach of winter. Unless the drought is broken before it freezes up, the future looks rather dismal with water tables receding rapidly and many reservoirs at a low ebb. Let's hope that a dray cycle similar to the one in the thirties will not materialize.

Hail Damage

Hail in varying amounts occurred 10 times in some of the cranberry areas of the state with slight to severe damage, beginning in May and continuing into early October. Some growers especially in the area from Millston to Valley Junction were hit two or more times, with considerable loss of berries knocked off or bruised in August and September.

Insects

Black headed fireworms appeared about one week late, generally in small numbers on well managed bogs. The second hatch appeared in mid-June in light amounts. Very few third hatch worms were observed. Millers of the second brood were active early in July and shortly thereafter the worms appeared locally on some bogs in numbers sufficient to cause areas of "brown out." Millers were active in mid-August in numbers depending on the control on the first and second brood of fireworms. Generally fireworms did less damage than usual.

Fruitworms, too, appeared in smaller numbers in mid-July. This was also true of the second flight, while little or no third flight showed up in August. When a complete dusting program was currently used, tipworms, leafhoppers and other insects were reduced to a minimum. The overall losses from insect pests were below 1%.

Again where three applications of fungicides were used (prebloom, post bloom and the first week in August) the incidence of field and storage rots, plus the two fungal spots were greatly reduced. It was again observed that the application the first week in August appeared to be of some value in holding down the amount of end rot in storage. End rot, due to unfavorable storage conditions was more evident this fall in the warehouses.

Due to unfavorable conditions during May the total volume of solvents employed was much less than in 1962. Some growers had moderate success with Weed-Rhap, especially with sticktights, altho other annuals and some perennials were partially controlled. Too it was also effective vs. ditch weeds, when applied in dry ditches. Some Dalapon was employed vs. wideleaf and other stooling sedges primarily by the swabbing technique. Very little Simazine was used since it was found that the chemical persists in the soil thru the second season with some injury to the young vines.

With the release of Casoron for experimental purposes in April on a prorated basis, a number of growers applied this material with moderate success so far as weed control was concerned. There is no doubt that Casoron is an effective herbicide vs. a large number of bog weeds including annuals like ragweed and sticktights, perennials such as horsetail, marsh smartweeds, buck bean, five finger, arrowheads, plus a large spectrum of grasses, sedges, and rushes.

Several species of ferns, however, seem to be resistant. Based on my observations over the past three years fall applications seem to be more effective vs. stooling grasses and sedges than when used in the spring.

The following disadvantages in the

use of Casoron were noted during the present season. Improper dosages due primarily to the mechanical defects of the spreader. Injury to the vines was noted when the herbicide continued to flow when the spreader was stopped, overlapping, and in the turns at the ends of the beds. Initially excessive amounts of Casoron and uneven distribution of the material over the beds.

No instances were observed where the vines were completely killed, altho enough injury occurred to inhibit new growth for a season or more. Too many instances were noted where vine growth was inhibited for several weeks. Flower formation, pollination and subsequent setting was also affected.

In July it was observed that the tips of the new growth became brittle and they were easily snapped off. This same effect was noted also on hardhack and leather leaf as well as on some of the long stemmed sedges. By the end of August this brittleness seemed to have disappeared and budding proceeded normally. Perhaps with the continued use of Casoron other side effects on the vines may appear. So far it looks very promising but correct amounts and precise distribution is imperative to avoid injury or growth inhibition of the vines.

Bulk handling of the berries in pallets is taking hold rapidly since much less labor is involved and the berries are subject to less bruising than formerly with sugar sacks. It is decidedly a step forward in the improvement of the quality of the berries for processing.

Additional research is necessary before the bulk storage of berries proves successful and likewise more data over several complete seasons must be accumulated to determine if the "wind mills" for frost protection will be practical.

May I add that for the first time in the 13 years I have served as a consultant to the growers in Wisconsin, the surplus problem will not hang over the industry this coming season.

THE TREND

In spite of much talk to the contrary, fruit consumption in the U.S. has increased during the last 50

years. On the per capita basis the increase has been from 158.8 pounds in 1910 to 198.2 in 1959. Ever since World War II consumption has been in the neighborhood of 200 pounds of farm fresh-weight equivalent.

And when one considers the increase in population that has occurred during the last 50 year period, he can readily see that Americans still like fruit.

On the other hand, the shifts in the various commodities are large. Citrus compared to the apple is the striking example. In 1910 citrus consumption was 17.8 pounds per capita; in 1959 it was 82.8. Conversely the per capita use of apples was 62.2 pounds in 1910, and 29.3 pounds in 1959.

Fruit consumption other than citrus and apple has also increased. In 1910 the figure was 78.8 pounds; in 1959 it was 86.1 pounds.

The help from the processor is shown in the tremendous increase in per capita consumption of processed fruits. Practically no citrus was processed in 1910 whereas in 1959 only 33.9 pounds were consumed fresh, and 48.9 were used in processed fruit.

The apple has shown no such increase in processing. In 1910 2.8 pounds were processed, whereas in 1959 7.4 were processed and 27.9 pounds were used fresh. For fruits other than citrus and apple the amount processed has also increased. The amount was 18.8 in 1910 and 41.4 pounds in 1959.

Cranberry Growers

THANKS

for making my bee
business so successful.

May 1964 bring you
health and happiness

John Van de Poele

800 Hancock Street
Abington, Mass.
Tel. 878-5756

Long Beach Peninsula Was Site Of Original Washington Bog

Experiment Station also Located There—Bogs Larger than Grayland—All Fruit Goes Processed—Region has been called "Cape Cod of the West"

by

Clarence J. Hall

Long Beach, Washington has often been called the "Cape Cod of the West." It is in this district that are located about 400 of the 1100 cranberry acres of the State of Washington. This is according to one estimate, and another gives the estimate as only 250 acres. But here is grown from 30 to 40 percent of the Washington production. The growers number about 35.

It is at Long Beach that the Coastel Washington Experiment Station, (formerly the Washington Cranberry Blueberry Station) was established as far back as 1924, and it was on the Long Beach Peninsula that cranberry cultivation in the "Evergreen State," was first begun on a permanent basis. This was at Seaview, a community just to the north of Long Beach, in the early 1880's when Anthony Chabot, a French Gardner planted a sizable bog to McFarlins, Jersevs and a few Cape Cod varieties all of eastern origin and a member of the Chabot family is still a grower although not at the original location. He is Elwell Chabot, one of the larger growers of the Long Beach area and he was visited on our recent West Coast trip. "The history of the first bog was fully published in CRANBERRIES, issue of March, 1945.

A Native Cranberry There

According to Dr. F. B. Chandler's "Cranberries in Washington," 1956, Lewis & Clarke, the explorers found the Indians gathering a native cranberry, and Dr. Chandler refers to an un-named editor in Seaview, who said a John Peter Paul tried to develop this wild berry in 1869. Strange to eastern cranberry growers is the fact that Chinese labor was used extensively to build the first bogs and then and later native Indians helped to harvest the crops.

Long Beach about 35 miles south of the Grayland area which we discussed last month its gateway is the fishing town of Ilwaco with its magnificent North Head nearby and this forms the northern land barriers of the estuary of the mighty Columbia River. The peninsula is 28 miles long; is said to be the longest continuous beach in the world, and like Cape Cod Grayland and Bandon in Oregon has now come to be, is a prospering summer resort area. There is swimming, deep-sea fishing for fighting Chinook salmon, the digging of razor clams, collecting the fantastically-shaped driftwood, gathering rocks. The whole Peninsula has a relatively small year-round population, Long Beach itself about 600-700 people and the region "quiets down" in the winter season as is true of Wareham, Mass. "heart" of the cranberry industry and other

resort areas. The cranberry industry gives the region a "boost" in economy the year around and particularly at harvest time. Famed Cranguyma Farms ((which will be taken up in a separate article) is by far the largest cranberry operation West of the Cascades is at Long Beach, now operated by Frank O. Glenn.

Appreciation

Here, we would like to express our appreciation to D. J. Crowley, retired director of the Long Beach Station for transporting us from Grayland to Long Beach, for the hospitality of room and food at the home of he and Mrs. Ruth Crowley, for introducing us to a number of growers and finally, at departure, driving us to Megler where we took the ferry across the Columbia to Astoria, Oregon to visit later the bogs of the Bandon area. Mr. Crowley and Dr. "Chuck" Doughty present director of the Station were our chief mentors in the region.

Dr. Doughhy gives the current individual average production per acre of some bogs at Long Beach as varying from 75 to 175 and that at Grayland from 100 to 200. Production in 1962 a bad "off-year" at Long Beach was about 75 and in 1961, 130 barrels to some acres and at Grayland in 1962 90 and in 1961 150.

The highest state average ever achieved as stated previously, and

the highest state average of any so far was 126.4 barrels achieved in the record year of 1961.

Bogs at Long Beach are generally larger in acreage than those at Grayland. The district has about 20 percent of Washington growers and about 40 of planted cranberry property. Largest West Coast property is that of famed Cranguyma Farms, at Long Beach with a total holding of 129 acres, which includes the former Parrish bogs, next largest is the Elwell Cahbot bog, about three miles north of the town of Long Beach.

Dr. Doughty says the acreage is growing slowly, as there is a little bit of new bog going in all the time. There is some talk of getting more berries by planting larger bogs, so that growers can afford to go into more mechanical equipment. However, as in all areas, no real increase in acreage may be expected until there is better return to the grower.

Most harvest at Long Beach is by the water reel method. As in other West Coast areas, nearly all screen-ries for fresh go to the Ocean Spray plant at Markham, first going to the receiving station at Long Beach. Mechanical driers are not used as in Wisconsin; there are bulk handling methods.

There is quite a bit of damage to the Long Beach bogs from deer "playing" on the bogs. Beaver dams interfere with good drainage.

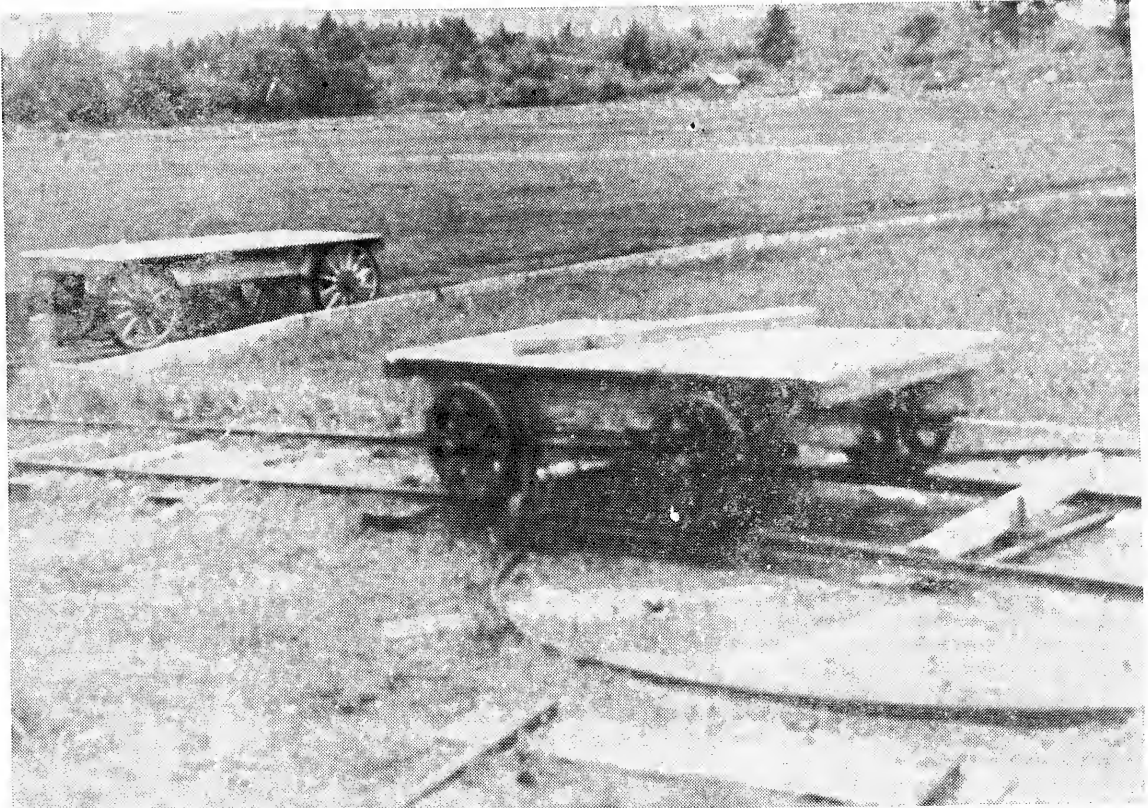
The water supply is generally adequate to meet the needs, the immediate source being the sump which the growers dig beside their bogs.

Pollination A Problem

Pollination is a real problem at Long Beach, perhaps the main reason being that temperatures are often too low for honeybees to work. These will just not fly when the weather is too cold and too damp. The honeybee has to have the warm sun to work at his full capacity.

The bumble bee will not work in damp, rainy weather.

Efforts have been started through the Long Beach Station to develop artificial nests for the native bumblebees to encourage their presence at the bogs. A number of boxes were set out in 1962 and there was fair success in getting the bees to use



Showing two track-running bog vehicles at Long Beach.

(CRANBERRIES Photo)

them. Dr. Carl Johanson of the Department of Entomology at Pullman, WSU has been trying a number of different sites, different size of nests, etc. Several early-spring blooming shrubs has been planted to aid these bumbles in getting established early in the season.

There is a little wind pollination.

Air Insect Control Difficult

For the application of chemicals or insect control there is a helicopter service which comes all the way from Salem, Oregon, or from nearby Centralia, Washington. It has been found to be extremely difficult to get in a straight-wing craft because of the tallness of the trees, towering around the bogs. On the windswept Peninsula, extending as it does north into the Pacific, it is also hard to find a time when the wind is sufficiently calm for air operations. When the helicopter service is used this is between five and eight in the morning.

Fireworms seems to be the worst insect pest, control for that and tipworm being DDT, Sevin, DDT plus Diazinon, and DDD, plus malathion, all wettable, Horsetail and loose-

strife are the worst weeds. Twig blight, now found to be a fungus, is being overcome, based on research made by Dr. Doughty and others at the station, but it was very troublesome. This is controlled by Captan Ferbam or Maneb, also all wettable. Long Beach growers are very much encouraged that the new herbicide Caseron, now used on an experimental basis, may prove of great value and a good deal of Chloro IPC is also used with good results for weed control. Parathion is another material used for fireworm, fruitworm and Lecanium scale. Maneb, zineb, Captan, Ferbam are used for field rot.

Application of chemicals are mostly by ground rigs of various sorts.

Little Winter Flooding

Some Long Beach bogs have been flooded in the past by winter rains, but this is not practiced much now. I was told "We don't have to winter flood, but we don't have enough water, and actually we do not often need to anyhow." There have been recent experiments with sprinkler systems turned on for very low winter temperatures, and I have the

impression it is felt this practice holds promise, but did not work out well at nearby Grayland.

Sand is usually pumped by scow to a stockpile and then "sprinkled" on by a stream of water through a hose; some growers have transported sand by bog railroad, trucks and wheelbarrows. Dr. Chandler in his report said he believed the sand generally to be rather fine, which tends to poor drainage and a shallow root structure. The sand used is beach sand. This he felt might be responsible for part of the hot weather injury to Long Beach bogs, but more important, Dr. Doughty believes is the sudden drop in relative humidity when off-shore winds blow across the bogs from the interior. These drops can be 80-90 percent humidity to 15-20 in a period of a single hour. He concurs that this beach sand does choke off the deeper roots if it is spread too often and becomes too deep.

Harvest is now at Long Beach by the water reel method and none of the crop goes to the fresh fruit market.

As far as I can ascertain Long

Beach deserved the credit for being the pioneer in the use of overhead sprinkler systems for cranberry growing. As has previously been reported, this experimental work began as far back as 1924 by Mr. Crowley and others and found to be effective and from its original home at Long Beach the practice of Cranberry bog sprinkling for frost, irrigation, heat control and for the application of insecticides is now spreading rather rapidly throughout the entire cranberry industry.

Long Beach is the home of Ocean Spray director Norman I. Brateng, and he is in a position to bring back information from the meetings of the board of directors at Hanson. Mr. Glenn of Cranguyma is also one of the seven principals of the Marketing Order Committee.

Cranberry History

A word about the development of the cranberry industry at the Long Beach area; from the survey by Dr. Chandler and our own past files it appears there was a fairly steady increase so far this century, except in the decade of the 1920's. This slump followed a real estate boom in the previous decade when many growers, a large number of them absentee growers who came in to make a "a fast buck" as we would say today, suffered heavy financial loss.

The rise in the number of bogs began again in the 1930's and hurried ahead with the good prices of some of the 1940 years, and also with the coming of Ocean Spray to the West Coast proved a further incentive.

All, or practically all the growers are members of the big cooperative.

As is the case with the rest of the West Coast, the bogs are mostly planted to the McFarlin variety.

Short Growing Season

There is a relatively short season in the Long Beach area. There have been frosts up to and including July. Harvest is from the last of September and through October as a rule, but occasionally harvest, especially at big Crayguyma Farms, runs into early November.

A record of sprinkler use at the experiment station at Long Beach shows that sprinklers have been used in the months of March, April, May, June, September, October and



Mr. and Mrs. Funke in the beautiful garden of their home.
(CRANBERRIES Photo)

Guido Funke Is a Pioneer Grower

Among the earlier growers was Guido Funke who became a Long Beach District grower in 1932. Today Mr. Funke, whose bog and house is on Pugh Road has 14 acres of bearing bog. These are old bogs some of the acreage having been put in 1912, these including some Late Howes and a lot of it ran out. Mr. Funke tore out a lot of the old, odd varieties and has been putting in

McFarlins since 1959. Production varies.

"The bogs and cranberry growing and this whole area has changed a lot since 1932," Mr. Funke said. On the day we visited, Mrs. Funke was tending her flowers, and among others had some handsome irises. There was a luxurious holly hedge and the Funkes place is most attractive.

even November, either for frost control, to reduce "heats" or for irrigation. For instance in 1956 the system was turned on 16 times; in

1959, 19 times. Eleven of the were for low temperatures and seven were for "heats".

The Long Beach area gets very

heavy precipitation in the course of the year, most of this the months of January, February, March, April, November and December, even as much as 22.11 inches in February of 1961. Precipitation of 13.60; 15.21, 17.18 in a month has occurred. Very little of this is in the form of snow as snow is said to be a rarity and does not remain on the ground for any length of time as a rule.

Rainfall record for the past seven years is available as was recorded at Cranguyma Farms, this being through the courtesy of Mr. Glenn; For 1962 total precipitation was 69.87 inches; 1961, 94.78; 1960, 77.50; 1959, 83.17; 1958, 82.56; 1957, 72.40; 1956, 81.23. This compares with an average mean precipitation at Middleboro - Plymouth - Hyannis, Massachusetts of 44.31 inches; precipitation at Pemberton, South Jersey cranberry area, is 43.16".

Temperatures Usually Moderate

Temperatures of 32 occurred on 49 days in 1962; 32 days in 1961; 56 days in 1960; 37 days in 1959; 21 days in 1958; 41 in 1957 and 43 in 1956. Yet on the other hand there were higher temperatures than 70 on only 13 days in 1962; 17 days in 1961; 12 days in 1960; 11 in 1959; 23 in 1958; 5 in 1957 and 21 in 1956. Lowest recordings were 11, 12, 13, 17 above zero in the eight years with most of the winter lows in the 20's a few in the high teens.

There are few summer days with recordings in the 80's and even fewer in the 90's. Highest in this record was 100.5 in July of 1962. In fact 100 was reached only twice in the past 8 years with the exception of the 100.5 degree record. There are a few flowers blooming in February, particularly some early blooming rhododendrons and camillias, and the crocus comes out in February. Bamboo can be and is grown at Long Beach.

Tempered by Japanese Current

The weather at Long Beach, as in all the West Coast cranberry areas is tempered by the fact it is on the easoast but more importantly by the fact the Japanese current cuts in so close to the shore. However, the Long Beach Peninsula, again in common with other Coast cranberry areas can seem very chilly and uncomfortable many times due to

so much moisture and to frequent drizzles and light rains and fogs, which those living in the area seem to mostly ignore.

But the region is beautiful in its lush greenness, in its tall, tall trees and the flaming yellows of the Scotch broom and Irish furze, even though these are serious fire hazards and regarded as definitely a nuisance.

Ilwaco, as said, is a fishing village by the rocky headlands of the Columbia River mouth, its sports fishing; Ocean Park is a quiet resort village; Seaview with summer homes and motel and hotel accommodations; Chinook, a river village home for many crab and salmon fishermen, oldest communities are Oysterville and Nachotta and these are the home port of Willapa Bay oystermen and Klipsan Beach, site of an eearly coast guard station and now resort community. These with Long Beach make up the Peninsula area. Ilwaco has individual moorings for more than 700 boats, there a wrecks of ships along the area and fantastic driftwood.

Group Officers

Current officers of the Long Beach Ocean Spray Cranberry Advisory Board are: Norman Brateng, Elwell Chabot and Mr. Glenn. The Long Beach Cranberry Club officers are: president, Lee Crowley, son of Mr. and Mrs. D. J. Crowley; vice-president, Paul Clarke; secretary, Mr. Glenn and treasurer, Will Morton.

Future articles concerning Long Beach will include the story of "Charlie" Nelson of Nahcotta, veteran grower and pioneer, who last year received an award as "Farmer of the Year", the Cranberry Station and its present personnel, Brateng, Ralph Tidrick, former county agent turned cranberry grower, Mr. Glenn and unique Cranguyma Farms.

1963 Crop

Ocean Spray plant, office at Markham reports that the Washington cranberry crop this fall has been about 110,000 barrels, or more than twice that of last year's 53,713 barrels. About 25,000 barrels of this came from the Long Beach, and the

rest from the general so-called Grayland district.

It was stated that berries selected for the fresh fruit market were especially good quality. All the fresh fruit has been sold, and the operations of the cannery were slated to wind up the first of December. More than one million cases have been processed during the current year.

Marketing Committee Passes Amendments

MUST BE VOTED ON BY REFERENDUMS

A referendum will be held on amendments passed at the special meeting of the Cranberry Marketing Order Committee meeting, Logan International Airport Motel, Boston, December 12th, and a referendum will also be held on the entire marketing order sometime next spring, probably in May. "Tony" Briggs, Committee Manager, announces. Provisions of a marketing order such as this are that a referendum as to whether growers wish the order to be continued or not may be held every two years. Two years of the order have now passed.

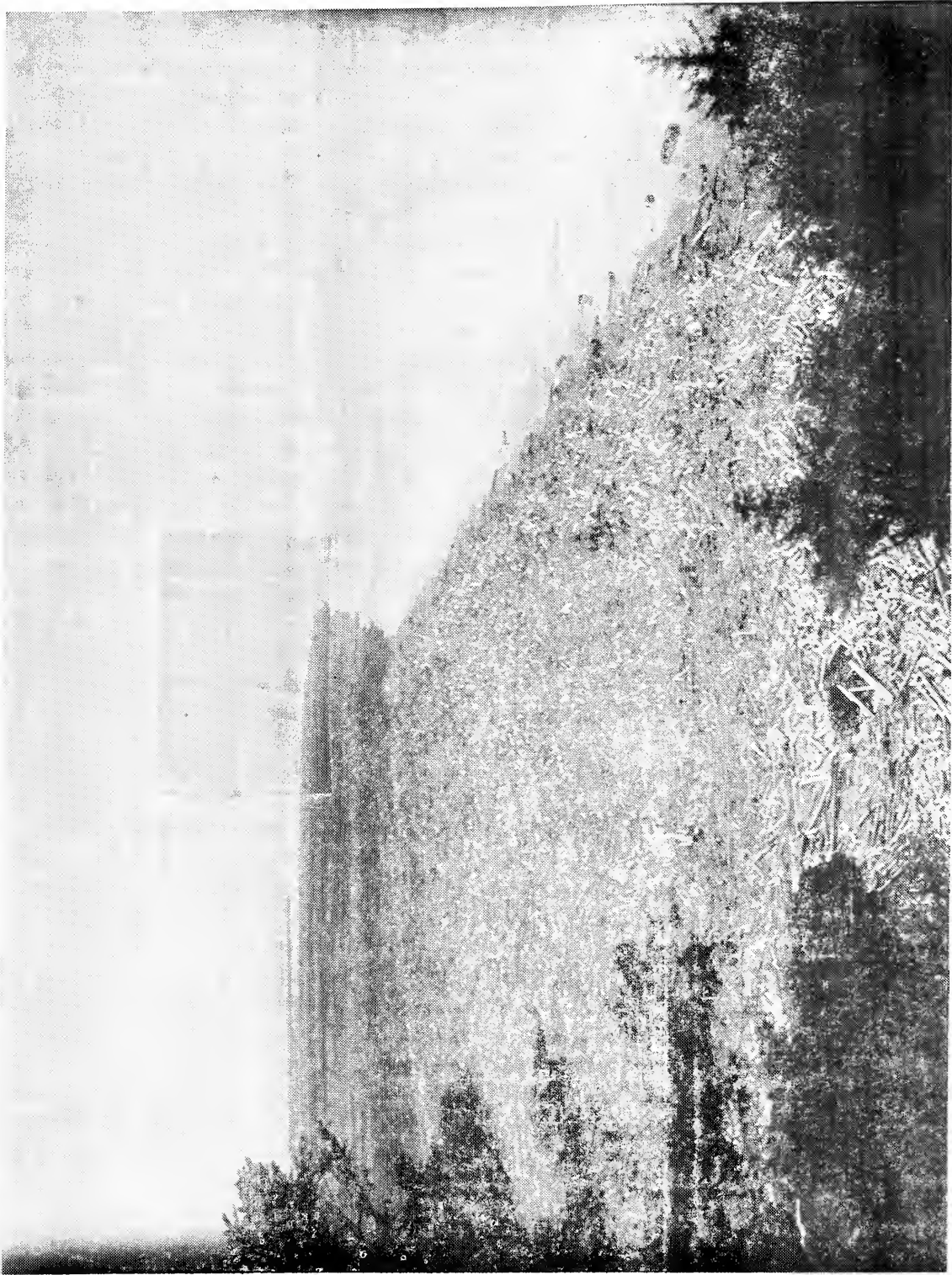
All principals were present at the meetings, plus alternate Fred Barber of Wisconsin; Leon April, New Jersey independent; Orrin G. Colley, president of Cranberry Institute; and two representatives of the USDA, these being George Dever and Richard Beeman. G. T. Beaton, Ocean Spray, was also present.

A considerable flurry was occasioned by the announcement that there were 668,936 barrels still in "chaff" or in freezers in the industry, Dec. 1. This figure was doubted by some particularly Walter Fort of New Jersey, independent. It has developed since the meeting the figure was not accurate, as two distributors sent in duplicate reports and the actual number of barrels, according to Mr. Briggs, is much less. The exact number had not been ascertained as this goes to press.

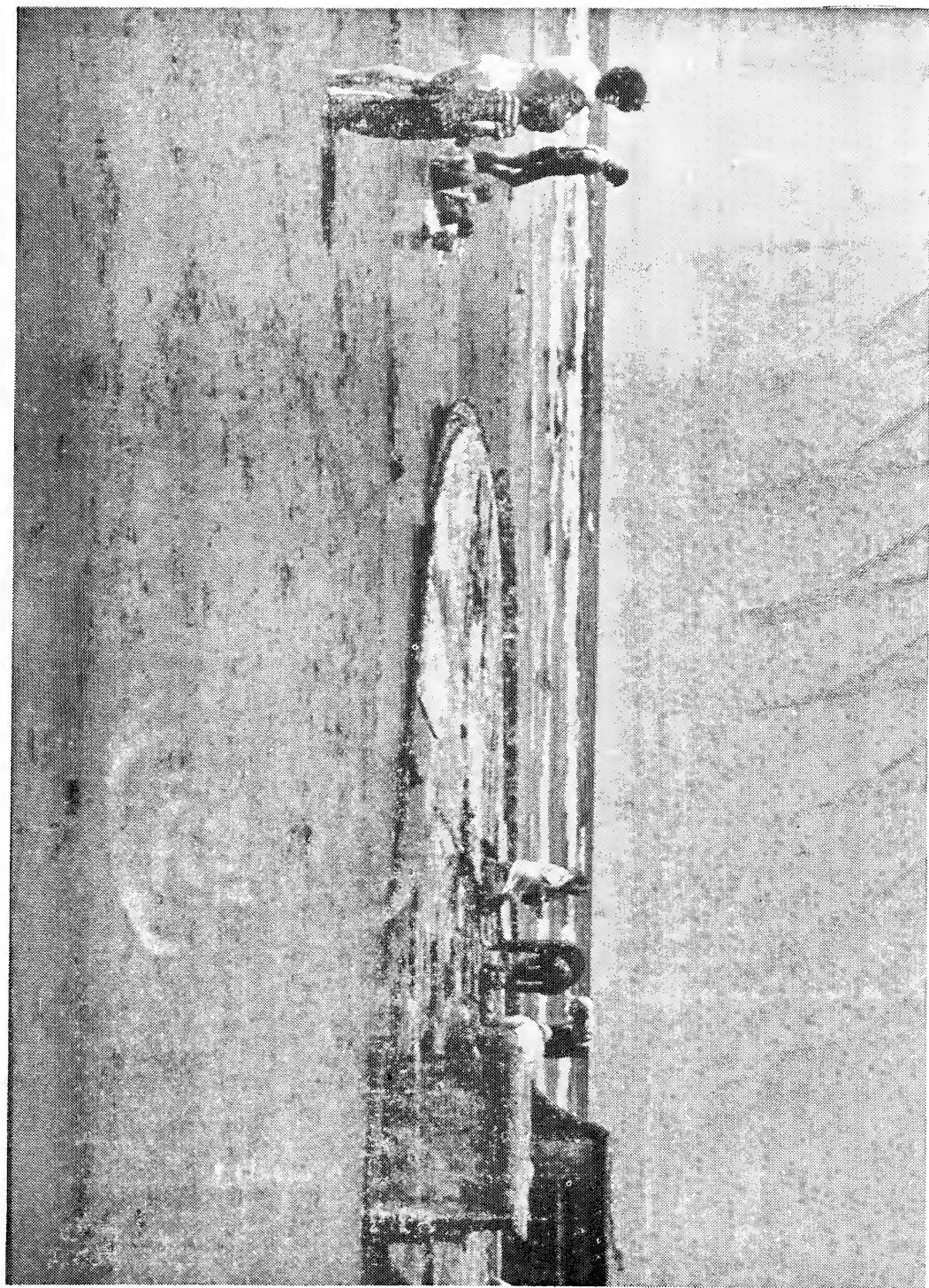
There were about a dozen amendments in all considered.

Among those accepted were that the committee adopted a withholding resolution that would grant a handler credit toward next year's "set-aside" allowance if, because of a poor market he withheld more than required; any funds received by the Committee from the "set-aside" in excess of cost be distributed on a pro-rated basis to handlers. Committee turned down a proposal to permit the export of processed berries from the "set-aside" and that there should be a federal inspection

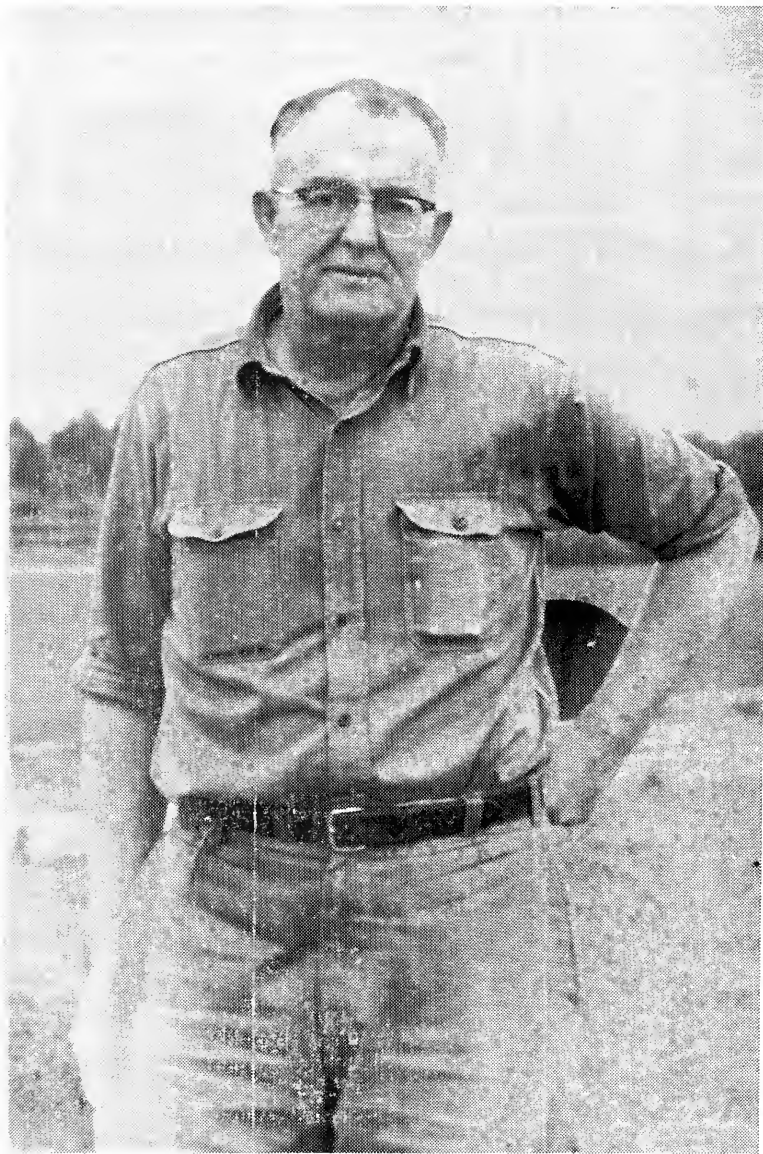
(Continued on Page 20)



"Beach Combers Paradise." Benson Beach at Fort Canby area on Long Beach peninsula. The massed driftwood explains why there is so much



Shipwrecks are scattered along the 28-mile outer beach of the Peninsula. Wreck shown here is the remains of the French Navy Ship "Intrepid."
(Photo Courtesy of Wayne R. O'Neil, editor, CHINOOK OBSERVER, Long Beach.)



ELWELL CHABOT, kin of Long Beach Pioneer and the second largest grower there. (CRANBERRIES Photo)

Second Largest Long Beach Grower Is Kin Of Washington Pioneer Bog Man

Elwell O. Chabot, kin of the pioneer grower in Washington, Anthony Chabot, who set a bog in the 1880's is a full-time grower and the second largest on the Long Beach Peninsula next to Cranguyma Farms. He has 17 acres producing, and four new ones "down." His property, three miles north of Long Beach and just south of Cranberry Road has produced a little more than 3000 barrels. Crops, of course vary, but he has produced at the rate of 200 an acre for some acreage. There is, in addi-

tion to the bearing bog about 100 acres in the whole property. He averages about 2000 barrels a year

Chabot has one of the larger sumps on the West Coast, this being 250 feet by 80 feet by 12 deep. The water source is seepage. The bog is diked for wet harvest, with wooden planking for dikes. He has a Buckner sprinkler system for irrigation, frost control and other purposes. The crop so far has gone entirely to the processed market, Chabot screening on his own property then the fruit be-

ing taken to the Long Beach receiving house and after that to the Ocean Spray cannery at Markham.

Chabot finds the worst insects are fireworm and fruitworm, and he controls these with parathion and DD? in paste form. A good deal of hand weeding is practiced on the Chabo property, but "paint thinner" is also used for spot weeding, and some Chloro IPC has been applied with good results.

The Chabot cranberry business is operated as a partnership, Newkirk & Chabot, the partner being David Newkirk, a brother-in-law who lives in California.

Elwell and his wife Klema have just completed one of the extremely modern bogside homes which are striking a feature of many of the West Coast properties. This is a plastered home with cherry pre-fabricated panelling in the living room, two bathrooms, three bedrooms, the large living and dining area combined, and kitchen and utility room with every new convenience.

The living room with windows to the floor is covered with wall to wall carpeting and has a Swedish fireplace. House is heated by electric baseboard heat with a thermostat in every room. The house, with about 1500 square feet of floor space is situated as to give a southern exposure, taking advantage of the sun from the east, south and west. Appliances include wall oven, counter top range, freezer refrigerator, combination dish washer, automatic washer and dryer. There is also ample closet space and the garage is attached to the dwelling.

The Chabots have two children, James who has a television shop in Long Beach and helps out in the harvest and a daughter, Patricia.

Chabot has modernized his bog operations as much as possible and is one of those who feel that a grower to be self sufficient has to have sufficient acreage and crop—"you can't make it on five acres," he says.

**ADVERTISE IN
CRANBERRIES**

Recent Developments In Cranberry Production In Wisconsin

G. C. Klingbeil, Extension Horticulturist
University of Wisconsin

Twenty-six years ago (January 1887) a group of cranberry growers established the Wisconsin State Cranberry Growers' Association. J. Treat was elected president.

The first article of organization was as follows: "To advance the interest of all engaged in the cultivation of cranberries in this state by obtaining statistics and information on the condition of the crop in this and other states, from time to time; establishing and taking measures to insure the confidence of dealers and purchasers by this evidence of fair and honorable dealings; to enlarge the area of the market for the fruit through definite and direct action; and generally, by all legitimate and honorable means to advance the interests of the cranberry cultivator."

It would appear that three quarters of a century ago the problems of the industry were little different from the problems of today: production and marketing. It is obvious that the industry has progressed. No obstacle has been insurmountable; drought and fires of the thirties, and ridiculously high prices of the forties, change to mechanization and "Black Monday" in the fifties, but a few. We know there will be new developments in the sixties. George Peltier, association historian, is compiling documents that show some of the many developments that have occurred in this industry. My purpose is to briefly look at the past, review recent developments, and attempt to look into the future.

I would like to remind that in Chapter 94 of the Wisconsin Statutes 1906 through 84.35 there are several paragraphs that are not new but should be familiar to every Wisconsin cranberry grower. To my knowledge cranberry growers are the only one privileged to build dams and ditches on waterway. With public interests in water today; guard this privilege zealously.

Let's first look at the acreage in Wisconsin: 1928, 2,200 acres; 1948,

2,800 acres; 1952, 3,700 acres; 1957, 4,000 acres; 1962, 4,500? acres (5,100 + total bearing and nonbearing)

Cranberry yields per acre: 1900, 15 bbl. per acre; 1920, 18 bbl. per acre; 1930, 16 bbl. per acre; 1940, 48 bbl. per acre; 1950, 63 bbl. per acre; 1960, 90 bbl. per acre.

Cranberry varieties and per cent of total acreage for 1962: Searles, 62-65 %; McFarlins, 20-23 %; Natives, Less than 10 %.

Yield Leveling Off?

These figures indicate that acreage is continuing to increase. The acreage could double by developing lands now in the hands of growers. Yields per acre have increased markedly in the past decade but appear to be leveling off. The major variety being planted is Searles, probably because it is the best yielding variety. There is considerable interest in the early maturing variety, Ben Lear, and likely within the next few years there may be 75-100 acres planted. The variety ripens early and yields reasonably well. The Stevens variety, because of its quality, is being planted as vines become available.

Weeds, insects, and diseases continue to be major field problems. Insects have been controlled by the phosphate poisons largely in the form of dusts. Dr. John Libby, Extension Entomologist, recently appointed, will be working with us on insect control problems. Application methods of pesticides are not uniform. The most effective method of applying solvents is the undervine boom; other herbicides are applied in low gallonage sprays and some as granules. The Chemi-Caster made by the Noble Manufacturing Company is being used quite widely for applying granules. As in all methods of pesticide application proper calibration is important.

Harvesting methods have changed greatly. About 1910 handraking on the flood became established and for 40 years was the standard method of harvesting. Machine raking was

introduced in the 1930's and today over 95 % of the crop is machine raked. The Case picker modified into a self-propelled unit and the Getsinger Retracto tooth picker are the most commonly used. The Getsinger picker will probably soon be self-propelled. Field air drying accompanied wet raking until the event of machine raking. Today probably 95 % of the crop is mechanically dried by modified crop driers.

Cranberries have long been stored in drying crates. Today there is much interest in bulk storage. Bob Gattchalk and Winnebago Cranberry Corporation both in the Cranmoor area are testing the method in volume. In my opinion we will see in the next few years a larger volume of berries stored either in pallet boxes holding five barrels or more or in bins holding 1000 barrels or more.

Weather forecasting techniques have certainly been refined to provide more accurate frost forecasts. There is not a complete agreement on how to financially support the frost warning services, but this is a minor problem. Several growers are using net radiometers to forecast temperatures with great accuracy. Newell Jaspersen at Cranmoor and Al Amundson of Babcock are using this valuable tool with confidence. Several more growers established these instruments in 1962.

Flooding is still the standard means of frost protection but the use of sprinklers for frost protection is increasing.

Since 1910 growers are sanding on a regular schedule. There is no change in this practice. Most growers are using either nitrogen or a complete fertilizer to obtain the desired annual vine growth. No blanket fertilizer recommendations are made due to the great physical variations between marshes.

To Reduce Shrinkage

I look forward to changes in grading and storage procedures and positive action to reduce the amount of shrinkage due in part incurred to rough handling and poor storage conditions. These are but a few of the developments in the Wisconsin cranberry industry. I am certain of more improvements in production methods in this decade.



The Sneak "Hurricane," of the last day of November flooded Wareham's lower Main Street. Water was receding when photo was taken. Building at right is Warham Courier, where Cranberries Magazine is issued.

(Courier Photo)

"WISCONSIN CROPS TO EXCEED MASS?"

From Vernon Goldsworthy, president of Cranberry Products of Eagle River, Wisconsin comes a report that this operation had a very successful year, and was not able to take care of all the business. He said attempts to obtain additional fruit late in the season were unavailing as there was no surplus available.

"Goldy" says he believes he could have sold an additional 50,000 barrels primarily in the processed form and in some new products which it was found necessary to hold in abeyance.

There will be considerable new Wisconsin planting in 1964 in his opinion and on properties with which he is associated he expects to put in about 75 acres. He recently purchased the Colton properties at Springbroom and will expand the acreage on both as rapidly as possible.

He declares it is personal opinion that Wisconsin in the next three years will have at least 1,000 more acres planted and considerable of this to the new varieties and that, "within the next three years and

possibly sooner than the Wisconsin production will exceed that of Massachusetts for the first time and that before many years this will be common place and accepted, as we continue to expand and improve our marsh operations, from an economical standpoint."

WISCONSIN FROST, SNOW

Early December report from Wisconsin, Snow and Frost depth report (December 10) says that frost penetration and snow cover for the first week of December were light, but the usual patterns of frost were beginning to develop. Penetration the first week was slightly deeper than a year ago, there being one report of 12 inches of frost in Douglas County. December first brought an 8 below. Snow flurries since December 6th have covered most of the state with snow depth of from one to six inches.

MILK ADVERTISING

Dairy farmers through the American Dairy Association will invest \$4,855,000 in consumer advertising this year. Media to be used includes television, radio, magazines, newspapers and billboards.

N.J. BLUEBERRIES

An interesting and informative page booklet on the "Blueberry industry in New Jersey, 1963" has just been issued by the New Jersey Crop Reporting Service, N.J. Department of Agriculture, USDA, Trenton, New Jersey. This has a foreword by Philip Alampi, New Jersey Secretary of Agriculture.

It gives acres harvested in 1963 a total of 7300, 518 growers; total production, 1,718,000 trays, value \$4,719,000; fresh sales 1,393,000 tray

ADVERTISE

IN

CRANBERRIES

MAGAZINE

CHRISTMAS 1963

This is the merry, merry Christmas season, when most of us lay aside our cares for a few days. We have said this before and events have proven our hopes were not justified — but we do believe things are actually looking up in the cranberry industry. Taking the growers as an entirety we believe there is a better feeling.

For one thing Ocean Spray made an improved payment on the 1962 pool. The returns to growers are certainly not what they should be for all growers. Yet, again it is a gain, even though it is not large.

From all distributors we have been in contact with the report is there will be a good clean-up of the fresh crop and from Ocean Spray the word it is likely there will be less berries in the freezers come August than there were in recent years. We understand the situation has improved for independent processors.

This has been a rather weird year weatherwise — there have been unusual droughts, freak weather conditions particularly in Wisconsin, where the outlook was at first good but deteriorated. It was a good year for the West Coast, where in Washington State the crop was about double that of the year before. Conditions were adverse in New Jersey; Massachusetts had a large crop, and may not yet fall off from original estimates.

To all our readers, our advertisers and to all, we say "Noel."

At year's end it is a good time to cast thoughts ahead. The most important single item is how to market more cranberries. One major way is through increasing cranberry exports, the project the Cranberry Institute, in cooperation with Foreign Agricultural Service of USDA is so vitally interested in.

Export plays an important part in many American products. Take turkeys. No less than 50 foreign countries buy our traditional Thanksgiving bird, also popular at Christmas. Ten years ago only four countries were buying our turkeys. We, ourselves, manage to consume all but about two or three percent of our turkey production. Yet this two or three percent

CLARENCE J. HALL
Editor and Publisher

EDITH S. HALL—Associate Editor
Wareham, Massachusetts

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Pemberton, New Jersey

(amounting to nearly 37 million pounds) going abroad is small but important. The ability to dispose of this small surplus, makes it more profitable for the turkey growers, and is a factor in keeping turkey prices down in this country, thus adding to their saleability.

We hope the article on foreign export elsewhere in this issue will be read—and pondered.

SERVING WISCONSIN

BLUEBERRY BOOST

The marketing life of the blueberry is due for a change. Storage practices that will keep them fresh for two weeks or longer—more than twice normal marketing life—have been developed by USDA.

Marketing Committee

(Continued from Page 7)

of "set-aside" berries.

Chairman George C. P. Olsson presided. The secretary is John C. Decas of Wareham.

Institute Meeting

Directors of the Cranberry Institute met on the same date, same place following the Marketing Committee meeting. There was a brief discussion of business matters, but no definite action was taken as the annual meeting of directors is set for January 6th at 10 a.m. at the Institute's office at South Duxbury.

At that time there will be the annual election of directors and officers, including the filling of the post

of secretary-treasurer recently made vacant by the resignation of Marcus M. Urann.

Fresh From The Fields

(Continued from Page 6)

again in such a degree. The problem was much worse on some bogs, including that of the Experiment Station bog. It appears to be tied up very closely to fertility and nutrition in the solid.

The fall weather was about average as far as temperature was concerned, a little warmer in some periods. The maximum for Novem-

Products Abroad

(Continued from Page 7)

needed if U.S. exports are to continue to grow. The challenge is made more difficult by the barriers being erected in the Common Market and by increasing trade promotion by our competitors.

ber was 59 degrees on the 29th and the minimum 26 on the 28th. To the first of November the rainfall had been about 15 to 20 inches below that of previous years. The rain to November first totaled 62.6 inches, to December 10th 80.17. November alone had 18.5 inches so that present situation is about normal. There was a comparatively dry July, August and September.

Bog Work

Work on the bogs at the present time consists mostly of repairing machiner, cleaning up the bogs after harvest, some pruning, both manual and by machine and fall application of herbicides.

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Ocean Spray News

PUBLISHED MONTHLY



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New ways to serve cranberries help to make our Christmas tree brighter. To try these Cranberry Dainties from the Cranberry Kitchen, please look for the recipe inside.

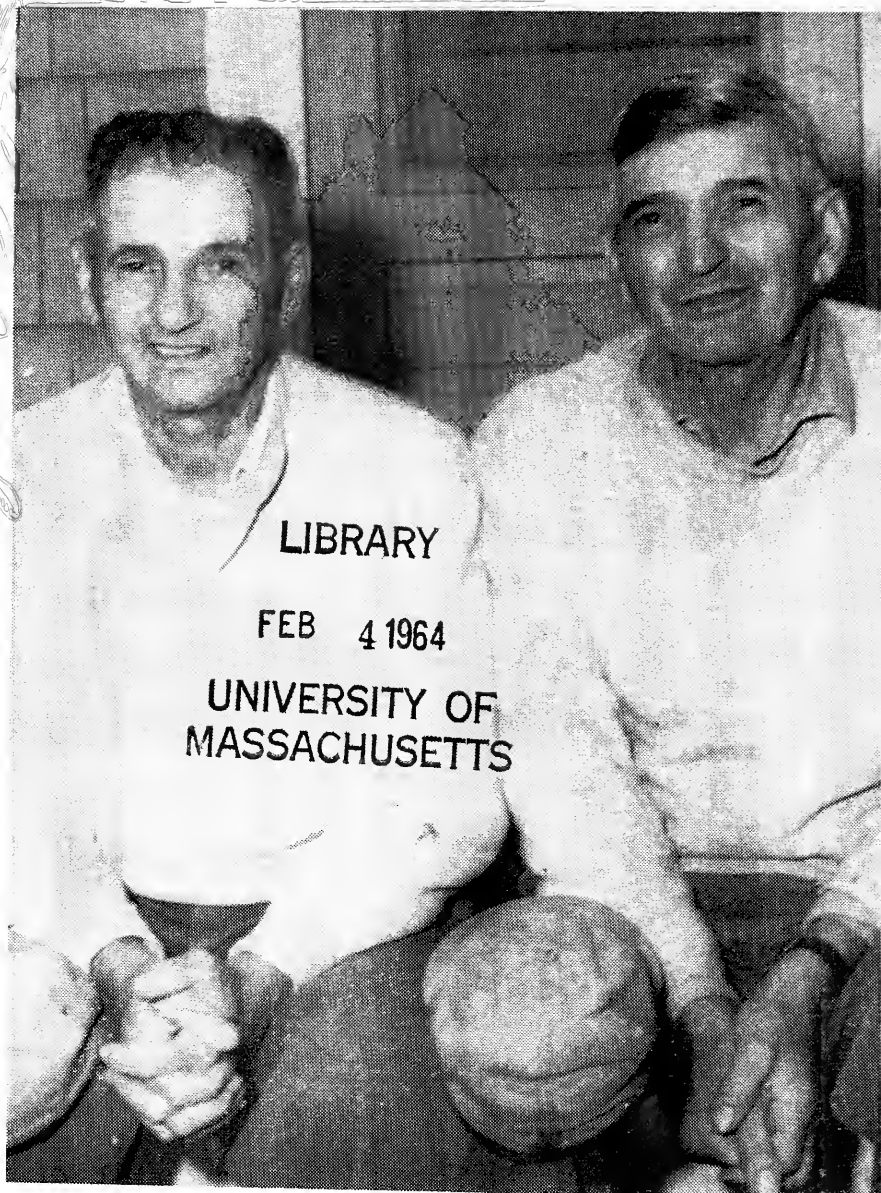
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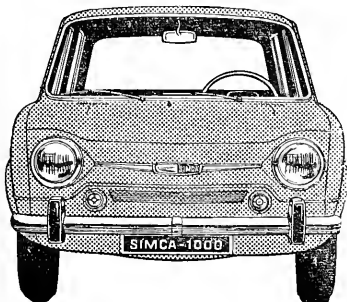
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Colley Re-Elected Institute President

**Will Leave Jan. 18
On Europe Trip**

Directors of the Cranberry Institute representing members of that organization met at Institute headquarters, South Duxbury, January 6 for annual election of directors and officers and to discuss other business. Orrin G. Colley of Duxbury was re-elected president; Leon April of New Jersey, vice-president; and Gilbert T. Beaton of Wareham was chosen to fill the office of secretary-treasurer made vacant by the resignation of Marcus M. Urann.

Directors elected are: Colley, April, George C. P. Olsson, Plymouth, Mass.; Clarence A. Searles and Benrend G. Pannkuk both of Wisconsin and Boston.

It was decided that President Colley is to go to Europe either January 18 to further promote a market for American cranberries, fresh and processed, in the western countries. He expects to be about four or five weeks on the trip which will include visits to the United Kingdom, Belgium, Holland and West Germany.

Cranberries At London Trade Show

United States commodity groups are participating for the first time in the International Hotel and Catering Exhibit Hall in London January 21-30. This is the first such participation and Behrend G. Pannkuk both of soring participation through cranberry products

The exhibit held annually is the

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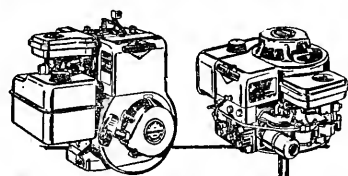
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biggest affair of its kind in the United Kingdom. Aimed specifically at uses of the catering and hotel business both in Great Britain and on the Continent.

The U'S Exhibit, largest at the show will cover some 5,000 sq. ft. Commodities included besides cranberries will be rice, prunes, raisins, soybeans, lard, poultry, wine and citrus fruits.

In the center of the exhibit will be a trade lounge and a demonstration area where a top U.S. chef will prepare American dishes using the commodities. These demonstrations will be seen through the U.S. exhibit area on closed TV hookup and permit far wider viewing by visitors.

A week before the opening the Carlton Towers Hotel of London will stage an American Food Festival.

NATIONAL CANNERS TO WORK FOR BIGGER MARKET IN EUROPE

The National Canners Association has begun to expand market development in Europe—far away the

biggest U.S. off-shore customer for canned foods. Fruits and vegetables are currently the top canned items the United States sells to Europe. The volume included \$194 million in canned fruit.

Much of NCA's program will be aimed at reducing tariffs which are the principal factors now limiting U.S. exports to the market. NCA also plans a program to convince European groups that where there is no significant domestic canning industry, U.S. imports would stimulate consumer demand (in France only 3/10 of a pound per person a year, compared to the 23-pound per person average in the U.S.) and thereby benefit domestic growers as well as U.S. exporters.

A similar program initiated several years ago in West Germany made that country the largest single market in Europe for U.S. canned fruits and vegetables, while at the same time it significantly increased sales of domestically produced products.

DROUGHT EFFECTS NEW JERSEY CROPS

Production of crops in New Jersey during 1963 totaled 2,234,690 tons, 3 percent less than a year earlier, according to the New Jersey Crop Reporting Service. Total output this year was also 3 percent less than that of 1961. Effects of the season long drought were reflected in lower yields for nearly all New Jersey field crops and fruit crops this year have more than offsetting the 1 percent increase in total acreage harvested.

NEW JERSEY CRANBERRIES

Annual summary of New Jersey crops revised 1962 and preliminary 1963 regarding cranberries show cranberry acreages harvested 3000 1962 and 2600, 1963; yield per acre 1962, 34.3, 1962, 25.0 barrels, 103,000 1962 and 65,000, 1963; farm value \$1,026,000, 1962, \$644,000, 1963 (based on average 1962 price).

RECORD U.S. FARM EXPORTS

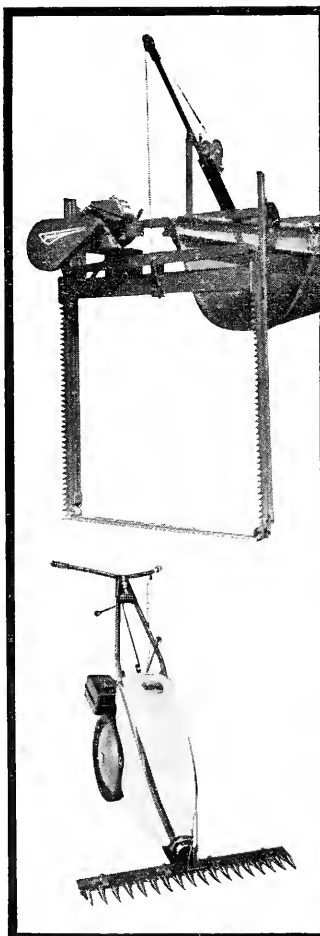
United States farm exports may reach \$6 billion in value, a record in agricultural exports in the 1963-64 fiscal year ending next June 30 according to the USDA publication "Foreign Agriculture." The previous high has been \$5.1 billion.

A factor in this forecast is the strong economic activity abroad especially in Western Europe and Japan.

Rain Tops Six Feet, Long Beach

Rainfall as measured at Crangum Farms, Long Beach, Washington for 1963 topped six feet. Total precipitation was 72.37 in., 2½ more than recorded in 1962, but well behind the record of 1961 of 94.78 inches.

Rain fell on 22 days in December the total for the month being 7.61. Nearly half of the 1963 precipitation fell during the last three months of the year.



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Read Cranberries

Keeping The Farm In The Family

(The following reprinted from FARM PROGRESS magazine with permission of the Goodyear Tire and Rubber Company, could very well be adapted to apply to cranberry growing interests.)

A successful farm or ranch business, like any other concern, should be kept intact when it is passed along to the next generation. Too many farms are sold when the operator retires or dies, simply because there is no workable plan for a son or son-in-law to take over. In other words, disagreement between father and son cause the son to leave for some other type of employment.

When a young man is truly interested in agriculture, every effort should be made to help him enter the family's farm business.

If you are a young man eager to step into your father's business, remember that dad may not be ready to go along with all your new ideas. He has worked hard to build his business and doesn't want it endangered. Be patient and eventually your good ideas will win his confidence. Sometimes a word from

the County Agent or a neighbor may help to convince him.

Some college training will be a worthwhile investment for you even if it is only a short course. Try to learn more in areas that will help your dad; fertilizers, agricultural chemicals, machinery and equipment record-keeping and analysis — all subject to rapid change and in constant need of updating. If you can work on the family farm during the summer you can try out some of your own ideas, and keep in touch with the business at home.

A regular salary, plus an incentive plan, may be the best arrangement to make with your father after you finish college or high school. The salary, in line with wages paid for a top-flight hired man, should be supplemented by a bonus percentage on farm product sales.

During this early period, father and son should find out if they can work together. If the two just can't get along, it's probably better for the boy to go his own way and the father to hire someone else. A younger son or son-in-law coming along may fit into the picture more easily.

If the son has saved some money to put into the business, a father-

son partnership is the logical step. A son isn't really ready to become a partner until he has more to contribute than just his labor.

In cases where the parents own the land and equipment, the father and son can form a partnership for renting and operating the land. A regular lease, between the partnership and the landowners, allows the son to have a fair equity in the farming operation.

If the father is nearing retirement, he may want to work part time. Then the son's full-time labor partially offsets the father's larger contribution — land and machinery. As soon as possible, the son should acquire a one-half interest in the machinery or other assets, buying the property and giving an interest-bearing note.

When the son owns all the machinery and one half of other assets and provides all the labor, a regular 50-50 share lease can be written between father and son. The income and expenses are then charged equally, except for expenses and buildings — paid by the owners, the parents.

Agreements or leases in writing can prevent a great deal of misun-

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derstanding. If there are other children in the family who will some day inherit part of the property, a written agreement is necessary to protect all parties. Heirs not involved in the farming operation should be given a chance to voice any objections before a partnership is formally written.

If the son takes over the farming business by the time his father reaches 62, the father may retire and be eligible to draw social security. If management decisions are left primarily to the son, land rental

income will not endanger the father's social security payments.

Of course, there should be a will to show how the estate is to be divided upon the parent's death. With some larger farm or ranch businesses, it is practical to incorporate and leave a certain number of shares in the business to each heir. There are many many tools to use in effective estate planning, but the big objective is to pass the business from one generation to the next — without having to liquidate and start all over again.

IRRIGATION

Irrigation, now practiced in varying degrees in every State has opened many new frontiers in American agriculture.

Irrigation provides a stable, diversified agriculture. It augments the overall agricultural economy, and it helps ensure adequate production to meet present and future demands of our expanding population.

Considerable progress has been made in developing methods of handling irrigation water. However, there are still many problems associated with irrigation that must be solved.

Research has made us better acquainted with soil structure, texture, and depth layering. These are important properties for estimating a soil's water-holding capacity, the rate of entry of water, and the rate of water movements through soil.

We have learned that an area can be covered with plastics to get nearly 100 percent runoff which can be stored for later use. Plastics are expensive and often deteriorate rapidly when exposed to normal outdoor conditions. Other quite promising materials have been studied.

Seepage and evaporation are major causes of water loss from storage basins. Polyethylene film, placed on a farm pool reduced seeping losses to practically zero. More economical ways of reducing seepage are being sought.

Reduction of evaporation by 15 to 20 percent has been obtained by putting hexadecanol on a pond surface. In Utah studies, 87 percent of evaporation was prevented by floating a plastic film on small ponds.

We are learning more about complex soil-water-plant relationships so we can do a more effective job of using irrigation water. Additional progress in making efficient use of water depends only on the imagination of scientific minds and the facilities provided them for research. (Agricultural Research Service, USDA)

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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of January, 1964 — Vol. 28. No. 9

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Real Winter Weather

A spell of real winter struck in the cranberry area beginning with the first real snow of the season on the 12th, followed by more snow on the 14th. Bitter cold came after that—14 above in the shelter at State Bog, East Wareham on the 15th; 13 on the 16; 8 on the 17 and 9 on the 18th.

Colder temperatures of course were reported in the open. Bogs were flowed up or being flowed as rapidly as possible, although there was a little snow coverage. Departure from normal for December to date was a whopping -134 for the year all but ended a plus 36.

Snows

Barnstable and Southern Plymouth Counties, especially the former, Cape Cod, were really clobbered with a rather unheralded snow storm on the 18th which left 8 inches of snow generally as recorded at Cranberry Station, more at other points. This was the worst storm in about two years.

Bitter Cold

Weather continued unusually bitter cold, temperatures dropping to

7 on December 20, 3 on the 21st, 2 above on the 22nd and two below zero on the 23rd. The 23rd brought a second storm, not as severe as the previous one, but about four inches of snow as recorded at State Bog, before the storm turned to rain.

That brought the total to the month to 15 inches whereas in 1962 December brought only 6.6 inches, and it assured of a "White Christmas." not of pure pristine new-fallen snow but rather bedraggled snow cover.

December Bitter

December ended as the coldest December, according to Boston Weather Bureau since 1947. Total degree deficiency for the 31-day period as recorded at Boston was an enormous 216. It was the fourth

December in a row colder than normal.

Below Zero

The final day brought the lowest reading of the winter to date a minus 10 in the shelter at the Cranberry Station with as low as 18 being recorded in the cranberry area at exposed places.

Much Snow

Total snow accumulation was measured at the Cranberry Station as 17 inches, as compared to 6.6 last December. There had been a constant snow cover since December 12th, a much longer period than usual. Total precipitation, however, was low, only 2.90 inches including the snow, with the mean for December being 3.90.

Water Release

The snow acted as good insulation

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on bogs which are normally exposed during the bitter weather, and on the last day of December, County Agents issued a warning card to growers suggesting that wherever water could be replaced that the flood be entirely released from beneath the ice to prevent oxygen deficiency injury.

Jan. Starts Warm

The first week of January was in sharp contrast to the bitter December. Temperatures were generally mild, the snow was melting and by the end of the first week the temperature to that date was a plus 35. Several days recorded readings in the 40's. Temperature plus on the 10th was 47.

Winter Returns

Winter returned January 13 with a howling coastal blizzard. This deposited 10¼ inches of snow as measured at Cranberry Station, East Wareham, more on the Cape, up to 19 inches at Falmouth. Gale winds reaching near-hurricane force, at times 70 and 75 miles per hour as recorded at Sandwich end of Cape Cod Canal, piled the snow in fantastic drifts at points, at other points leaving the ground all but bare. This was the second major storm for the cranberry area of the current winter and the worst in several years.

WISCONSIN

DECEMBER COLDEST EVER

January came early to Wisconsin this year in December resulting in the coldest December on record. The average temperature was a cold 13 degrees dethroning the 14 degree record set in 1876. There were also 13 days in December when the temperature fell to zero or below setting a new record. The previous greatest number of days of this type in December were 10 in 1916. The year was also the second driest on record with some areas of the state receiving only two-thirds of the normal in all areas coming in the form of snow during the middle of the month. All sections of the state were snow covered at Christmas averaging from 4 to 6 inches. The outlook for January calls for temperatures to be about normal and precipitation continuing below normal.

30 BELOW

The first below zero temperatures occurred on the 1st with a minus 8 in the northwest. This cold air slowly settled over the state, but being of Canadian origin resulted in only slight frost penetration. On the 13th cold Arctic air moved in and for the next 10 days one of the coldest and longest periods of sub-zero readings were recorded during the period in the north. All inland lakes were

reported frozen over by the 20th marking the earliest date on record. Snow cover preceded the cold Arctic air resulting in maximum night time radiation. The snow cover also helped to slow frost penetration. Deepest frost penetration was in the east and northwest where snow cover was the lightest, being a foot deep compared to half that amount elsewhere.

MARSHES FLOODED

The type of weather was ideal for the application of the winter flood and subsequent freeze down. With the absence of snow cover there should be no danger of oxygen deficiency. All marshes were reported to have had enough water for winter flooding. Marshes with low water supplies were building their winter floods up early in the month.

Only a handful of fresh berries remained in the state by mid-December and supplies packed during the month both fresh and processed were reported the lowest in many years. While the above normal readings in October and November had detrimental effects on keeping quality it was of concern to many growers that stocks could have not been on hand for the normal Christmas trade. It now appears that the 1963 shipped crop will fall below the 1962 shipped crop of 360,000 bbls. As far as set and size factors are concerned the following minimum night time temperatures appear to have had the greatest effects on this year's Wisconsin cranberry crop, May 1, June 19, July 10, Aug. 19 and September 13.

NEW JERSEY

December Very Cold

The month of December at the Cranberry and Blueberry Laboratory was extremely cold. The average temperature for the month was 27.9, about 8° colder than normal, making it the coldest December in the 35-year history of weather recording here. At the middle of the month, from the 15th through the 21st, there were 7 successive days during which the maximum temperatures were constantly below freezing, the high during this period being only 29°. The minimums were occasionally near zero, and once, on

(Continued on Page 18)

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Birth of a Pesticide-Result of Years of Research and Development

by D.H. Moore, Research and Development Dept.,
Niagara Chemical Division
FMC Corp.

The field testing this year, of a new fungicide -- Polyram -- on Cape Cod cranberries, for control of fruit rot and storage rot, again spotlights the efforts being made to find materials that will prove more effective in solving pest problems and yet remain safe to man in their use.

The work with Polyram was done under the direction of Bill Atwood, bog manager for the A.D. Makepeace Co. (Wareham, Mass.). Results, according to Atwood, look highly promising. Of course, the chemical is not yet registered for this use -- the experiment represents only one test, in a long series of trials that might eventually lead to such registration. You see, contrary to popular belief, the evolution of a new pesticide label is a complex, lengthy and expensive project.

The agricultural industry estimates that over 30 million dollars is spent each year for new and better products, and that 1.5 to 3 million dollars is spent (over a period of several years) in research and development before a single product is successfully introduced. Constituting this expense are literally thousands of laboratory and field tests aimed at checking the safety and performance of a compound.

A Team Effort

Development of a new pesticide is a highly complex operation. A co-ordinated team effort of scientist from widely divergent fields--chemists, pathologists, botanists, entomologists, agronomists and toxicologists (among others) -- is necessary. Close cooperation of state and federal agencies is a must. For it is from these agencies that registrations appropriate to many crop situations will be forthcoming.

The discovery of even a single, promising pesticide material is a monumental project. Hundreds of compounds are synthesized. The chemist is guided in his synthesis efforts by patents restrictions, past experience, ease of preparation, probable costs and availability of raw materials. Also, he frequently is searching with a particular pest or crop in mind. The chemist's first step is to formulate a compound in a preliminary way -- usually diluted with a clay or solvent -- prior to submission for biological testing. As favorable evidence from laboratory biological testing and field research accumulates -- product formulation research, involving optimum additives, storage stability, quality control and a host of other factors, is accelerated.

Biological Screening

A typical biological screening operation utilizes a variety of pests selected for their typical responses to known toxicant. Insects, plants (including weeds), bacteria, fungi and nematodes are specially grown at the lab to insure ample population for proper evaluation. Many millions of agricultural insects are used each year in these operations. Norms of performance are charted for each species' reaction to a test compound.

Probably the most vital step in a pesticides' struggle to be born, is field research. This phase of development is decisive because in the field, a compound faces a number of variables that cannot be evaluated in the laboratory. Effect of varying weather conditions throughout the country and the delicate balance between pest control and chemical injury to the crop plant are factors that can be evaluated only in the field.

It is also in this field that close cooperation with state and federal agencies gains importance. State experimenters are extremely helpful in evaluating a compound on crops grown in their respective areas. This evaluation at the practical level usually lasts at least three years and often continues after commercial introduction as new use patterns are explored.

Residue Detection

As the development of the synthetic chemistry of a new pesticide compound progresses, analytical chemistry capable of tracing residues of a compound at any stage of use must be developed. It must be capable of detecting residues from the point of its application to a crop

such as cranberries, through the processing of that crop, and eventually in the final canned product as it is sold to the consumer.

As each developed compound must ultimately meet rigid government regulations, residues as low as one-tenth part per million must be readily detectable.

Data needed to support requests to the Food and Drug Administration for a new chemical's registration may involve tests on as many as 30 crops in 25 states--some 700 crop samples and ten analyses per sample, for a total of 7,000. Measurements of acute oral, dermal, and inhalation toxicity and sub-acute or chronic oral toxicity must also be made. It may take up to three years to compile sufficient toxicological data to satisfy legal requirements.

Labeling

Labeling instructions on how and when to use the chemical -- based on all aforementioned test data -- are drafted and submitted to the federal agencies for approval. Application rates, necessary precautions, method and time of application, and other information must be included to satisfy government requirements and avoid misuse by the grower. The agencies consider the data and establish tolerances for each crop on which the material will be used and upon which a residue might be expected at harvest.

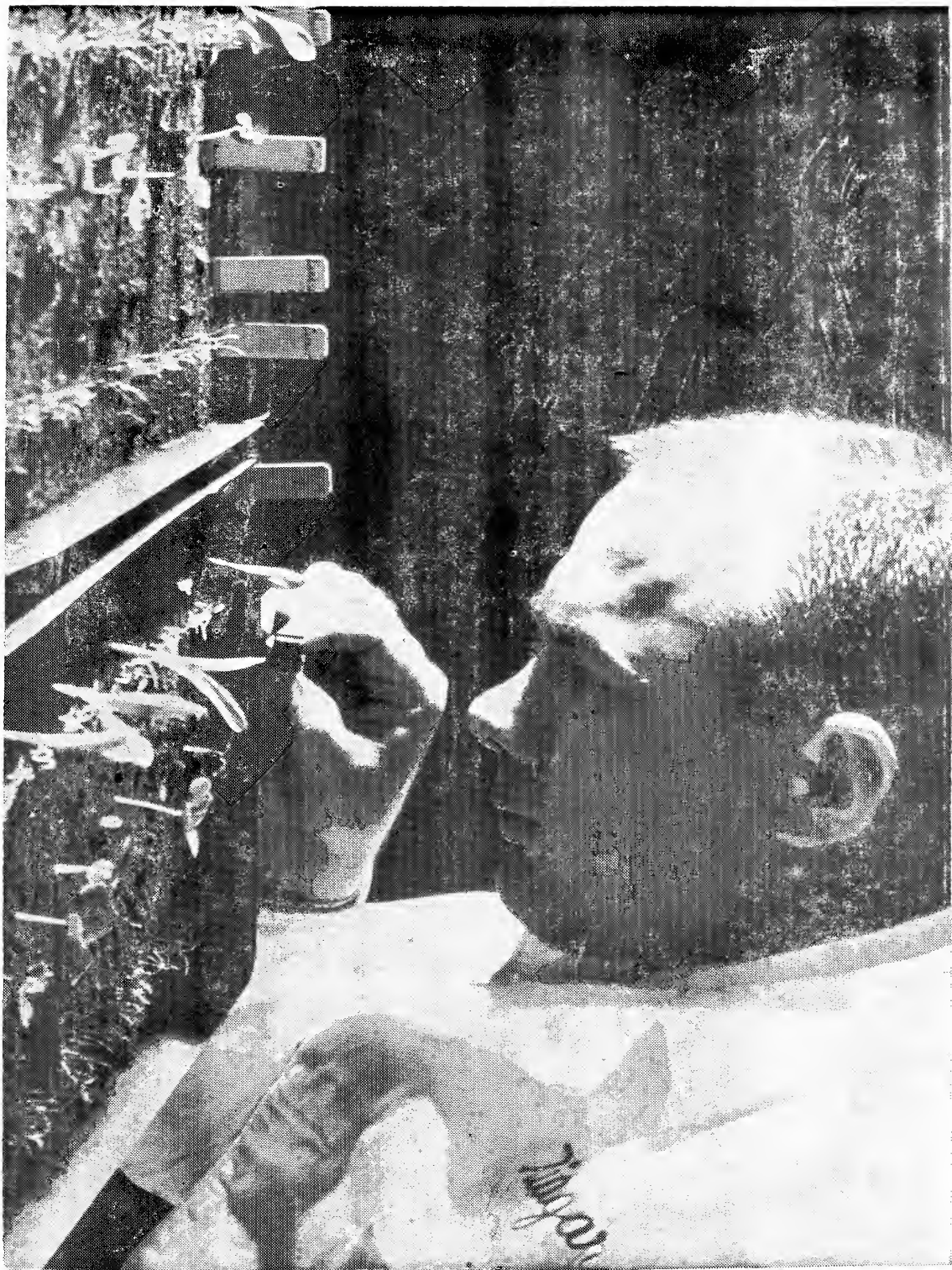
The extensive research efforts of the pesticide manufacturer can go for naught, however, if their products labels are not read and followed completely carefully. U. S. Department of Agriculture registrations and FDA tolerances are based on use of a compound according to the label as it reads. This cannot be overemphasized.

It should be noted, however, that most of the steps described are not taken at fixed points in the timetable of a materials' development. Chemical analysis and toxicological studies occur at many different stages of development. Formulation work is conducted at different times throughout the entire test life of a material. New evidence from tests

(Continued on Page 20)



A STEP IN PESTICIDE; This capillary melting point provides rapid measurements of a compound's melting point. It is one of the many rapid measurements of the many modern instruments required in researching new pesticide compounds. (Photo Courtesy, Niagara Chemical Division, FMC Corporation)



THE AGE-OLD BATTLE AGAINST WEEDS, is being fought in research laboratories where new compounds are continually developed and tested in greenhouses as shown above. When greenhouse tests

show promise, tests are then moved to the field on specific crops. (Photo Courtesy Niagara Chemical Division, FMC Corporation)

Simon and Tony Majahad, Brothers of Lebanese Descent, By Own Labors Have Built Beautiful Small Bogs

North Carver, Massachusetts Men Have Now Achieved Small Acreage, But With Success and Excellent Production

by Clarence J. Hall

Two brothers of North Carver, Massachusetts, starting from scratch and "back-breaking" work in building and maintaining their bogs themselves have become successful and top producing cranberry growers. Simon and Anthony Majahad, American born, but of Lebanese descent do not hesitate to say they have been engaged as laborers all their lives, and as such built their bogs.

That they are only small growers is true, having only 8 acres in all, in two locations, one in North Carver and one in Kingston, but on seven acres (one still not yet in full bearing) they have produced a crop of 1,024 barrels, or 146 barrels to the acre and average about 125 to the acre, while the general Massachusetts average varies around 50 barrels or a little less. They had good production in 1951 and in 1962 and in 1963 they had 1122 bbls.

Beautiful Bogs

Their bogs are recognized as among the most beautiful in Massachusetts, level, well-vined over with vines of a desirable depth and all but free of weeds. In fact, Tony says, that when Joe Kelley Cranberry Specialist of the Massachusetts Cranberry Experiment Station made a visit to the bogs, "he thought the bogs were so pretty he didn't want to step foot on them."

Although the bogs were built by Simon and Anthony, today they are in the name of Anthony and Simon's wife, who was Miss Ida May Fields. Simon had two heart attacks a few years ago. Mr. and Mrs. Majahad live on High Street in North Carver and Anthony, who never married lives with them. Being strictly "do-it-yourself" people the two brothers largely built this house themselves, and in the construction made much use of local lumber, native pine and fir, which they cut from their own land themselves and had made into lumber. The house is a substantial one of two stories, with a big two-car garage.

Of Lebanese Descent

Born in Rochester, N.Y. 66 and 61 years ago respectively, Simon and Tony were brought to North Carver as small children in about 1906. Their father had been born in Lebanon, on the Mediterranean, "Bible country," says Simon, Christ walked through there, and it was once a part of the Great Turkish Empire. Our father was a laborer, too. When our mother died we came to live with an uncle here in North Carver. He sent for us. Our father, we two boys and two sisters all lived in a little house and were brought up by our oldest sister who was very young then." This house, still standing, is located on a woods road leading to the present bog of the Majahads.

Both boys went to school in Car-

But, you gather he was able to get a little political influence to work and he got in. "But I only fought the battle of influenza," he says. "I got as far as Camp Devens, right here in Massachusetts and I got influenza." That was the great flu epidemic which raged during that conflict, when thousands died at Camp Devens, he recalls in a matter of a few weeks. "I was given up for dead, more than once," Tony says, "and I could hear them talking about who would carry my body home, but I didn't die."

In fact he also served in the Second World War, drafted again and he served three months in the infantry in Texas, when it was decided he was too old for such service and was honorably discharged. Anthony served 16 months in the U.S. Navy, stationed at Newport R.I. Anthony was not in the second conflict as he had in the meantime sustained a back injury.

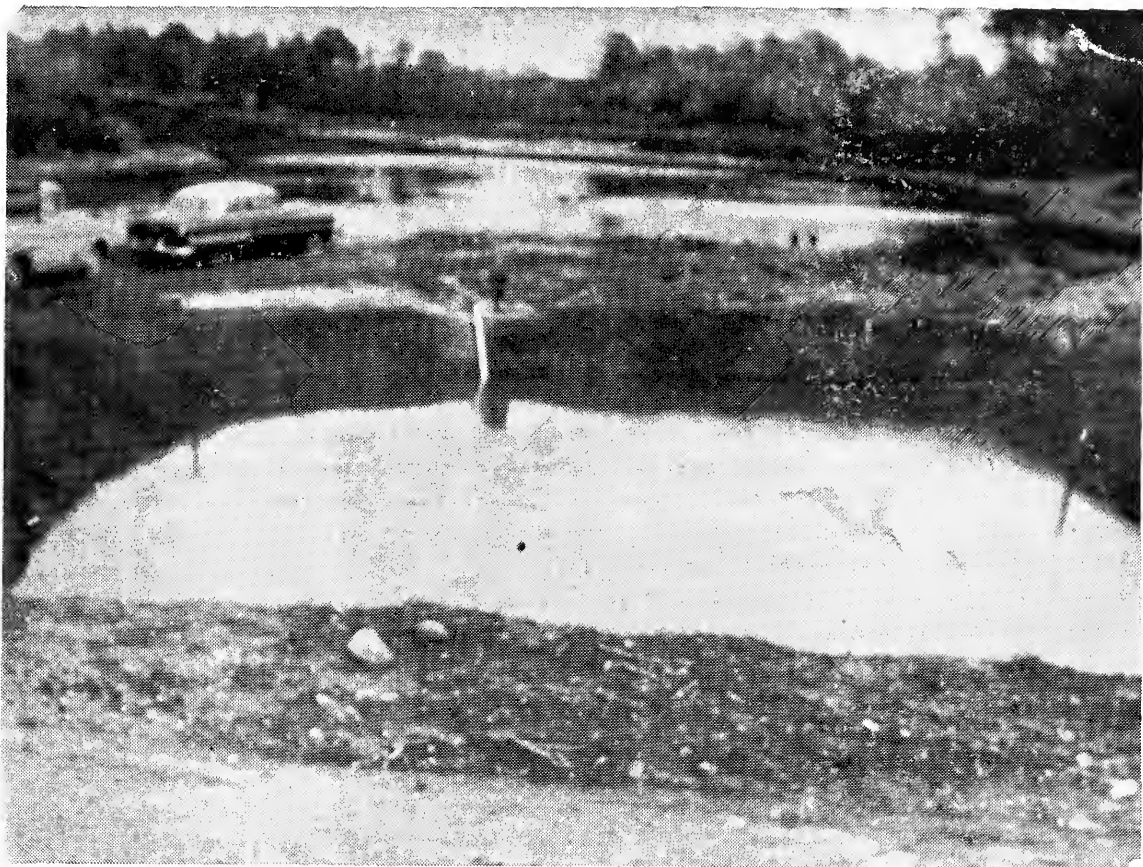
About 1930 they thought of build

ver. They took jobs as laborers, working on cranberry bogs, in the woods falling pine and assisting in construction work. When the First World War came and both saw service. Tony at first was not accepted because he was underweight.



Simon Majahad

(CRANBERRIES Photo



View of one of the sumps, with flooded bog below.

CRANBERRIES Photo)

Built Bog In 1930

ing a bog for themselves. They had bought the "Ward Place," in about 1921. This included about 3 acres of swamp land, Maple and Cedar, all good peat bottom. Much later, they rebuilt another acre of abandoned bog at the same spot. This property contains about 26 or 30 acres of upland, well wooded. It is on a woods road, off Snappit Street, the name being a corruption of the Indian word Anasnapit. They began to build from scratch, doing all the work—with only a little assistance—clearing the swamp, grading and building the bogs, ditching them, making flumes and setting the vines. They say it was back-breaking work. "For clearing the swamp," Tony says, "we had an old hand-operated stump puller. We went round and round with a windlass, like slaves of old days you see in pictures.

This bog, which now included the "old Charlie Dunham bog," of one acre, which will come in full bear-

ing this year, was set almost entirely to Early Blacks as is the bog they built later in Kingston. They have less than an acre of Howes. They had only winter flowage at North Carver.

Put In Sprinklers

They were wiped out by the bad frost of 1944. "That was a terrible spring frost," the brothers say. "The freeze even burned the needles on the pine trees around the bogs."

They realized something had to be done. So they suspected there was water under the area. They bought well points and began to drill, in sand holes and elsewhere. They found water—plenty of it. They drilled 8 wells with two inch pipe. "We don't know what the water is," says Simon. Whether it is spring water, but we think it may be an underground river. Anyway there is an unlimited supply, apparently."

Then they had dug two big sumps (Weston Bros.) to store the water. First they fill the bog ditches and

then pump it into the sumps. They have two pumps a Deming and also a Bailey, a converted Jeep and a Wisconsin motor as power. In addition to the sumps, they have one reservoir into which the water can be pumped. Although the supply is limitless, it is a long job to get it onto the bogs. For a frost they have to start in the morning and are not covered until about midnight. "We can't wait for frost reports," they agree. "We have to use our own judgment. We haven't lost anything since 1946 by frost."

Two years ago, when Dr. C. E. Cross urged that Massachusetts growers put in sprinkler systems for irrigation, frost protection and chemical applications, the Majahad brothers were among those who did so. On the old Dunham bog which they had completely renovated they installed a system using 14 Rain Bird heads.

Worked Wonderfully

"The system worked wonderfully," says Tony. In 1962 there was



Simon is shown beside one of the bogs.

(CRANBERRIES Photo)

one fall frost when the temperature went down to 21. We didn't lose a berry. The next morning after sprinkling the bog and even the trees along the shores were a beautiful sight," says Tony. "Everything was iced up solid. I wish we could have taken a color picture of it." On that bog they picked forty-six barrels on about half an acre with the growth in its third year.

They had branched out into the Kingston bog in 1946, also one of 4 acres in three pieces. This is located off Elm Street, near route 30 and this had gravity flow, although two pumps are used to get water back into the reservoirs. For that they borrowed some money, \$500, which they said was loaned them by Marcus M. Urann, himself, who was so well known as the founder and long time president of Cranberry Canners, Inc. later National Cranberry Association and now Ocean Spray Cranberries, Inc. They later borrowed additional money from Ocean Spray's Cranberry Credit division, which they paid back.

They were among those who enjoyed that top-price year when berries brought up to \$32.00 a barrel. In this bog there was some heavy construction equipment used from H. A. Phinney, bog contractor, and also later at the North Carver bog.

Worked Every Spare Moment

But when they started the latter bog they began working themselves every spare moment when they were not laboring for others. They worked Saturdays, Sundays and holidays.

The Majahads are very grateful to Mr. Urann for his help in really getting them in the cranberry business. "Mr. Urann was more than helpful to us," they agree. "He did everything he could to help us out, and he was never anxious about our bills. We take a man as we find him and Mr. Urann was certainly all right with us."

They have about the same amount of upland at Kingston. More acreage could be put in at both places, if need be.

For a year or two they sold their

fruit to an independent distributor but since then have been staunch loyal members to Ocean Spray.

Their crop is now harvested with two Western pickers, which they own. They now need sometimes a third man to help in the harvest but generally Tony operates the picker, while Simon runs a jalopy which they own for wheeling berries and for sanding.

There is good sand around the bogs and they have their own pit but they find it cheaper to buy sand. Insect control is done from the air by Ben Atwood, with straight wing from Hanson.

Fertilize

They believe in fertilizing every spring when "the bogs are in the pink." They have a regular sanding schedule and keep all the bogs to snuff in this respect. At one time they kept bees for pollination, but now do not as they feel a bee sting might be very harmful to Simon since his heart attack. They have bird houses around the bogs to help with the insect problem.



Tony walks beside one of the bogs.

(CRANBERRIES Photo)

Now they are able to take it much easier than they used to, although Tony does most of the work. They continue to hand weed and the bogs surely show this careful attention. The bogs aren't entirely weedless, even though they look all but so. Simon says he asked a woman to

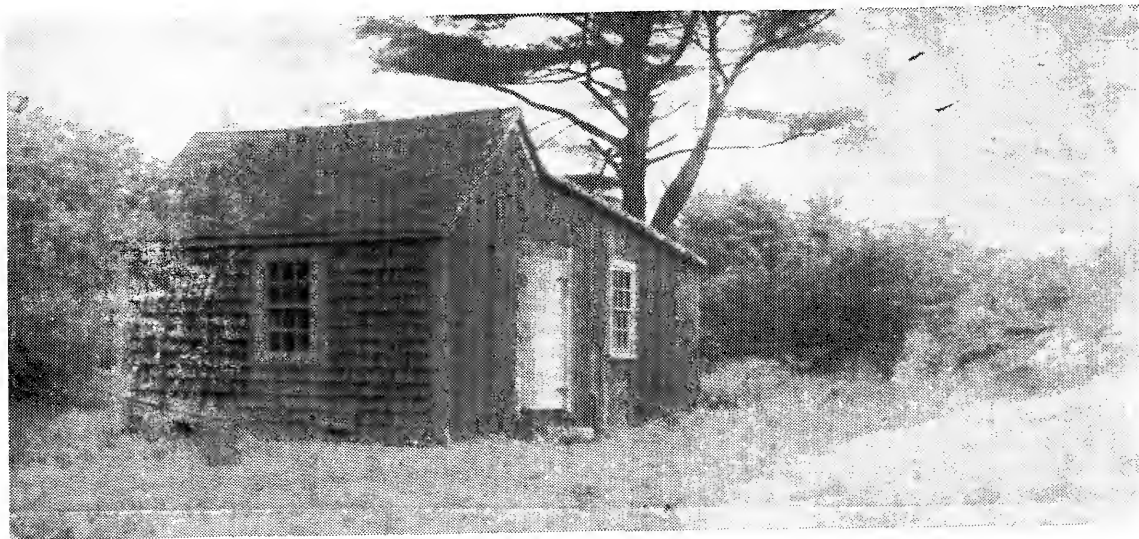
do some weeding for them and she came back and said she couldn't find any. But I could," and I went out and pulled them."

Mrs. Majahad is a true "cranberry wife." She sometimes goes screening in the fall, as many cranberry women still do. She screens

for Ocean Spray.

Simon is a member of the South Shore Cranberry Club and regularly attends its meeting at Kingston. He also belongs to the Cape Cod Cranberry Club. Simon is a member of the American Legion and also of

(Continued on page 17)



The small bog house in which they lived at first,

(CRANBERRIES Photo)

"The Ocean Spray Future Is In New Products"—Gelsthorpe: Cranberry Growers Have Much To Be Bullish About"—Olsson

"For the first time in a number of years, I feel optimistic about the future of the cranberry industry and particularly the future of our cooperative," declared George, C. P. Olsson, Plymouth, Mass., president of Ocean Spray Cranberries, Inc. before nearly 200 at the annual meeting of that company at Hanson, Mass. January 8th. This was the first winter meeting, in accordance with the change in by-laws and it was voted that next year the meeting shall be the second Wednesday in January (unless a legal holiday) shall be in Wareham probably at Wareham Memorial Town Hall or the Onset plant, as the directors decided.

Election

There was no change in the board of directors with the exception of the post of David E. Pryde of Grayland, Washington who has served since 1952 and declined to stand for re-nomination and re-election. He is succeeded by Cecil Richards, also of Grayland.

Other directors elected were: Massachusetts, Victor F. Adams Osterville; Frank P. Crandon, Acushnet; William E. Crowell, Dennis; David W. Eldredge, South Carver; Carroll D. Griffith, South Carver; Richard A. Heleen, Middleboro; Russell Makepeace, Marion; Elmer E. Raymond, Braintree; Alvin R. Reid, Hanson; Chester W. Robbins, Onset; Miss Ellen Stillman, Hanson; Marcus M. Urann, South Duxbury, New Jersey, John E. Cutts, Vincentown; Thomas B. Darlington, New Lisbon; William S. Haines Chatsworth, Wisconsin, Alvin E. Bark, Wisconsin Rapids; Donald S. Duckart, Wisconsin Rapids; Lester M. Gordon, Tomah; Gerald M. Potter, Warrens; Tony Joniak, Hayward, Washington; Norman I. Braten, Long Beach; James Olson, Bandon, Oregon.

Officers re-elected were Olsson, vice president, Lester M. Gordon, Wisconsin, Edward Gelsthorpe, executive vice president; secretary, Russell Makepeace, Marion, Mass.; treasurer, Chester W. Robbins of Onset, Mass.; John F. Harriott, Han-

son, Mass. assistant secretary-treasurer.

For the first time in a number of years Makepeace who is ill was unable to read his annual report, which was given by Harriott.

Executive Vice-President Gelsthorpe, in making his first report before a meeting of Ocean Spray stockholders said the future of Ocean Spray and of the industry depended upon the development of new products. He pointed out that many firms have a number of products, such as Heinz pickles which has 72 items, Kraft in cheese which has 127. In cranberries, he added, there have been only two major products, and one new one fully developed in the 304 years since the landing of the Pilgrims and their becoming acquainted with cranberries. These two are fresh cranberries, which is only their natural form, processed sauce and now Cranberry Juice cocktail. Two new products to be introduced and nationally marketed in the future are "Cranapple Juice Drink," a mixture of cranberry and apple juice and a cranberry-orange relish, cranberries and orange peel. Members attending were given samples of these new products.

"Big Business"

He said Ocean Spray is now "big business", with an annual volume in excess of \$30,000,000 and as such it could now strive for the very best in research and in production methods. He also called for a greater sense of responsibility between management and membership and said Ocean Spray in the future must give stricter supervision to the growing of the crops by its members to meet the quality now demanded and to comply with more rigid pesticide application now required by Federal and State laws.

"What are the reasons for my optimism?" asked President Olsson. "After many years of surplus pools and keeping pools open for more than 17-month periods, we are now in a current position. The last two pools have been closed in less than 12 months. The 1963 pool should be no exception. This means less carry-

over each year, which results in savings in manufacturing costs and reduced freezer and storage costs.

Marketing Order

Referring to the Cranberry Marketing Order in effect for the first time with the crop of 1962. With 12 percent set-aside amounting to approximately 130,000 barrels he said it had been possible to return \$9.41 a barrel plus 25 cents in stock. "This, of course, is not as much as we would like, but considering the set-aside and the shrinkage which was considerable, it is a substantial improvement."

He said the Order has a stabilizing effect on the market and helps increase returns. He pointed out that there had been a 5-percent set-aside proposed in the 1963 crop but become apparent the crop was not as large as anticipated and the marketing committee voted unanimously to eliminate even this.

He asserted the Order had proved its effectiveness and is a tool which need not be invoked unless needed and he urged growers to again vote for the order when it comes up for referendum in April.

He said the goal of increasing returns to the grower should never be lost sight of.

He explained how through the Cranberry Institute, there had been a Federal School Lunch program with cranberries and the total value to the industry of the three years had been approximately \$3,500,000 returns. "This has been a great help to us during our recovery years, and I hope that, as conditions improve we will not have to seek this help but that we can paddle our own canoe as we did prior to 1959."

He told how he had maintained contact with members of Congress, the United States Department of Agriculture, the Food and Drug Administration and the national service organizations, such as the National Council of Farmer Cooperatives, National Canners' Association, Grange and Farm Bureau.

He told how Ocean Spray is instituting a plan which will put cooperative ownership more com-

tely in the hands of its current members.

"The change in our management of the first of 1963 season appears to me to be the biggest step forward we have taken in years. Mr. Gels-
thorpe came to us with a real business background of experience and management. In the short time of months he has made remarkable progress in the tightening up of our organization, streamlining production, pulling the organization together and getting its members to work as a team. We have talked about new products. He has done something about it, we have two new products and more on the fire."

Concluding, he said, "Our inventory picture as of the first of the year is good and we are in the best position we have been in many years. Our financial picture is the best I have ever seen it. I feel certain that you will agree with me as cranberry growers we have much to be bullish about in the years ahead." He said he hoped as many members as possible would attend a dinner January 15th at the Red Coach in Middleboro the affair being held in honor of three long-time employees now resigned. These are Miss Sue Pitman, Middleboro; Mrs. Lucy Morse and Simon Kendrick of Arwich.

The attendance listened closely to the report of Gelsthorpe. He stressed that there were two important factors in the success of any business, and particularly a grower cooperative such as Ocean Spray. One was the responsibility of management to the growers and the other the same on the part of the grower members. He said he regretted to say there was some distrust on the part of a minority, to say a few of the growers.

"A grower should not feel he is let off if he can cheat Ocean Spray in regard to his berries. He is only cheating himself. He is being dishonest."

"What is management's responsibility to you? What is our common goal? It is to increase your returns from your crops, to market more cranberries each year at better returns; better quality products of more value to the consumer; to find

the best possible person for each particular job in management."

"We in management are going to ask for more of you as growers, in quality of fruit you bring in. We need good color in berries for cocktail. We will need good fruit to meet demands of future products.

"Also your cooperative must take a more active part in not only making it certain that we get the kind of berries we need, the color, but we must become more interested in your use of agricultural chemicals of all kinds. We cannot rely too much on Federal and State interests in the use of pesticides. We must be certain of what we are using and of the results of these materials."

He continued that in past years, he was fully aware that many new products had been tried and some of these had not gone over with the consumer. He said Ocean Spray must keep on trying with new products, even knowing that some may fail. He strongly urged a position of "stick-to-it," of perseverance.

"We must find new things to put cranberries in, we must find if they will sell, we must have other products dips, relishes, marmalades, juices. Our growth is going to come from our new products. There is the whole field of dietetic.

We are a big business now. We can only afford only the best in our research and in our production methods. He said he knew advertising is costly and some of the money does not pay its way, but advertising is vitally necessary for every product and all businesses are up against the same problem of finding new and better products and of how best to advertise them.

He said label design is being changed again. "Our old labels don't shout 'Ocean Spray' loud enough in the market". He said the more "modernistic" designs on some labels do not tell the true story of cranberries. Our designs must and will be more literal and tell more literally of the uses of our products. We must improve our products; we must have better distribution. Our aim should be all of our cranberry products in every store in the country all the time." He added he knew this was actually impossible, but it was a goal to shoot at.

The aid to sell the best and advertising were magazines for cranberry sauce, TV for cocktail, and also the use of radio. He said "if you men here do not see our commercials on daytime TV don't let that fool you. The women slaving all day in front of the TV set do and they are the ones that mostly do the buying."

He then said "I take my hat off to our staff", then proceeded to mention a few by name. John Weld, our new attorney who knows his field thoroughly. George Olsson, in the 'political field', he can walk into doors in Washington that I can't get in. Any business would like to have such a man as George Olsson on its staff. He is priceless."

"Bill Stilwell, advertising, Larry Proesch over-all sales; Lester Haines; Ed Lewis in marketing and advertising; his judgment is mature. Stan Skelskie, new head of research, who came from Welsh Company; Bob Lucas, our production man, whose job it is to see we constantly are improving our methods; Ed Gaughan, our comptroller; Bill Farley, our purchasing agent who spends much more than a million dollars for us each year; I believe we are among the top ten purchases of sugar and syrups. Ed Schilling, Maynard Holmes, eastern plant management."

Robbins in his report as treasurer was also encouraging. He said the company had been borrowing less and paying back sooner. He told how the coop had been borrowing up to \$7½ million from the Springfield Bank for Cooperatives, to cover operating costs. This year we borrowed only \$1 450,000. He said he expected advances on the 1963 pool would be similar in time to those of 1962; a payment being made in January of this year, another in May and a third in August, which it was thought best suited to the needs of the individual as concerns his own financial requirements.

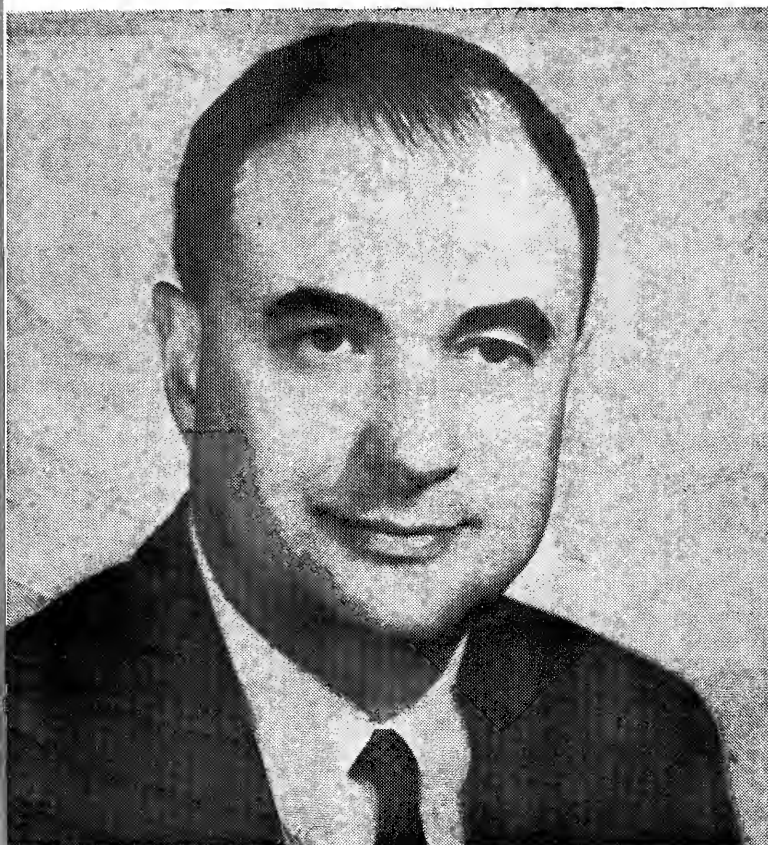
An informal discussion followed the meeting which lasted less than three hours.

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JOB WELL DONE. David E. Pryde, cranberry grower of Grayland, Washington, was honored this month by Ocean Spray's Board of Directors for his 11 years of valuable service to the co-op. Left to

Richards, Grayland, who succeeds Mr. Pryde, Mr. Pryde and Edward Gelsthorpe, executive vice president and general manager of Ocean Spray. (Photo by Stanley Bauman)



Ocean Spray Names New Research Man

Stanley I. Skelskie of Buffalo, New York has been appointed Director of Research and Development at Ocean Spray Cranberries, Inc., according to an announcement by Edward Clsthorpe, Executive Vice President and General Manager. Mr. Skelskie took over his new duties in Hanson, Massachusetts, on Nov. 18. A graduate of the Massachusetts Institute of Technology, he also studied at Boston University, Northwestern University, Tufts College, Case Institute of Technology, the U.S. Quartermaster Subsistence School at Chicago and the University of Buffalo.

For the past seven years he has been with Loblaw, Inc. of Buffalo, New York as Manager of Quality Control-Research, Central Packaging and Prepared Foods Departments and as a Buyer of Grocery products. Previously he spent 10 years with Welch Grape Juice Company in Westfield, New York serving in

Quality Control, Research and Development and Operations and Engineering.

A Counselor in the Institute of Food Technologists, Mr. Skelskie was Past Chairman of the Buffalo Sub Section and also of the Western New York Section. He is Chairman of the IFT-Cornell University Advisory Committee on Food Science; a member of the International Association of Dairy and Food Sanitarians, a founding member and past president of the Western New York Association; a senior member of the American Society for Quality Control and a past member of the Executive Committee, Buffalo Section; a member of the American Association of Cereal Chemists and a past member of Executive Committee, Buffalo Section; and a member of the American Management Association.

He is a combat veteran of World War II and served in the Army Air Corps in the Western Pacific. He holds the Pacific ribbon with 7 battle stars, a Philippine Liberations Medal with star and an Air Medal with 3 Oak Leaf Clusters. Until 1957,

he was a Reserve Officer, U.S. Quartermaster Corps, as a Subsistence Procurement Officer.

For the past two years, Mr. Skelskie has been President, Religion and Education, at Temple Beth An, Buffalo, New York and a religious school instructor there for the past seven years.

The Skelskies and their four children, Barbara, 15; Judith, 13; Cynthia, 11 and Arthur, 5, presently are living in Buffalo, New York. They plan to make their new home in southeastern Massachusetts.

Simon And Tony Majahad

(Continued from page 13)

"The Barracks," a Plymouth Branch of the organization of veterans of World War I. Tony belongs to no organizations except that both are communicants of the Catholic church.

Simon has a son, Leo, who is an engineer, living in Winchester, Mass. He also has two daughters, Catherine, Mrs. Thomas Gayoski of Rochester, Mass., and Rose, Mrs. John Close, who lives on High St. near her parents.

Both brothers used to hunt and fish, but neither do now. "I used to like fishing for pleasure," avers Simon, "But I know now after having my heart trouble how a poor fish must feel gasping for air."

So, today after years of hard work and an ambition to become successful Simon and Anthony Majahad are cranberry men, even though small, with beautiful bogs and crop record per acre which could be the objective of most any cranberry grower.

CROP INSURANCE

How did apple growers react to the test program for Federal Crop Insurance? They took out more than \$2 million worth! The insurance was offered by the Federal Crop Insurance Corporation in three counties in north central Washington for the first time this season. Coverage included remuneration for losses resulting from frosts and freezes, hail, and windstorm.

(American Fruit Grower)

Mass. Cranberry Station and Field Notes

by Prof. William E. Tomlinson

Snow—Ice

The writer is convinced that all that is needed to change the weather pattern is to mention the

steps to take to alleviate its affects on the bogs in this magazine or in a Flash Card from the County Agent's Office. Be that as it may, in spite of a much colder December than normal winter injury was not a problem because of adequate snow cover. That conditions conducive to oxygen deficiency injury developed late in the month on flooded bogs is also definite as there was a deep snow cover on the ice for many days.

With our fluctuating pattern of weather this winter with alternate freezing, thawing, raining and snowing it is well to remember that the oxygen content of flood waters drops quite quickly on bogs with a 3 or 4 inch snow cover on the ice, and that oxygen deficiency injury can become more severe as the winter goes on and as the cranberry plants use up their carbohydrate reserves. Therefore, on these bogs that can be reflooded, rather prompt removal of the flood from under snow covered ice is indicated in the interests of high production.

Also of importance is the replacement of the flood before too much of the bog is exposed by melting away of the snow and ice cover as exposed vines are more subject to winter kill than they were before flooding.

There have been a couple of brief communications from Dr. Cross, the first from London where the Crosses were just plain tourists on a sightseeing binge and the second from Cambridge where "Chet" was engaged in official sabbatical leave activities visiting research facilities and observing their operations.

Fresh From The Fields

(Continued from Page 6)

the last day of the year, at 5 below zero.

Towards the end of the month the thickness of the ice on some cranberry bogs was as much as 9 inches in some areas. Lou Grant, Isaiah Haines's assistant at Whitesbog, avers that the ice was thicker than he has ever seen it so early in the winter. A 7-inch snowfall on December 23rd worsened conditions and, towards the end of the year, the oxygen content of the flood water at

Whitesbog had declined to 4 cc per liter on the most stagnant bogs. However, this was followed by a freakish warm and rainy spell which immediately improved the oxygen content in these bogs.

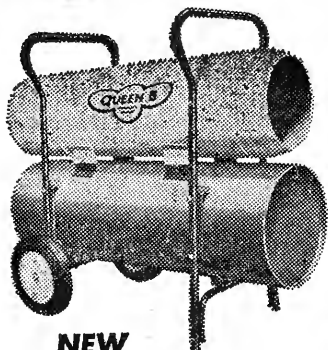
The total rainfall in December was only 2.23 inches, or about .8 of an inch below normal. The total snowfall was 8.6 inches, or more than twice the normal amount for December.

Weather Summary for 1963

Summarized, the weather in 1963 was cold and dry. The average annual temperature was 51.6° which is the coldest on record for the locality. It was colder by .1 of a degree than both 1962 and 1961. Every month of the year except March, October and November was colder than normal. In August, September and December the average temperature was the lowest recorded for these respective months. Incidentally, temperatures have been below normal in 20 of the 24 months of the past 2 years; 29 out of the past 36 months have been colder than normal. In the past 100 years, 8 have been below normal in temperature. Of the past 20 years, 12 have been below normal.

1963 was one of the driest years on record. Total rainfall amounted to 35.12 inches, or about 8.04 inches below normal. Although three years were drier than 1963, the record dry year, 1930, had only 1.88 less rainfall. The drought was especially severe during the important growing season of the year, from April through August. During this period the total rainfall was only 11.1 inches, or 8.71 inches deficient from the normal. April, with .67 of an inch, and October, with .26, were the driest months of the year and both were the lowest on record for their respective months. Only March, September and November had excessive rainfall. During the year there was a total snowfall of 14 inches, 8.6 of which occurred last month (December). Throughout the very cold periods of January and February of 1963 there was no snow cover. This fact made conditions favorable for winter injury of blueberries and for a very high mortality of bumblebees and other wild bees, also unfavorable for blueberries.

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PERSERVERANCE

Member-growers attending the annual meeting of Ocean Spray, held in January this year seemed to be told some straight-from-the-shoulder facts by Executive Vice President Ed Gelsthorpe. He said the future of the cooperative (and incidentally of the cranberry industry), lies in "new products." There is nothing new in this thought, as he frankly said.

He said success in building up increased markets lies in "perserverance," "stick-to-it" plugging. And also in obtaining the best possible in Ocean Spray management and staff—and in efficiency in all production methods. He admitted new products, increased sales in all products could be done only, really on a "trial and error" basis. No one knows what will "click" with the public, as consumers until a thing is tried.

New label design will be more literal, he said. "The more modern design did not seem effective with cranberry products. The buying public seems to be intrigued by anything "new." You have only to pick up a magazine or newspaper or look at TV to realize this. We claim to be no authority on advertising, but we have wondered, if cranberries haven't a selling point in the very fact that cranberries are "traditional;" have a heritage of the past, and if this fact should not be put forward at least to some extent in promotion.

George Olsson, president, is not an over-exuberant person in thinking, and when he says he and other growers have a right to feel "bullish" as to the future, his words should bear weight.

With Ocean Spray about 85 percent of the cranberry industry, increased prospects for the co-op is increased prospects for the industry.

We like the article provided by Niagara Chemical Division concerning the amount of effort and money necessarily involved in the development of new insecticides, herbicides and any agricultural chemical. New chemicals, as in new Ocean Spray products do not just happen. They come about by the same "trial and error" system and by "perserverance."

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

We like, also, tenor of the article about the Majahad Brothers of North Carver, Mass. This shows, once again, that the same perserverance does bring success, even though it is not spectacular success. The American "dream" is still true.

We are sorry that "Dave" Pryde has seen fit not to "stand" longer as an Ocean Spray director from Washington. We do like the choice of his successor, Cecil Richards.

SERVING WISCONSIN

Marketing Order Committee Sets Three Meetings

Three public hearings on proposed amendments to the Cranberry Marketing Order are scheduled by the Cranberry Order Marketing Committee next month. These are:

Massachusetts, February 10 at 9:30 a.m. Memorial Town Hall, cafeteria room, Wareham; New Jersey, February 12, 9:30 a.m. at the Holiday Motel, exit 4, New Jersey Turnpike, Moorestown, Mt. Laurel room; Wisconsin, February 14, 9:30 a.m. Wood County Courthouse, Wisconsin Rapids, Wisconsin, Court House auditorium.

Birth Of A Pesticide-Result

(Continued from Page 7)

frequently indicates the need for alterations before the final formula is set. Even after a product has reached the market, further studies combatted, by judicious application compound are considered.

The benefits of and need for pesticides are not generally questioned within the agricultural industry. Cranberries, for example, have thier color enhanced, while fruit rots are combatted, by judicious application of fungicides.

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Ocean Spray News

PUBLISHED MONTHLY

Optimism keynotes Ocean Spray's 33rd meeting of stockholders

Ocean Spray's revitalized management team is most important reason for grower-members to feel optimistic about the future, President Olsson said in his Annual Meeting Report, January 8th in Hanson. "Mr. Gelsthorpe has made remarkable progress in tightening up our operations, streamlining production, pulling the organization together and doing something about new products."

"The future of our business is new products," said Executive Vice President Edward Gelsthorpe. These, in addition to our bread and butter products of Fresh Cranberries, Cranberry Sauce and Cranberry Juice Cocktail, will expand the usage of cranberries. He introduced new members (see below) of the management team and complimented veteran members for their dedicated efforts.

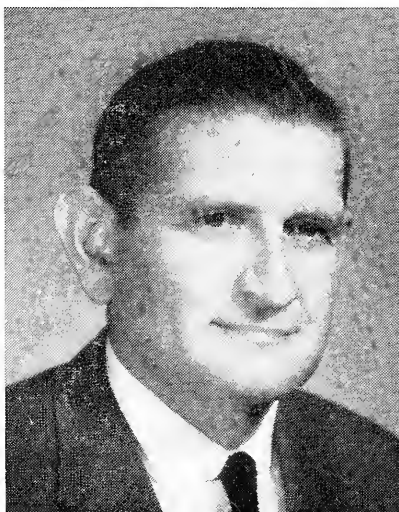
Higher earnings in view. Treasurer Robbins said, "I am looking ahead and up. In November, 1963, we paid off the final \$200,000 on the old Term Loan." He said that improvements and reduced costs point to higher earnings for growers.

"The next advance, on the 1963 pool, \$1.50 per barrel, will be paid on January 30, and I think we can all look forward to further advances in May and August."

Stockholders' vote. The Board of Directors were re-elected with one new member, Cecil G. Richards, taking the place of David E. Pryde, retired.

Dates of payment of Preferred Stock Dividends were changed to June 15 and December 15, beginning June 15, 1964.

Location of next Stockholders Meeting, January 1965, will be in the Town of Wareham.



"Cranberries are Big Business."
Edward Gelsthorpe



New to O. S. team: L. to R., Robert C. Lucas, Dir. of Operations; Edwin F. Lewis, Dir. of Marketing; Stanley I. Skelskie, Dir. of Research and Development, and John C. Weld, Asst. to the Executive Vice President.

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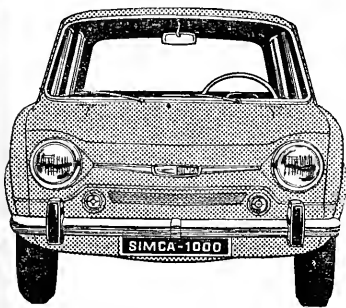
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Wisconsin Growers Elect Bruce Potter President

Wisconsin State Cranberry Growers' Association meeting at the YMCA, Wisconsin Rapids, elected Bruce Potter of Camp Douglas, president for the coming year. Potter is associated with the Cutler Cranberry Company, and served as vice president in 1963. He succeeds Ben G. Pannkuk.

Others named are Richard Indermuhle, Manitowish Waters vice-president; Leo A. Sorenson, Wisconsin Rapids, secretary-treasurer; William Barber and Keith Bennet, of Warrens and Leonard Rodeghier, Wisconsin Rapids as directors.

Members discussed a proposed state marketing order for cranberries, a representative of the Wisconsin State Department of Agriculture, Marlon L. Schwier of

Madison explaining the plan. As envisioned the marketing order would serve basically to provide equitable assessment of all state growers to finance research and the frost warning service. Although some objection was raised it appeared that most of the argument for and against was being held back for a hearing to be held later in the year.

Dr. Dana gave an address on weed (a resume of which will be published in the March issue of Cranberries Magazine.) Dr. Donald Boone, also of the U. of Wisconsin gave a research report on fungicides, Prof. George L. Klingbeil, also of the U. of Wisconsin showed pictures highlighting the cranberry industry during the past year.

Retiring President Pannkuk in his annual report praised the effectiveness of the Cranberry Institute, reported on the new ASCS practices available to growers and closed with a review of the activities of the Wisconsin association.

Dr. George L. Peltier asked that old cranberry equipment be preserved for a cranberry museum in prospect.

Approximately 125 attended and guests included Prof. Earl Wade and Prof. John Libby of the U. of Wisconsin and Robert Thayer, Al Stange and Larry Rens of the Wisconsin Department of Agriculture.

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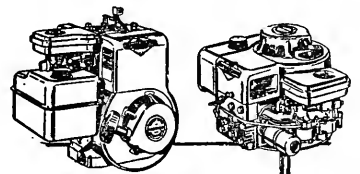
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Ocean Spray Names New Market Director

Edwin F. Lewis has been named Director of Marketing at Ocean Spray Cranberries, Inc., according to an announcement from Edward Gelsthorpe, Executive Vice President and General Manager. The former New York advertising executive directs all phases of the Ocean Spray Marketing operation. He makes his headquarters at the cooperatives' executive offices in Hanson, Massachusetts.

With Young & Rubicam, Inc., since 1953, Mr. Lewis moved up from Account Executive to Account Supervisor and Vice President. He was previously Vice President and Account Executive for Grant Advertising in the Detroit and Washington, D.C. offices. Earlier advertising and sales experience was with Gardner advertising.

During World War II, he was a Major in the Army General Staff Corps. He holds the Silver Star and Purple Heart and is a graduate of

the Infantry School at Fort Benning, Georgia, and the General Staff School at Fort Leavenworth, Kansas.

Born in Coraopolis, Pennsylvania and educated in the public schools there, Mr. Lewis received his B.A. degree from Western Maryland where he was a letterman in football, boxing and track. His sports interests now center on golf and skiing with woodworking one of his hobbies.

The Lewises and their daughter, Rebecca, lived in Scarsdale, New York before moving to Cape Cod. They now make their home in Centerville.

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Mass. Cranberry Station and Field Notes

by Prof. William E. Tomlinson

Scum

This is the season that growers should be on the watch for the development of green or algal scum. This will appear first in and near the shore ditches. It can be controlled by applying evenly four pounds of copper sulfate crystals per acre foot of flood on the ice or in the bog flowage in late February or March, as directed in the Weed Control Chart. Withdrawal of the flood in mild weather, on bogs with plenty of water for reflows, will also discourage scum development

Chart

On February 6, there was a meeting of growers, county agents, and Cranberry Station staff to discuss the revision of the Insect and Disease Control Chart, in the Weed Control Chart, and the first revision of the Fertilizer Chart since 1958. These will soon go to the printers and should be distributed toward the

end of March. The revisions will be discussed in this column next month.

It hasn't been a winter that favored sanding on the ice to any extent. Except for a short period in December, temperatures have been too high to make ice that would support heavy sanding equipment.

No Winter Damage

The feeling prevails that there has been no detrimental effect on the coming crop prospects caused by the winter weather so far (February 13). The frequent freezing and thawing weather, mild temperatures after the first of the year, and frequent rain have prevented the development of oxygen deficiencies. Though it has been windy, the temperatures have not been low enough to cause winter injury (physiological drought) to vines that were exposed after withdrawal of the flood from under the ice.

Dr. Cross

News from Dr. Cross has been infrequent. He is no doubt having too busy and too enjoyable a time to take time out and write frequently. The last letter, and the third received by the Cranberry Station, was written at Oxford. He mentioned seeing Orrin Colley in London

and accompanying him on his rounds of markets and brokers, and feeling encouraged about export possibilities.

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USDA Hearing Held On Amendments To Marketing Order In Massachusetts New Jersey and Wisconsin

Undercurrents of Tensions in Occasional Clashes in Testimony

First public hearing on the proposed amendments to the Cranberry Marketing Order at the Wareham Memorial Town Hall, Feb. 10 began at 9:30 a.m. and did not adjourn until well into the evening with no supper break. Much testimony pro and con was taken, but scarcely more than a handful of growers were present as spectators. Much of the testimony heard was

of a technical nature, with the proposals having the apparent intent of "smoothing out" the functioning of the Cranberry Marketing Order Committee of 7. However, there was a note of tenseness as concerned the testimony of some of the "independent" handlers as against the "big cooperative", Ocean Spray.

A frequent and sharp questioner was Blair Perry of the Boston law firm, Hale & Dorr, who represented the Decas Bros. interests at the original hearing two years ago and at

this hearing appeared for the Decas group, Indian Trail, Inc., of Wisconsin Rapids, Winnebago Cranberry Company of Wisconsin and Peter A. LeSage, of Massachusetts. Attorney for Ocean Spray was George "Ted" Finnigan of the firm of Ropes & Gray of Boston.

The hearing master assigned by the USDA was Will Rogers, a former congressman from Oklahoma; representing the USDA were George A. Dever, Norman Healy and Harry Platnick, the latter an attorney. The marketing committee was represented by Chairman George C. P. Olsson; Plymouth, president of Ocean Spray; vice-chairman Behrend G. Pannkuk, Wisconsin Rapids president of Indian Trail, Inc., processors and distributors and an owner in the Winnebago Company; secretary-treasurer John Charles Decas of Wareham, representing the Decas interests; principal Frank Oliver Glenn, Jr. of Long Beach, Washington, representing the West Coast; Maurice Makepeace, Marion, alternate of the A. D. Makepeace Company.

From Wareham the hearing was continued to the Mt. Laurel Room, Holiday Motel, Exit 4, Moorestown, New Jersey on February 12 and from there to Wisconsin Rapids, February 14. All testimony of witnesses on the record was taken under oath, and it was reported the transcript of the Wareham hearing alone will run to 300 typed sheets.

No decision is given at the conclusion of the hearing as the matter of the amendments goes to Secretary of Agriculture Freeman for acceptance or rejection.

The longest testimony of the day and raising one of the most disputed points was that of Gilbert T. Beaton, manager fresh fruit sales and export manager of Ocean Spray. This came on his amendment to change the word "acquire" where it appears in Paragraph 929.52 to the word "handled". He said "acquire" might mean different things to different distributors and he wanted everyone to be working on the same interpretation and that he thought "handled" was the proper way to designate this.

It developed this changing of the words could mean a difference in the barrellage of any withholding, as the amount handled, that is handled for marketing in either fresh or processed form would reduce the amount handled "acquired" because of prior "shrinking" (spoilage in storage and through screening) to a smaller amount of berries than designating the withholding amount from the number of berries "acquired" by a distributor.

The point was made this would, apparently, work out in practice to

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(Continued on Page 16)

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Following a return of winter, Jan. 14 with heavy snow and cold, the weather turned much milder and the traditional "January Thaw" set in just about on time.

The second "blizzard" of the winter and one of the worst storms of years struck the Cape area on the 13th and 14th, depositing depths of snow ranging from 10¼" as recorded at Cranberry Experiment Station up to 19 inches at Falmouth on the Cape; Nantucket Island, where heavy snow is something of a rarity getting 12 inches. Gale winds of hurricane force at times, 70 to 75 miles per hour at Cape Cod Canal, hurled the snow in huge drifts at many points, at others, leaving the ground all but bare.

There were two lighter falls later in the month, but January's 31 days ending with a total precipitation of 3.72" for the month (with the average being 4.12") of which 11.75 inches was snow. But it was not a bad month mostly either in heavy snowfall or in temperatures. In fact the month ended about two degrees a day warmer than average. Coldest temperature reached at State Bog

was zero on the first day of the month.

Prof. "Bill" Tomlinson, acting director of the Cranberry Experiment Station during the Sabbatical of Dr. Cross said January as far as cranberries go was about an "even month." There had been, snow, freezings, rains, meltings. He was of the opinion there had been little or no winterkill and little oxygen deficiency.

Also, the weather had been such to end of January that little ice sanding had been accomplished. There had been a little gotten in December, but certainly not much if any in January.

February began rainy, a little snow but relatively mild. The first week ended slightly warmer than normal.

WASHINGTON

Winter "Wet and Mild"

The best way to describe the current winter in the cranberry areas is "wet and warm." The month of December brought a total fall of 10.90 inches of rain. Temperatures at Long Beach ranged from a low of 23 to a high of 59 degrees, bog temperatures were high, low 20 and high 57 degrees, time did these temperatures stay low for more total rainfall of 19.79 inches and than a day or two. January had a temperatures ranged from a low of 30 to a high of 53; bog temperatures were high 46 and low 27 degrees.

Little Snow

There was a little snow, just enough to cover the ground but the fall only remained a short time.

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Early Spring?

February started warm and sunny and the ground was soon expected to be dry enough to get out onto the bogs. Dr. Charles C. Doughty said indications were for an early spring, if new growth is any sign. Camelias and early rhododendrons were in bloom and spring bulbs were starting to bloom.

Some Bog Work

There has been some pruning work done, dikes were repaired but not much else until rains stopped.

WISCONSIN

Year of Surprises

Weatherwise 1964 continues to be a year of surprises with the usual bitter cold month of January averaging a whopping seven degrees above normal and less than one inch of precipitation. This was the warmest January since 1944 and the least snow since back in early 1900's. It was very difficult for the skiers, to say the least. The month started very cold, warmed up for a week, dropped again but then started breaking high temperature records for over a week. Lowest was -30 in the northwest on the 1st and highest was 55 in the southeast on the 22nd.

Average temperatures ranged from 25-30 degrees in the south to

15-20 degrees in the north. The Southern half of the state had little snow cover at month's end, with the north having from 6-8 inches. Frost depths were the deepest in the central areas, with as much as 36 inches reported in the Wausau area. The extended forecast for February calls for continued above normal temperatures and below precipitation.

Dryness Concern

The continued lack of precipitation is causing concern among the large water users in the state, including cranberry growers. The north western area continues to be the most deficient in precipitation and some water levels are reported as the lowest ever recorded. Unless substantial precipitation occurs in the next six weeks, water tables will continue to drop.

Ideal Sanding

Needless to say the weather pattern was most ideal for sanding. With the early freeze down in December and the lack of snow in both of our coldest months, sanding got off to an early start and many growers had completed their entire sanding operation by mid-January. Dyke and road hauling will continue until the frost starts out. Practically every marsh in the state was doing some type of sanding work.

Ocean Spray Honor 3 Retiring Employees

Three long time employees of Ocean Spray Cranberries, Inc. were honored by 100 of their fellow workers, January 15, at a testimonial dinner at Red Coach Grill in Middleboro upon the occasion of their retirement. Those honored were Miss Sue Pitman of Middleboro, Mrs. Merton Morse of Hanson and Simon E. Kendrick of Dennisport.

Miss Pitman has been associated with the cranberry industry since 1912 when she went to work for New England Cranberry Sales Company, headquartered in Middleboro. She moved up to Assistant Treasurer and was with the Sales Company until it liquidated in 1954. She began at Ocean Spray the same year, at first in charge of fresh cranberry shipments, and later as Office Manager and Personnel Director. In this position she won the affection and respect of both cranberry growers and employees throughout the national cooperative.

She is a graduate of the Middleboro schools and of Bristol County Business School where she was a secretary of her class. She also took courses in Psychology. An active member of the Central Congregational Church throughout the years, she has also served as President of the Quota Club, Secretary of the Central Cemetery Association, and Secretary of the Assawompsett Pockasha Pond Association. During World War II, she was Director of the Report Center in Middleboro.

Miss Pitman resides at 72 South Street with her sister, Mrs. Madeline Baker.

Mrs. Morse, born Lucy DeMeule in Quebec, Canada, has been a resident of Hanson for more than 40 years. She has been associated with Ocean Spray since 1932 as Chief Shipper. Previously she was employed at the National Fireworks. She is a member of the Saint Joseph The Worker Church in Hanson and presently resides on Indian Head Street.

Simon E. Kendrick of Upper

(Continued on Page 17)

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Studies of the Effect of Zinophos on Cranberry Yield

Bert M. Zuckerman

Cranberry Experiment Station
University of Massachusetts
East Wareham, Massachusetts

In 1961, the results of experiments on the control of nematodes in cranberry soils by Zinophos (0, 0-diethyl 0-2-pyrozynyl phosphorothiate) were reported (2). In these experiments control was best when 32 lbs. actual toxicant/acre of 10% granular Zinophos was applied, but 8 or 16 lbs.-acre also reduced nematode population levels significantly for more than 3 months. Recently, Bird and Jenkins (1) reported that cranberry vines which were treated with 32 lbs./acre of 10% granular Zinophos had 38% more uprights and 44% more fruit buds than did untreated vines. No injury to the vines was observed in their tests. In this paper, the results of a 3-year program on the effect of Zinophos on cranberry yields are given.

METHODS

Two blocks of 25 plots each were established in Early Black cran-

berry plantings in 1961. Each plot was 5 feet square within which an area of 9 square feet was harvested and the berries weighed in each of the 3 test years. Each treatment within a block was replicated five times and called a series.

The rates and formulations of Zinophos evaluated are given in Table 1. The emulsifiable concentrate was diluted in water, applied as a drench with a pressure sprayer, and then washed in by applying water as a spray at the rate of 2000 gallons water/acre. The granular material was diluted with 2 parts sand to one part granular by volume to ensure even distribution. Nematocides were applied in late April, 1-2 weeks following withdrawal of the winter flood, with the exception of Block 1, Series D, which was treated after harvest in late October. Soil temperatures at the time of the spring applications were between 52° and 56° F.

RESULTS

The 32 lb. rate caused reddening of

the vines in about 50% of the treated plots, though damage from the granular formulation was less prevalent than that from the emulsifiable concentrate. Significant yield reductions occurred in the year of treatment in 1961 in Block 1, Series C and D, and in Block 2, Series D, in 1962 Block 1, Series C. The other series treated with the 32 lb. rate yielded smaller crops, but these differences were not statistically significant (Table 1). These plots were not treated in 1963 and that year yields were significantly larger. Franklin 1 observed that in the year following reduced yields (due to such causes as frost injury or oxygen deficiency), yield was generally much increased. The explanation given for this occurrence was that cranberries which bear a small crop one year secure a needed rest, and the crop-bearing potential the following year is thereby increased. In the current experiments, yields frequently were significantly reduced in the year of treatment, and signifi-

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cantly increased the year following treatment. The 3-year total of yields from plots treated with the 32 lb. rate approximated those of untreated.

The 8 and 16 lb. rate caused no apparent phytotoxic effects. The trend towards higher yields was associated more consistently with the 16 lb. rate. This trend is most apparent in the Block No. 1, Series B tests, but was also noted in the Block No. 2, Series B and C tests. On the basis of these data, it was estimated that increased yield responses in cranberries would be stimulated by application between the 8 lb. and 32 lb. rate.

DISCUSSION OF RESULTS

Based on one year's treatment, Bird and Jenkins (1) observed better growth and an increase in the number of uprights and fruit buds in plots treated with the 32 lb. rate of 10% granular when compared with untreated plots. They observed no phytotoxicity in these tests.

In the current experiments, reddening of the vines and a significant yield reduction frequently occurred following application of the emulsifiable concentrate at this rate. In one experiment, the 32 lb. rate of the 10% granular formation caused vine reddening on a few plots, and a significant yield reduction. While it is difficult to draw a valid conclusion pertaining to the phytotoxicity of the 32 lb. rate of granular Zinophos from the current tests, it is evident that use of this rate should be tested further.

The reason why significant yield increases occurred in the year following treatment can be explained by analysis of the facts known about the action of Zinophos on cranberries, however current knowledge does not permit interpretation of these deductions as being experimental proof. Bird and Jenkins' (1) findings of increased fruit bud formation on vines treated with Zinophos, gave promise of increased yield potential for the following year. The significant reduction of yields from vines treated with the 32 lb./acre rate indicated that in the second of successive years of treat-

ment, a low level of yield suppression may be experienced at the 8 and 16 lb. rates, which partially counterbalances the increased fruit potential resultant from the first years treatment. This deduction received support from the fact that significant yield increases did not occur in the second consecutive year of treatment, but did occur in 3 of 5 Series treated at the lower rates in the year following treatment. From the above, it was concluded that Zinophos should not be applied in consecutive years.

CONCLUSION

Significant yield increases occurred in the year following treatment with 8 or 16 lbs. actual Zinophos/acre. Yield increases generally were greater when the 16 lb. rate was used. Yields were reduced by 32 lbs./acre, and frequently vines reddened, but the emulsifiable concentrate was more phytotoxic than was the granular formulation. The results indicate that a rate of 16 lbs. actual/acre of 10% granular Zinophos applied in the spring every other year would increase the yield potential of cranberry vines. Zinophos is not currently registered for use on cranberries. This article is a report on progress in our experimental program, and should not be construed as a recommendation for use of this chemical.

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CRANBERRY MEN HONORED

President Charles C. Doughty, director of the Coastal Washington Experiment Station at Long Beach, Washington was recognized as a 100 percent attendance member for 1963 at a recent meeting of the Ilwaco-Long Beach Kiwanis Club. Leonard Morris, cranberry grower received recognition for 18 years with perfect attendance record and also Dr. J. Harold Clarke, formerly with cranberry interests for 16 years.

"H. D." Scammell

Harold D. Scammell, prominent for many years in the blueberry and cranberry matters, particularly in New Jersey, passed away recently. He was 79 and had been active, in his Blueberry Nursery business in Toms River, N. J., until his sudden passing. In 1913 "H. D.," as he was familiarly known, was named entomologist assistant of the USDA. He then began to investigate cranberry insects with headquarters at Pemberton, N. J. He spent one year in residence at famed Whitesbog, N. J.

He was born in Brooklyn, N. Y., on October 7, 1885, attended two New Jersey schools, the High School at Hancensack and Stevens Preparatory School in Hoboken. In 1910 he was graduated with a Degree in B. S. in Horticulture and Entomology from Colorado Agricultural and Mechanical College at Ft. Collins. Subsequently he was employed as assistant to the State Entomologist for Mesa County at Delta, Colorado.

He worked with the late Frederick Coville and Miss Elizabeth C. White at Whitesbog in the development of the cultivated blueberry. He served in prominent capacities in both the cranberry and blueberry industries. He had been appointed to the New Jersey State Board of Agriculture and also to the Board of managers of the New Jersey Agricultural Experiment Station.

"MISS CRANBERRY HIGHWAY" CORONATION

Cranberry Highway Association composed of businessmen along the Cranberry Highway which runs 6 miles from Middleboro (Mass.) Rotary Circle to the rotary circle at Orleans on the Cape made plan this month for its 5th anniversary. The crowning of "Miss Cranberry Highway", this year is to be associated with the big 50th anniversary celebration of the completion of the Cape Cod Canal this summer.

FRUIT-O-SCOPE

Cranberry growers have something to crow about. They're the baby foods market for the first time with introduction of Gerber's new strained and junior apple juice and cranberries. (American Fruit Grower, January.)

TABLE 1

Yields of cranberries following treatment with several rates and formulations of Zinphos.

Block No.	Year	Series No.									
		A		B		C		D		E	
		Treatment	Yield	Treatment	Yield	Treatment	Yield	Treatment	Yield	Treatment	Yield
1	1961	8 lb. EC	599	16 lb. EC	542	32 lb. EC	436*	32 lb. EC	463*	NT	549
	1962	8 lb. EC	429	16 lb. EC	491	32 lb. EC	262**	32 lb. EC	371	NT	429
	1963	NT	479*	NT	598*	NT	700**	NT	397	NT	386
		3 yr. yield Average	502		544		499		410		441
2	1961	NT	823	16 lb. g	711	NT	901	32 lb. g	699*	NT	868
	1962	8 lb. EC	718	16 lb. EC	789	16 lb. EC	820	32 lb. EC	611	NT	671
	1963	NT	505	NT	546*	NT	501	NT	648*	NT	410
		3 yr. yield Average	682		682		741		653		650
<p>1. EC = emulsifiable concentrate. g = 10% granular. NT = not treated. 45% active ingredient (4 lbs./gallon)</p> <p>2. * = significant yield increase or reduction at the 5% level; ** - significant yield increase or reduction at the 1% level; as compared with the non-treated plot yields.</p> <p>3. Treatments given in lbs. actual toxicant/acre.</p> <p>4. Each yield figure represents the averaged yield of 5 replicates in grams.</p>											

Richards, New Ocean Spray Director Is Now A Full - Time Grower At Grayland

**He Operates Ten Acres—Believes Grayland Production
Will Increase, and More Fresh Fruit Can Be Produced.**

by Clarence J. Hall

"I am going to keep on full-time work on my cranberry property from now on," says Cecil G. Richards of Grayland, Washington. Formerly engaged in electrical work, Richards has now achieved the ambition of many a small West Coast grower—that is, to make cranberry growing his only occupation.

Richards is one of the better known and respected growers of the Coast, active in cranberry affairs of the Coast, which he knows well as far as cranberry growing, goes from Lulu island in British Columbia down to the Bandon area in Oregon. In August he was named vice chairman of the West Coast Advisory Board of Ocean Spray, membership on this body being of great importance in the general over-all West Coast cranberry picture. For several years, until 1963 he was president of Grayland Cranberry Grower's Association. He is now vice president, which also means he is vice president of the Grayland division of the Coast Advisory Board as the officers of both are one and the same. Last month he was elected Washington State director of Ocean Spray, succeeding "Dave" Pryde.

Grower Since 1938

Cecil has been a cranberry grower since 1938 and has now achieved holdings totaling 10 acres of producing bog. His average per acre he places at from 125 to 150 barrels. His top production has been 1250 barrels, when he did not have as much acreage as he now has.

Richards has made one previous trip to Massachusetts, going there as an alternate to a West Coast director of Ocean Spray. This was in

1957. He now, presumably will become more familiar with eastern cranberry growing as he attends the directors' meetings at Hanson.

He was born in 1906; his folks being farmers at Granite Falls, Washington, near Everett. He attended schools at Granite Falls and after graduation from high school he went into construction and electrical work.

Bogs In Small Pieces

When he came to Grayland to go

into cranberry work he found the vast Grayland swamp cut up into very small individual bogs, and he had difficulty in getting bog sections in the Grayland swamp which were side by side. Finally he laid out about 2¼ acres, selecting the bog very carefully. This property is on Evergreen Park Road.

He now owns one sump and half of another, and has two sprinkler systems.

Harold Lilligrade owns to the north of his property and Conrad Ross to the south. Mr. Ross, who is more than 80 and a longtime grower is still active in taking care of his property.

The Richard bogs are really laid out in a large rectangle, stretching from Evergreen Park Road to the abrupt hills in back of the Grayland swamp. He had been active in installing sprinkler systems for others and when seen at Grayland had just finished putting in 15 systems.

He utilizes the railroad tracks on his bog, using standard gauge. Some of Grayland growers use this width some smaller. In the "old days", the carts were pushed over the track by man power, today he says more than half are motorized.

Of Grayland production he believes this is going up in general but that acreage may be tending down as some growers go out of the cranberry business.

Automatic sprinkler systems are increasing rapidly in the Grayland district.

Automatic Sprinklers

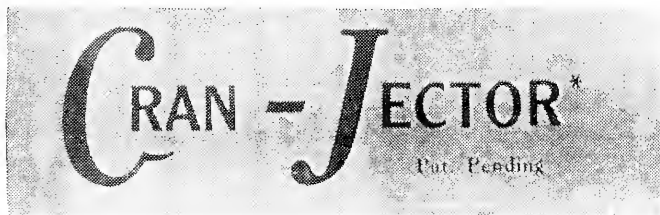
"Almost all of us now have sprinkler systems, with warning bells," he adds. Mr. Richards is among those who recognize a problem in pollination at Grayland area. He feels the climate is too cold for the best working of honeybees, "so most of the pollination is by bumblebees. However the honey bees seem to be doing better each year."

"Two years ago a few grower tried air pollination, that is they had helicopters come in and hover over bogs at the critical time to stir up enough air to spread the pollen. But he added, "there happened the year to be such good natural pollination factors present that the experiment proved to be inconclusive."

Concerning sand, Richards says that "in building a new property w

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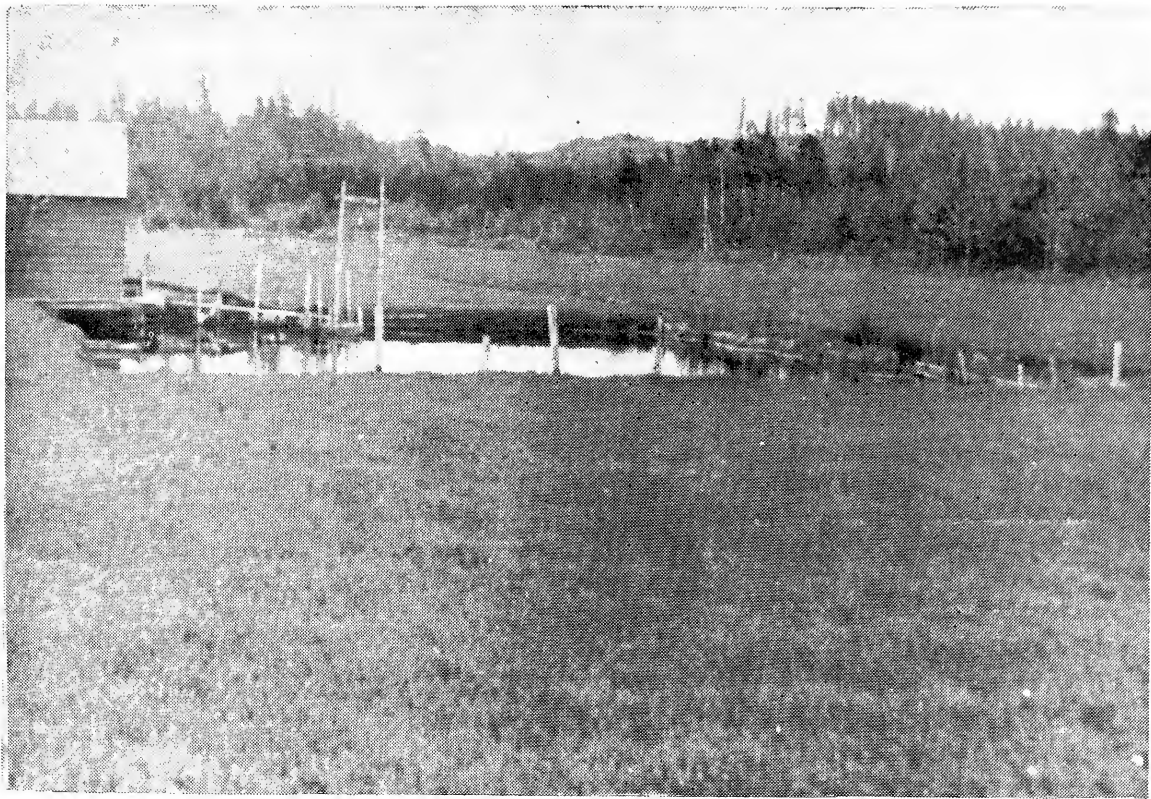
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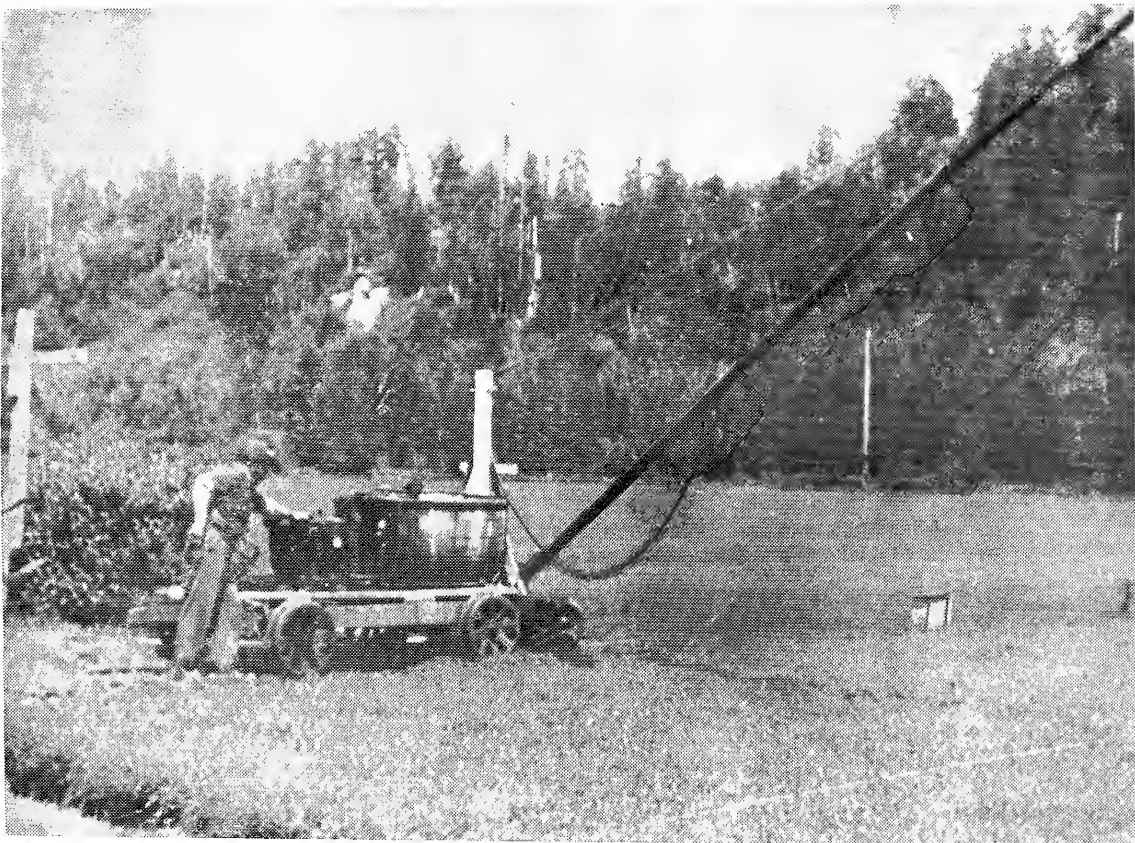
7 Clermont Ave.,

Trenton, N.J. 08618



Showing a sump in the center of the Richards Bog at Grayland.

(CRANBERRIES Photo)



Richards pushes out his spray rig on his tracked bog at Grayland.

(CRANBERRIES Photo)

All of Grayland growers do their own screening (It is only the fruit for the fresh market which is screened at Markham.) Ocean Spray screens the fresh berries as they are needed, keeping them now in its temperature-controlled rooms. "As we get our new facilities at Markham," says Richards, "I can see no reason why we cannot put out more fresh berries. We are now running about 20,000 fresh — this could go easily to 30,000. We get no shrinkage from our processed berries, "because they are put into the freezer immediately.

His bogs are planted to McFarlins. His home place bog is on Smith Anderson Road, this piece consisting of three and a half acres. Next to this he has a holding of two and a third acres. On this home place bog he has gotten up to 300 barrels to the acre.

Richards is a believer in adequate fertilization, using a 3-10-10 or a 10-20-20, putting on the materials about every year where he feels it is needed. He adds, "If we didn't sand, the weeds would take us off. There are dozens of different kinds of weeds. Horsetail is the worse.

"Our main insect is fireworm, and I run my sprayer down the track spraying three times for fireworm and fruitworm. Parathin and DDT is used for the ground spray. However we put Parathin through the sprinkling system."

Your editors spent a pleasant afternoon with Cecil Richards as part of our West Coast trip. He took us to Tokeland, a crab fishing center. It was also once, apparently, a popular resort on Willipa Bay, and there is still a huge hotel, built back in the days when large resort hotels were constructed and which had been visited by many notables of the time.

Through Richards we met the owners and were shown interesting old photographs, records, etc.

Richards like most Grayland growers has his own cranberry equipment. He has a suction picker, two Wester Pickers, a warehouse and separator on each bog; dryer, track sprayer and in all four sprinkler systems.

Richards is busy most of the time, but his hobbies are fishing, camping and bowling.

REDUCE LABOR COSTS AND IMPROVE FRUIT QUALITY WITH FROST PROTECTION BY FMC TROPIC BREEZE WIND MACHINES

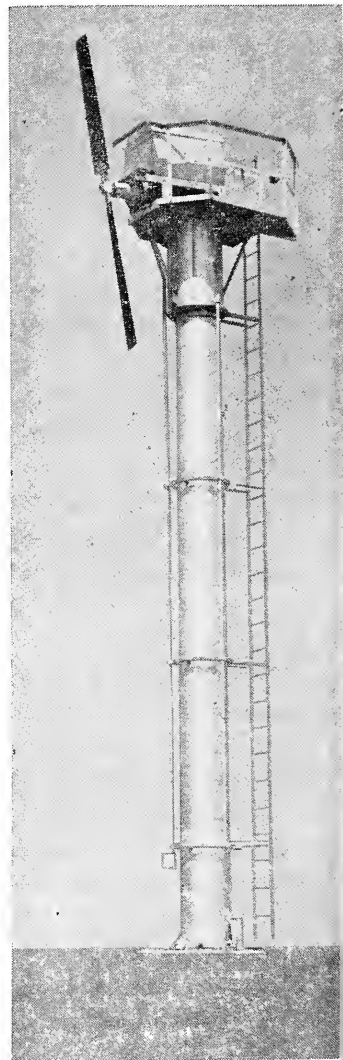
Tropic Breeze Wind Machines have been widely used in citrus groves and orchards. They are a thoroughly proven piece of equipment. And now they have been shown to be highly effective in cranberry marsh frost protection.

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The Effectiveness Of Wind Machines For Cold Protection In A Wisconsin Cranberry Marsh

By W. R. Wallis, Meteorologist
U.S. Weather Bureau

Cold Protection is a necessary part of Wisconsin cranberry production and for years the protection has been accomplished by flooding cranberry beds with water from surface reservoirs. Flooding provides complete cold protection, but it is not without problems. In some areas several hours are required to provide an adequate flood and during cool dry periods, water becomes an expensive commodity. Weed and fungus infestation, scalds, and plant retardation are also problems related to flooding and they are particularly

acute during the critical bloom and young berry stage of the season. It is generally agreed that each flood during this portion of the season substantially reduces both volume and quality of the crop.

During the summer months of June, July and August critically cold temperatures are, with very few exceptions, limited to clear still nights and lowest temperatures are generally above 25°. Experience has shown that wind machines are effective as a method of cold protection under these conditions and in

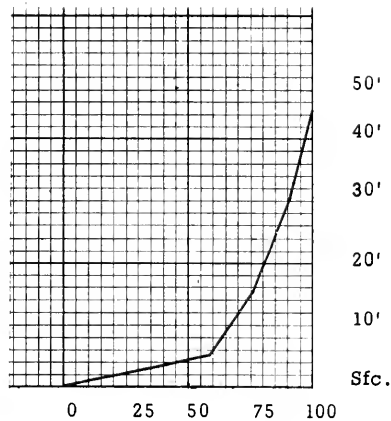
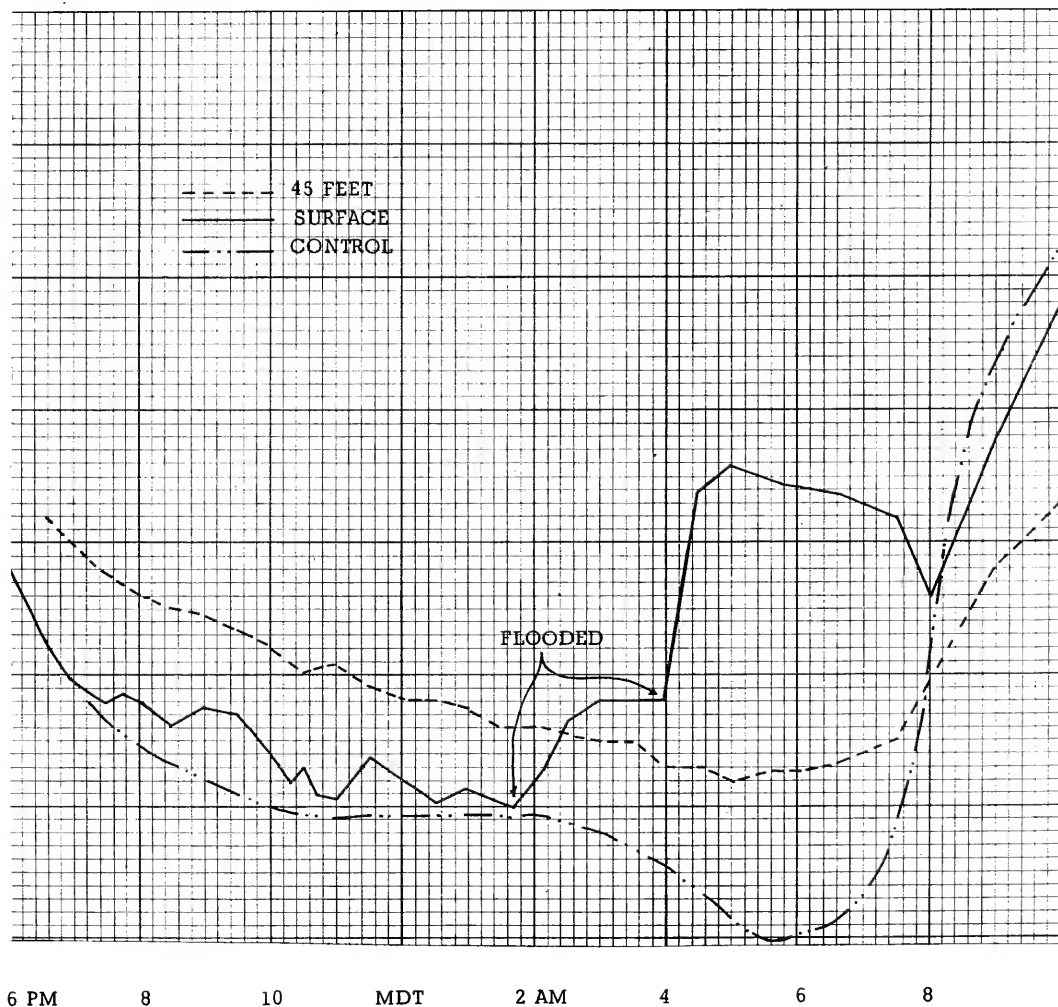
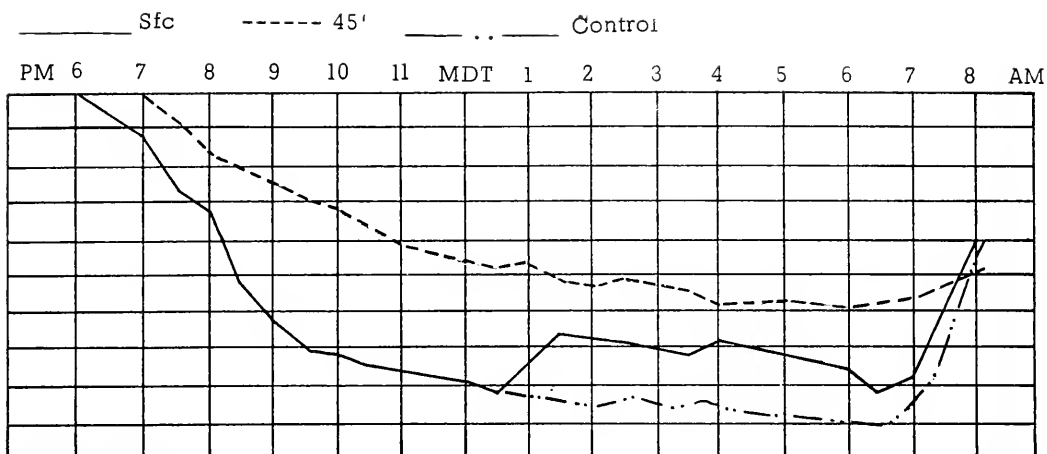


FIGURE 1.

June, 1963 two wind machines were installed in the C & H Cranberry marsh near City Point, Wisconsin. The machines were not intended to

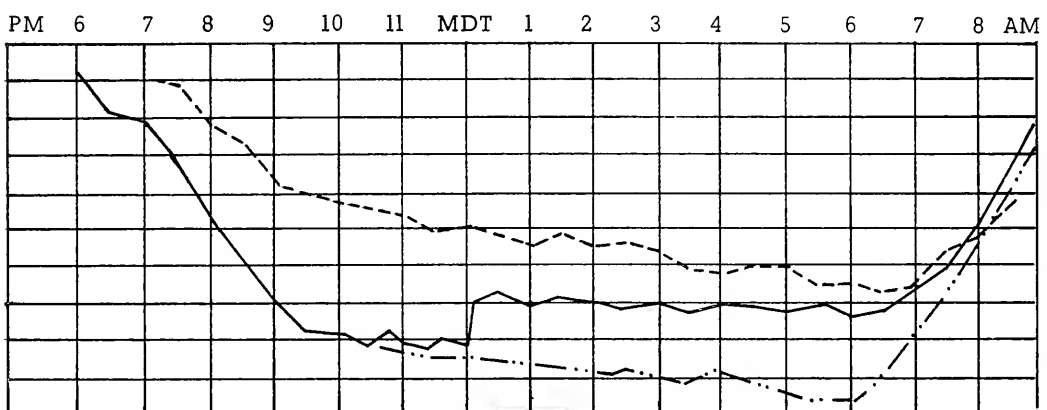
C & H CRANBERRY MARSH 9/13/63





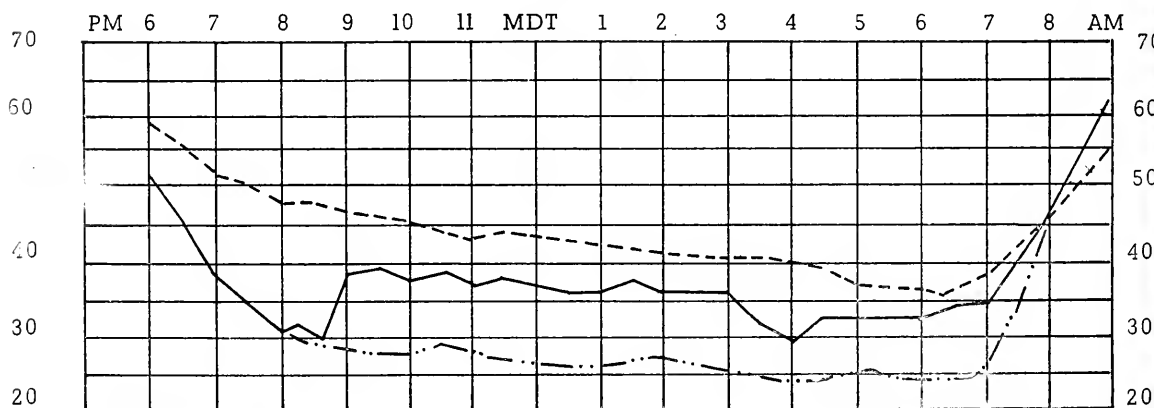
Aug. 15, 1963

FIGURE 2.



Aug. 18, 1963

FIGURE 3.



Sept. 14, 1963

FIGURE 4

eliminate the need for flooding altogether, but rather to reduce the number of floods during the critical portion of the season. Temperature recorders were placed in the marsh to measure the temperature modifications induced by the wind machines and recorders were also placed in similarly cold locations

outside of the marsh to provide a comparison.

Wind machines utilize the nocturnal temperature inversion by drawing warm air from aloft and forcing it to mix with or replace colder air near the surface. The larger the temperature inversion. The larger the machine influence will be. A 45'

inversion tower located 400' west of the wind machine provided vertical temperature profiles above the marsh and the profiles showed that on clear still nights a large inversion of 12-20° formed over the marsh. The inversion reached a peak 2-4 hours after sunset and diminished somewhat during the

mainder of the night. The sunrise inversion was consistently around 80% of the maximum inversion before midnight. Fig. 1 gives the percentage of the total inversion below each level on the inversion tower and it can be seen that the temperature increase was very sharp near the surface with over half of the total inversion lying below 5'. On all of the sixteen nights used for these averages 50% or more of the total inversion was below 5'. The large temperature inversion and the fact that the cold air is quite shallow indicate favorable conditions for effective wind machine operation.

The wind machines were operated on five nights and Fig. 2, 3, and 4 are temperature traces for three of these nights. The traces from the two remaining nights were very similar. The traces illustrate the rapid temperature response when the wind machines were started. The response ranged from 6° with a 14° inversion to 8° with an 18° inversion, or approximately 45% of the total inversion. The wind machines were able to maintain a constant level of protection during the remainder of the night and at no time did the marsh temperature fall below 32° while the machines were running. On the night of Sept. 14 (Fig. 4) the machines were turned off at 3 A.M. In one hour the marsh temperature dropped from 36° to 29°. The wind machines were started again at 4 A.M., but they were able to produce only a 3.5° temperature increase.

There was one night during the period of this study when the marsh was flooded and no attempt was made to protect with the wind machines. This was the night of September 13 and it can be seen from temperature traces in Fig. 5 that although the wind machines could have provided some protection, it doubtful that the machines alone could have maintained the marsh temperature above 32°.

The temperature data provides a means by which the wind machine's performance can be judged from the standpoint of temperature modification, and the data presented in this report indicate that wind machines can provide adequate cold protection on a majority of the nights when protection is required. The limit of

protection which can be expected is dependent upon the magnitude of the inversion, but a reasonable estimate of the maximum protection would be 8°, and this with an inversion of 20°.

As stated earlier, it was felt that reducing the number of floods during the critical portion of the season would improve quality and yield and the results confirmed this feeling. Keeping quality of the berries harvested was excellent and yield per

acre was well above that of neigh-

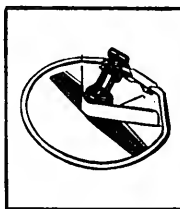
EDITOR'S NOTE

Warren Wallis, author of the article on the "wind machines," is a meteorologist employed by the U.S. Weather Bureau and during the winter months is stationed at the Weather Station at Lakeland, Florida, and during the summer at Madison, Wisconsin, forecasting for the

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cranberry frost warning service.

He succeeded Jim Georg in Wisconsin and it was Mr. Georg who first ran detailed tests with the large type wind machines in Florida on citrus crops in the early 50's, and published several papers on the subject. Wallis assisted him in subsequent years. It was Mr. Georg with whom Leo A. Sorenson, Wisconsin Rapids cranberry consultant first discussed the possibility of testing this type of machine for cranberries. It was planned to originate the tests in 1960, but these never developed due to the aminotriazole scare. Upon recovery from this crisis in the industry Mr. Sorenson discussed again with Wallis and after studying all the "angles" in conjunction with his superior at Madison the test was approved.

Sorenson felt this was the only way the machines could be satisfactorily tested in an unbiased manner and with the proper equipment.

The experiments according to Sorenson and others proved themselves, and now there is considerable interest in the machines in Wisconsin and several machines have been sold and delivered in New Jersey, and several are being considered for Massachusetts.

The first article on the two "wind machines" at the C & H marsh in Wisconsin appeared in CRANBERRIES Magazine in the August issue.

USDA Hearing

(Continued from Page 4)

the advantage of Ocean Spray and Attorney Perry questioned the witness at great length, and in doing so, the report of Ocean Spray to its stockholders and to the marketing committee differed in barrelage for the crop of 1962, in regard to screening and shrinkage, he inferred.

Mr. Blair was cautioned several times by the hearing master that the questions he was asking were irrelevant and that he could not "put figures in the mouth of the witness" in the matter in which he was asking the questions that the question should be approached through a different line of method.

Mr. Perry pursued the point by calling Anthony R. Briggs, manager of the Marketing Committee who said the total industry shrink for that year was reported as 92,236

barrels, and then calling President Olsson to the stand who testified the report to stockholders had showed an Ocean Spray shrink of slightly more than 100,000 barrels or a difference of about 14,000 barrels.

Mr. Olsson under questioning by Attorney Finnigan and from the floor said the annual stockholders' report was prepared by a recognized and competent outside firm of auditors, and the figures used in the preparation were those of the auditors. He said he felt the report was fully justified from the standpoint of good auditing. Beaton had testified earlier he did not believe the changing of the word "acquired" to "handle" would materially change the set-aside figure. To a question, Mr. Olsson replied that if Mr. Perry was a stockholder he could find the information on the figures at the main office at Hanson.

Another change in the by-laws was one proposed by Decas Bros. this being presented by John C. Decas on the stand. As marketing orders now stand, to be placed in effect upon an industry, more than two thirds of the growers or producers, either by number or volume must vote in favor in an industry-wide referendum. This the cranberry growers did two years ago.

In essence the Decas proposal was that the "secretary shall terminate" an order when he finds that the order is not favored by either a majority of growers affiliated with any "cooperative marketing organization", in this instance Ocean Spray, or by a majority of growers not affiliated with this organization; in this case the growers or the so-called "independents."

The plea of Mr. Decas was that as Ocean Spray has a majority of about 85 percent of growers, by numbers and volume that this Ocean Spray majority had forced its will upon the minority independents with only two or three exceptions.

Even though recognizing that only a majority of total number of growers as independents might vote for termination, it was only fair this minority should have this "protection." He said he was not advocating such a vote necessarily at this time but he would like to have that provision in the order so that if it became advisable from an independent point of view, this could be done.

Before he testified he was cautioned by Hearing Master Rogers that the amendment might not be considered as constitutional in that a minority of total growers might be making a decision against the will of the total majority, but he would permit the testimony to go in. Attorney Platnick of the USDA said he also doubted if such a vote

would be effective that the secretary "shall" do something as it was the intent of Congress in passing legislation on marketing orders that a majority rule. He suggested the word "shall" be changed to "may" but Mr. Decas said that was no his desire.

At the start of the hearing Robert Hiller, Rochester, asked if he might read into the record a letter from his employer Peter LeSage, distributor, who is in Florida. Mr. Roger said he would permit this, as a courtesy, even though the content would have no bearing on the evidence as it was not given under oath.

He said if the letter had been addressed to him and not to Mr. Hiller it would have been admissible and that Mr. Hiller could testify in his own words if he wished. The letter referred to a belief the marketing order favors Ocean Spray to the disadvantage of independents, that the order might not be constitutional and that Vernon Goldsworthy, Wisconsin independent grower and handler is testing this constitutionality in the Wisconsin U.S. District Court. Goldsworthy has been charged by the Department of Justice with a violation of the acts of the order.

The whole question of a termination of the order comes up for a referendum this year, probably in May with another nationwide vote to cranberrymen.

Growers must also vote on the amendments it approved by the secretary. There are 12 in all. Mr. Briggs had testified that a number of these were merely for "streamlining" the committee operations.

One concerns a proposal, put forward by Mr. Beaton for adopting withholding resolution that would grant a handler credit toward next year's set aside. A proposal put forward by Mr. Olsson which would require handlers to pay the committee a specified amount to obtain berry release from the set-aside. A proposal by Manager Briggs would require the committee to determine the price per barrel a handler must deposit for release of withheld berries. Another concerns the changing of the word "date" to "dates" for the filing of a report at end season.

Report Issued By Market Committee

Anthony R. Briggs, manager Cranberry Marketing Committee has released the latest compilation of inventory and handling report as given by handlers which shows that as of January 1, 1964 there was a total of 424,638 barrels of hand in the industry as compared

a total on hand, January 1, 1963 416,771. The total crop acquired 1963 as given by the distributors 1,201,966 barrels, and it is interesting to note that at the Cranberry Marketing Committee's October meeting, when the set-aside was reduced to zero the Committee estimate at that time was 1,197,593, or deviation of only 4373 barrels. Broken down by states the 1963 crop was: Massachusetts 632,341; New Jersey, 65,271; Wisconsin, 353,199; Washington, 112,431; Oregon, 1,846 barrels. Of this production 394,969 barrels were sold on the fresh market; and processors, 729,524. The balance of the crop reported on hand is given as 144,689 barrels processed ready for shipment and, freezers, 279,949 barrels. On hand, September 30, or the start of the 1963 selling season were 1,866 in freezers; processed ready for shipment, 85,872 barrels. Disposition as the processors reports show was 152,738 sold processed of the 1962 crop and of the 1963 crop 12,678 barrels. The new figure of barrels on hand corrects that of 663,938 given at the Cranberry Marketing Order hearing Boston December 12. The difference is due to the fact, it is explained that at that time there were duplication of figures on the part of the distributors.

Donor 3 Retiring Employees

(Continued from Page 6)

Stanley Road in Dennisport has been Ocean Spray's Harwich Plant since 1940. He has been a Receiver and Mechanic in Maintenance. His position was Machine Operator. Born in Harwich, he is a graduate of Harwich High School where he was Captain of the Baseball Team. He and his wife, Grace Kendrick, have a son, Donald, of Dennisport and 7 grandchildren. Kendrick's father, Benjamin Kendrick, was sea captain of a fishing boat and also raised cranberries. He owned the Bells Neck cranberry bog in Harwich. After several years since his death, the property is now being cleared for housing. Still will retain its name of Bells Neck. Simon went fishing with his father at the early age of 12 and helped on the cranberry bogs. However, he followed neither profession. Instead went into the packing end of the cranberry business in Ocean Spray.

Stanley Benson of Middleboro was

Toastmaster of the affair and presented gifts from the employees present. Mr. Benson was associated with Miss Pitman at the Sales Company and is now Assistant Sales and Traffic Manager, Fresh Cranberries, at Ocean Spray.

Edward Gelsthorpe, Executive Vice President and General Manager of Ocean Spray, presented gifts and certificates from the cooperative, engraved watches to Mrs. Morse and Mr. Kendrick, and an amethyst and pearl bracelet to Miss Pitman.

Chester W. Robbins, Treasurer of the cooperative, and representing Massachusetts cranberry growers spoke of the contribution made to the cooperative by these dedicated people over the years.

Serving on the arrangements Committee, Mrs. Vaino Korpinen of Middleboro, Mrs. J. E. Taylor of Plymouth, Miss Margaret Clark of Hanson and Miss Betty Buchan of Duxbury.

New FDA Booklet: Facts For Consumer, Pesticide Residues

WASHINGTON, D.C. — How a Federal agency enforces the safety rules established by Congress to control pesticide residues in food crops is detailed in a booklet entitled "Facts for Consumers—PESTICIDE RESIDUES" recently issued by the Food and Drug Administration, U.S. Department of Health, Education, and Welfare.

The booklet points out that pesticides are a powerful weapon in the battle to guard American foodstuffs against insects and other pests, but that their use poses the problem of ensuring that no harmful residue remains in the food that reaches the consumer's table. It spells out in nontechnical terms how the Federal Food, Drug, and Cosmetic Act operates to accomplish this objective.

Details of the booklet explain the system for setting safe tolerances, areas of Government authority, the farmer's responsibility, safety clearance requirements, and testing procedures.

Before 1940, the booklet points out, there were only a handful of basic chemicals available for use

as pesticides. With these products farmers were able to control only a few of the primary pests such as the codling moth, boll weevil, potato beetle, and some scale insects.

Today there are almost 500 basic chemicals used in more than 54,000 registered pesticide products. Of these, about 250 chemicals are widely used in about 38,500 agricultural formulas.

In one recent year over ten million growers of fruits, vegetables and other crops in the United States used 175,826,000 pounds of insecticides, plus an even larger amount of weed killers, fungicides, and other pesticides.

Many of these can and do result in chemical residues on harvested crops. It is, therefore, important that there be adequate controls to protect consumers from injury.

"Facts for Consumers — PESTICIDE RESIDUES" summarizes the two major laws under which the Federal Government works to control the safety of pesticides.

One is the Federal Insecticide, Fungicide, and Rodenticide (IF&R) Act of 1947, which is administered by the Department of Agriculture (Pesticides Regulation Division, Agricultural Research Service). The other is the Federal Food, Drug, and Cosmetic (FDC) Act of 1938 as amended by the Miller Pesticide Chemical Amendment of 1954. This is enforced by the Food and Drug Administration of the Department of Health, Education, and Welfare.

The IF&R Act is a label registration law. The FDC Act provides for the setting of safe limits on the amount of residue that may remain on the crop at harvest. The FDA procedure begins to operate after the manufacturer has registered or applied for registration of his product with the Department of Agriculture. The manufacturer then submits to FDA a petition for a "tolerance" or an exemption for his pesticide.

The petition must contain results of tests made to show how much residue will remain on the crop if directions on the label are followed, tests made on animals to show that this amount of residue will not be harmful, and methods of analy-

(Continued on Page 20)

Chloro IPC

the new answer to dormant weed control in

Cranberries



Chloro IPC, a time-tested herbicide made by the Chemical Division of Pittsburgh Plate Glass Company, can now be used on dormant cranberries. This is good news to growers who need an economical way to control annual grasses (bent grass, annual blue grass, turkeyfoot grass) as well as such weeds as rushes, horsetail, velvet grass, looserstrife, tearthumb and certain others. Chloro IPC is applied while the plants are dormant. It is completely dissipated before the fruit ever appears, so there's no residue problem. Chloro IPC is among the least toxic of all commercial herbicides.

Thorough field testing of Chloro IPC on cranberry bogs in Massachusetts, Wisconsin and Washington has developed local experience and recom-

mendations suited to each area. PPG Chloro IPC is easy to apply in the form of 20% granules, 100 lb. to the acre during November or December after harvest. A repeat application in early spring before cranberry growth begins will give further control of annual weeds. Ask your experiment station personnel at the state university for local recommendations on use of PPG Chloro IPC. Write for more details and your local distributor's name to: Pittsburgh Plate Glass Company, Chemical Division, One Gateway Center, Pittsburgh 22, Pa.

 chemicals

THE ORDER AGAIN

Once again the Cranberry Marketing Order is in the forefront of the minds of cranberry growers, proposed amendments to the order having been heard at the three hearings by the USDA in Massachusetts, New Jersey and Wisconsin. As this goes to press the results of the hearings are not known. But the evidence has been taken.

Amendments concerned; handler withholding, shall have the excess quantity credited to his withholding obligations of the next fiscal period in which free and restricted percentages are fixed; the committee shall determine the amount per barrel each handler must deposit with the committee for berries bought back. Also any funds received by the committee shall be distributed proportionately to all handler on the basis of the volume of cranberries handled. These are amendments designed, it is understood to smooth out the functioning of the order.

Ocean Spray proposed that the free and restricted percentage and withholding obligations be based on the volume of cranberries handled. Decas Bros. independent, proposed to amend the order to require a referendum or termination each year. Such a referendum now comes up in May, the second year.

Whether or not we like in theory the order, it's effectiveness will be brought up and discussed at that time and each grower may again make his decision.

THE FROST "WINDMACHINES"

We are far from being enough of an "engineer" to comprehend much of the workings of the so-called "wind-machine" for cranberry frost protection as referred to in the interesting article in this issue. But, we do know the innovation sounds most interesting and is arousing interest in Wisconsin, Massachusetts and New Jersey, (particularly among blueberry growers in the latter) and for all we know on the West Coast, but the machine or machines would not seem to be adaptable to very small holdings.

The interest does indicate that growers are becoming ever more conscious of the

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frost losses inherent in cranberry growing and of the fact that flooding does nothing to improve berry quality. This and the rapidly increasing interest in sprinklers for frost control are all to the good. Such control is not cheap, but it appears to pay off.

"Wind-machines" in cranberry frost control, as we pointed out sometime ago are not new, but this seems the first really scientific approach to the problem with engineered methods.

SERVING WISCONSIN

New FDA Booklet

(Continued from Page 17)

sis that can be used to detect and measure this residue.

How these laws operate for consumer protection is of special interest to farmers, since they are both producers who must use pesticides safely and consumers who enjoy the benefits of safe use for their own families.

The booklet is available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. The price is 15 cents.

BOG SALE AT LONG BEACH

Mr. and Mrs. Guido Funke, who have operated a cranberry bog for 32 years at Long Beach, Washing-

ton have sold their holding, it is reported to Mr. and Mrs. Erling Brateng of Longview. The sale included 14 acres of bog, a large warehouse and other buildings. The Funkes retained the dwelling and a portion of land.

IRRADIATION

What's the future for irradiation of fresh fruits? Bright! The Atomic Energy Commission is working on plans to install an irradiation processing plant in California by early 1965 to research irradiation of fresh fruits. FDA reportedly has already approved use of irradiation for both bacon and wheat and has applications for use on citrus and potatoes. (American Fruit Grower.) Editor's Note, Cranberry Institute has been looking into the use of cranberries in irradiation field.

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Ocean Spray News

PUBLISHED MONTHLY

Ocean Spray schedules advertising on top daytime Network Shows

Ocean Spray's Go Creative Cranberry Juice Cocktail TV commercials are continuing to reach homes all over the nation, week-in, week-out. Aimed at Mrs. Homemaker, the Cranberry Juice Cocktail spots are carried on ten of her top-preferred daytime shows on the NBC and ABC networks. The commercials boost Cranberry Juice Cocktail sales by showing sparkling new serving ideas for home and party menus. A continuing schedule of Go Creative commercials is planned on 330 stations of the two networks through September 1964.

Tune in on these TV shows for Go Creative serving ideas

ABC-TV—Price Is Right, Seven Keys, Queen for a Day, The Object Is.

NBC-TV—Word for Word, Truth or Consequences, Loretta Young Show, You Don't Say, Let's Make a Deal, Missing Links.

Giving another big push to Cranberry Juice Cocktail sales is the promotion continuing through March on Arthur Godfrey's show over 200 CBS radio network stations.

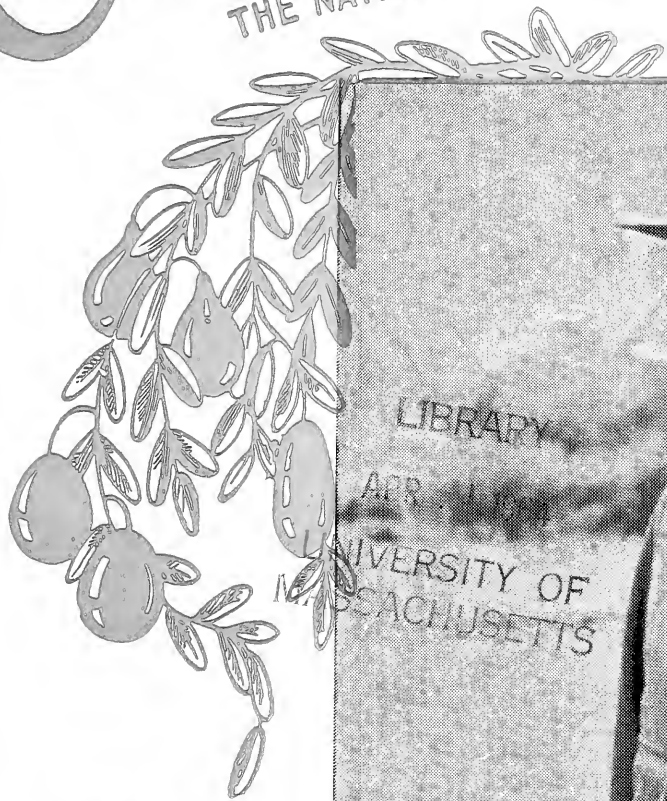
Judging's begun on the Fresh Cranberry Recipe Contest promoted by Ocean Spray on Arthur Godfrey Time over CBS radio network and on Don McNeill's Breakfast Club over the ABC network.

Over 9500 original recipes for using Ocean Spray Fresh Cranberries were entered by the closing date, January 31. Winning "Cranberry Dish of the Year" will be announced in March.

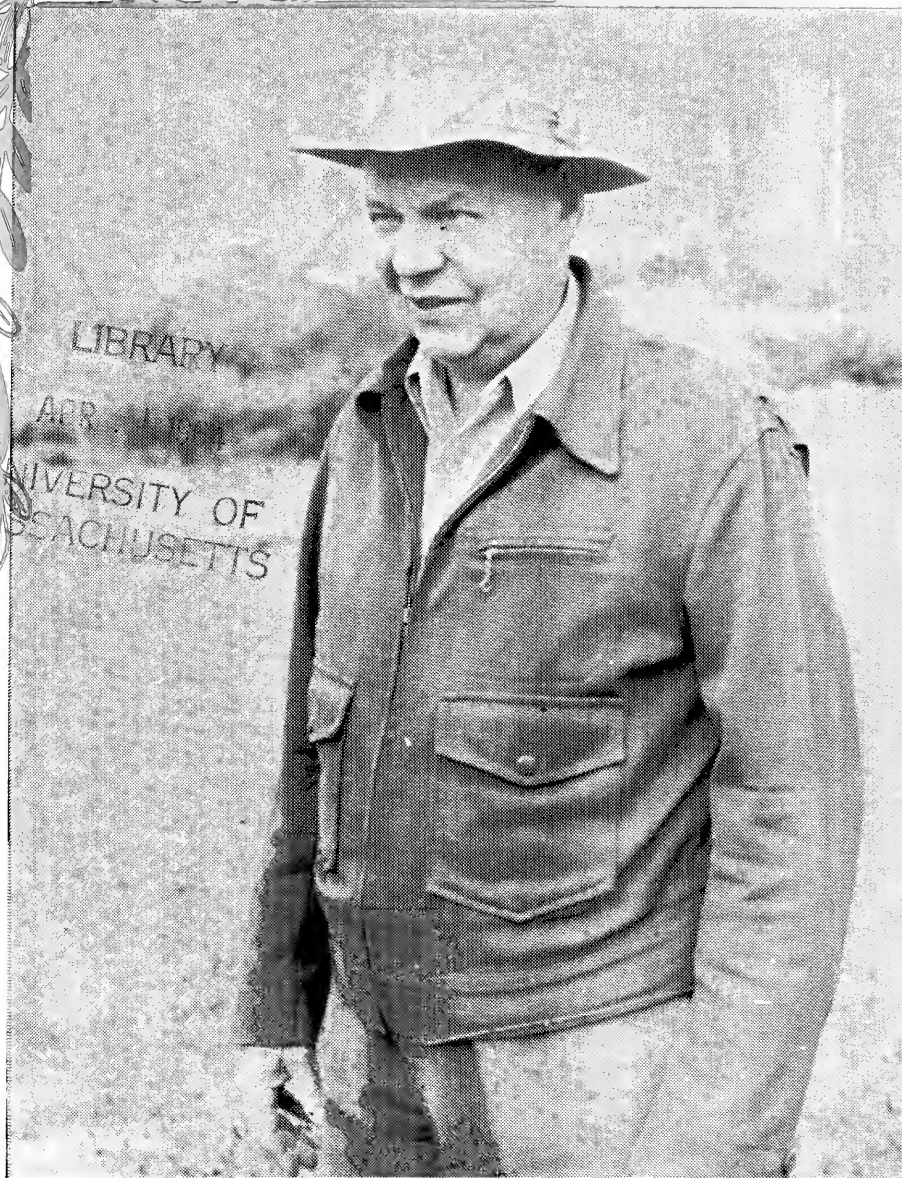
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Cranberries

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"Dave" Pryde, Retiring Ocean Spray Director on one of his bogs at Grayland.

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Letter To The Editor

(Pres. Goldworthy Discusses new Pooling Plan of paying for cranberries by Cranberry Products, Inc.)
Editor's Note.)

Here at Cranberry Products, Inc., we believe, the only honest fair way to pay for cranberries is on a quality basis and we have taken the lead in developing a pooling system in 1963 to make this a reality. While the rest of the cranberry industry may be opposed to such a quality program now, we are sure they will eventually follow such a program before too long, as the grower with the quality fruit will demand it. He will want more for his high quality fruit than his neighbor is receiving for floaters that are not even good canning stock.

This year at the time of harvest we paid \$10.00/bbl. f. o. b. for cranberries packed in sugar bags, which we furnished. In most cases the growers shipped us the cranberries as they harvested them, thus saving at least 10%-15% shrinkage by shipping at the time of harvest, or \$1.00 to \$1.50 per barrel. All our growers were paid in full in 1963 for their 1963 production shipped us.

On cranberries sold on the fresh fruit market we paid the grower what was received for them less \$.50 a barrel to cover our operating cost. Thus, a grower with Searles, Howes, or McFarlins sold on the fresh fruit market and bringing \$17.00 to \$20.00 a barrel, received this for his cranberries less the packaging supplies and \$.50 a barrel. The fresh berries are not pooled with the canning berries as we believe it is not fair to pay the same price for pies and seconds as the finest Howes sold in retail stores.

Why, subsidize the poorer quality fruit with the high quality fresh fruit berries and pay them both the same price, as is now being done generally in the industry. You expect to pay more for cream than you do for skim milk, but the fellow with skim milk is of course delighted to receive part of the money from the cream, if no one objects, and they are all paid one pool price with no incentive for quality. We believe the cranberry industry will soon adopt a quality plan and we take pride in being the leader of such a plan.

Two years ago at the hearing on the pending Marketing Order we suggested the way to increase cranberry consumption was by developing new products, as we had been following such a program since

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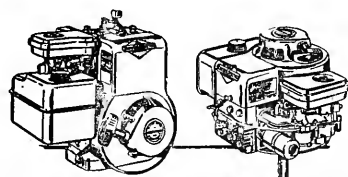
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Cranberry Products, Inc., was organized and have never had enough cranberries. While it probably was not well received by the industry at that time we are glad to note that this is the backbone of the new management program at Ocean Spray and we commend them on this forward outlook. Had it been initiated several years ago there would never have been a need for a Marketing Order, in order to have the independents help Ocean Spray with their surplus problem.

Is it because of a new products program in 1963, cranberries are in short supply. Since the latter part of 1963, and so far in 1964, no freezer or fresh fruit berries have been available to the independents. We could sell 50,000 barrels in new products alone if we could only get the cranberries, but no freezer berries are available to us.

We believe our quality program will come to be accepted by the industry, the same as was our program of new cranberry products.

Vernon Goldsworthy, President
CRANBERRY PRODUCTS, INC.

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Ocean Spray Holds Mass. Growers Meets

Ocean Spray Cranberries, Inc. has been holding a series of meetings for Massachusetts growers to discuss various problems and these were well attended. The first was for growers of the Plymouth-Kingston-Hanson area February 27 at Monponsett Inn, Halifax; the second at Eugene's in Middleboro for growers of the Middleboro-Wareham-Carver area, March 5 and the final for Cape growers at Hyannis, March 12.

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Mass. Cranberry Station and Field Notes

by Prof. William E. Tomlinson

Warm, Cold, Warm

The winter continues its pattern of alternate cold and warm months—December colder than normal, January warmer than normal, February colder than normal, and March came in like a lamb and has stayed above normal at least through March. Those bogs that were drained after the snows of February 16, 19 and 29 and the water left off, have not been subjected to winter killing conditions, even if not reflowed after the ice melted in early March.

More Snow

Precipitation has been ample this winter and has done much to replenish water supplies that had been much reduced by the dry summer and fall months of 1963. Snowfall also has been ample, more having been measured at the Cranberry Station than in any previous year since 1926, the first year that records of snowfall were kept here. The

total fall for the winter of 1963-64 has been 54.4 inches compared to the previous high of 51.8 inches in the winter of 1947-48.

May Be Oxygen Deficiency

As a consequence of all this snow and the resultant snow ice and snow covered ice, there is a very good possibility that oxygen deficiency injury has resulted on those bogs which have remained flooded all winter. Indications are that these bogs will produce better if they are managed as early water bogs and not held late this spring.

New Charts

Changes on the Insect and Disease Control Chart are minor ones. The drastic price reduction of carbaryl (Sevin) this winter has made it competitive with parathion. Because of this and its good safety and performance record, we have recommended it in preference to parathion for spring insects. The portion dealing with fruit rot control has been condensed and reworded slightly. Carbaryl has replaced Diazinon in the fruitworm recommendations and the separate summer weevil treatment with aldrin and dieldrin has been dropped.

The Cranberry Fertilizer Chart has been revised for the first time since 1958. Several of the notes have been revised and all recommenda-

tions on the chart are in terms of mixed fertilizers in 0-1-1, 1-1-1, 1-2-1, and 1-2½-1 ratios of grades that are readily available. Separate applications of Urea and ammonium sulfate are mentioned in the notes only, rather than in the body of the chart as heretofore.

Changes in the Weed Control Chart include spring control of cut grass, some upland grasses growing on the bog, hairy panic grass, haircap moss, mudrush and horsetail, and fall control of summer grass and sorrel with 20% granular Chlora IPC.

A Simazine spray recommendation for cut grass control is also an effective control of certain upland grasses growing on the bog, and is so indicated on the chart.

A new note has been added to emphasize the necessity that rainfall or sprinkling follow the application of iron sulfate, Chlora IPC and Simazine within a reasonable length of time if they are to be most effective.

Dr. Chet Cross will be spending most of March in Ireland. Hope that he didn't forget and wear an orange tie down the main street of Dublin on St. Patrick's Day if so we may never see him again.

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Wisconsin Faces Possible Bad Spring—Too Dry

PREDICT WOOD FIRES SITUATION COULD BE WORST IN YEARS

From Vernon Goldsworthy of Eagle River, Wisconsin, who keeps a sharp, if unofficial eye on all cranberry conditions in Wisconsin comes a report that unless there are heavy snows or rains, Wisconsin marshes could be in for a lot of trouble this spring. Many of the cranberry areas are extremely short of water, especially in the vital Cranmoor and

Mather areas.

By February some of the marshes had vines coming out because of the warm weather and there was no water to reflow the beds, so there may be some bud damage to exposed vines. There was a lot of sanding in the Badger State this season because there was practically no snow on the ice, and the sand draws heat. As of March 13, Goldy said there was not much change in the picture.

‘It is quite likely Wisconsin will get some injury if we do not get some heavy rain or snow this spring. Should this occur it is sure

to curtail the Wisconsin crop.’

The winter in Wisconsin is reported “all in all” as one of the nicest winters in anyone’s memory and also one of the driest.

At the same time the Milwaukee Sentinel was saying that Wisconsin will face its greatest forest fire danger in years unless there was substantial snow or rain. Neil Le May chief state forest ranger was quoted as saying that “Milquetoas March” following on the heels of a dry winter would herald “the worst approaching spring in many years.”

Other sources from Wisconsin such as this month’s “Fresh From the Fields” by Leo A. Sorenson confirm the situation bears watching.

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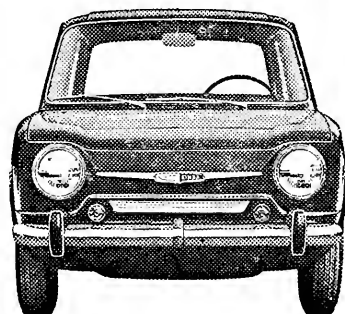
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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of March, 1964 — Vol. 29, No. 11

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Second Class Postage Paid at Wareham, Massachusetts Post Office.

FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Temperatures up to the middle of February fluctuated either slightly above or slightly below normal, in fact on the 13th the departure from normal was zero (Boston) or exactly normal, a situation seldom reached by weather period February 16 brought on one of the worst snow storms of the season with more than a foot in some parts of New England, 18 deaths attributed to the storm. The Southeastern Massachusetts (cranberry area) got less snow depth but high winds which closed the Cape Cod Canal for several hours, and left whole villages without electric power, due to wires and poles down.

Snow Again

That storm left $5\frac{1}{2}$ inches of snow as recorded at the Cranberry Station and the area was scarcely dug out before there came another blizzard on the 18, this leaving more than a foot in many areas, was heavy in Southeastern Massachusetts and left about 8 inches at Cranberry Station. This coastal northeastern was the fourth major snow of the winter, and to that date February has deposited a total of

15 inches, State Bog recording.

Still Another Storm

The month of February ended with a considerable snow cover on the ground, the previous falls being added to by still another bad snow storm on the night of the 28th. This left from six to 8 inches of snow in the cranberry area, particularly on the Cape, 12 inches was again recorded on normally snowless Nantucket and 8.2 as recorded at the Cranberry Station.

Unusually Snow Month

Total snow for the month of February as measured at the State Bog turned out to be 23.7 inches or just about double the usual amount for February. Rainfall for the period was 4.44 inches, mean average 3.67.

Glad Month Over

The month finally ended record-

ing a temperature deficiency of about 30 or about a degree a day. February was a month that the cranberry area was glad to see behind it.

March Comes Lamb-Like

March did not come in like the proverbial lion, but fantastically lamb like. Warm air came up from the South and during the week temperatures in the cranberry area were in the high 40's and 50's and even 60's. The snow cover melted rapidly. Real tropical air on the 5th melted nearly all the snow and the reading on the 6th was a healthy plus 60 for that period.

Temps. Run-Up

The second week was marked by colder weather and several snow showers. Temperatures at the third week of March were still running above normal, something like a

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healthy four degrees a day.

Some Bogs Drawn

With the advancing of the season many growers were pulling the planks and taking off the winter flood. There appeared to be in general sufficient water resources for any spring frost floods.

WISCONSIN

Water Supplies Low

The third coldest winter month being February brought a continued welcome relief in the new year, by being an average of 3 degrees above normal. While not as great a departure as January, it was more than welcome in hastening the advent of spring. The only bad feature of the weather was the continued below normal precipitation in most areas of the state. Subsurface soil moisture is at an exceptionally low level throughout the state following two years of drought and water levels plus stream flows are approaching record low marks. Overall precipitation deficiencies are almost one half below normal or a minus 15 inches for the past two years. Precipitation to date for 1964 is averaging about one half of normal. The 30 day forecast for March offers continued above normal temperatures and below normal precipitation.

What Effect?

What effect this continued below normal precipitation will have on the cranberry industry in the state for 1964 is still an unknown factor, with the so-called make or break weather yet to come. April and May precipitation will determine the status of most of the cranberry

reservoirs in the state. Naturally those marshes dependent on surface water will be in the most trouble.

Expect Little Winterkill

Except for the far north there was little snow cover on the marshes. Warm weather had started to deteriorate the ice on the sections, with considerable vine tip emergence on shallow flooded beds or sanded beds. Most marshes were preparing to reflow these beds when colder weather invaded the state late in the month. Little winter killing was expected due to shallow frost depths in the beds.

Road and Dyke Work

Weather was exceptionally fine for road and dyke work and most marshes moved the most fill dirt in years. Bed sanding had to be stopped by mid month due to ice weakening.

NEW JERSEY

Winter Cold, Snowy

January and February have been cold and snowy in the New Jersey cranberry region. January averaged 32.7 degrees F., 1.2 degrees colder than normal and February was even colder with a 31.5 degree average or 3.2 degrees below normal. The most severe weather occurred in mid January when minimums regularly ranged from 10 to 20 degrees. The extreme low was 8 degrees below zero on January 15.

Snows were more frequent than cranberry growers are accustomed to in this state. In January there were two snowfalls totaling 11.6 inches; February had a total of 13.5 inches on four snowy days. For the entire winter, December 1963

through February 1964, there have been a total of ten snows with an accumulation of 33.7 inches. The heaviest snow occurred on January 13-14, amounting to 11.6 inches.

Also Up In Precipitation

Both January and February had more precipitation than usual. Converted to rainfall the total precipitation for the two months was 7.7 inches or about 1.64 inches more than normal.

WASHINGTON

February Dry Month

February was an unusually dry month, following a wet January. Records at Cranguyma Farm showed only 4.29 inches of rain during the 29 days. There was precipitation of 21.07 inches in January. There was measurable precipitation on 13 days. In February of 1962 rain was 7.88.

Also A Chilly Month

February, however, was a chilly month with the mercury dropping 32 degrees on 14 nights. The coldest was the 25th with a minimum reading of 24. Warmest days was the 3rd with a 57 degree.

Wet Weather Hampers

As March came in the weather was the main topic of interest. March started out wet again. There has been so much wet weather that it has been impossible for the growers to do much bog work. Temperatures were mild.

Bud Looks Adequate

So far this winter there were very few really low temperatures, in fact not as much cold weather as was

Continued on Page 24

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Cranberries, Casoron and Confusion

by Malcolm N. Dana

Department of Horticulture
University of Wisconsin

Weed control has occupied the best efforts of cranberry growers since attempts to improve the production of this crop were initiated. Growers have long recognized the competitive effects of alien vegetation on the growth, productivity and successful management of cranberry bogs through influences on nutrition, pollination, photosynthesis and harvesting to name but a few factors. The struggle against weeds has evolved from hand operations for weed eradication to the use of iron sulfate and petroleum solvents for broadcast applications for weed suppression and now to the use of more sophisticated herbicides that will selectively eradicate certain weed species. The inadequacies of the selective herbicides have now led us to explore other avenues of control in which we rely on manipulation of environment to discourage weed growth.

Twenty years of research with organic herbicides has produced several materials of value in the control program in cranberry marshes. The basic control program continues to be the use of petroleum solvents and inorganic metal salts in combination with hand weeding and the clipping of seed heads before maturity. Organic herbicides are used for supplementary applications to control specific weeds.

The oldest systemic herbicide used in cranberry marshes is 2,4-D. In Wisconsin, our growers find a limited use for this material as a granular application for the control of annual broadleaf weeds such as spanishneedles and ragweed and to a lesser degree the perennial rice cutgrass (sicklegrass). Swabbing applications for the suppression of willows, loosestrife and asters have been successful where care in application was practiced. The sensitivity of the vines to 2,4-D limits the usefulness of this herbicide for broad spectrum weed control.

Dalapon has found a small niche in the Wisconsin weed control program. This herbicide is used most successfully to eradicate grass and sedge weeds in two-year-old

plantings. Used at this stage of bog development, dalapon does not interfere with fruit production and does provide an inexpensive method of eradicating a number of weed species. Dalapon usage in bearing sections has been limited, due primarily to the crop injury in the year following treatment.

The use of simazine in cranberry marshes has always been limited. The herbicide is effective against annual broadleaf weeds when applied in early spring. Unfortunately, the range of safety to vines is very narrow and, as a result, many growers have experienced damage from careless use and, therefore, are discouraged with simazine. It is our opinion that 2,4D Granules will accomplish the same weed control that may be expected from simazine at low rates (one to two pounds per acre) and will do the job more safely. Therefore, we discourage further use of simazine.

The most recent addition to the list of herbicides granted label approval for cranberries is Chloro IPC. This material is pre-eminently an annual grass control material but it has some value for control of other weeds such as bluejoint grass, stovepipe horsetail, sicklegrass, dodder and loosestrife. The use of Chloro IPC in Wisconsin has been very limited due, in part, to the high cost of the material. The limited number of weed species controlled limits the number of areas on which the use of Chloro IPC could be expected to produce success. Field experiences may prove usefulness of this herbicide for some presently unrecognized situations but research experience does not suggest that extensive use of this material will develop.

The material which is of major interest to cranberry growers at the present time is dichlobenil or Casoron. This herbicide was granted an experimental label registration in the spring of 1963 and received extensive field testing as a result. Approximately 150 acres were treated in Wisconsin during late April and early May. The experimental label was withdrawn in November. It will not be reissued until full data on residues, toxicology and de-

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gradation products have been accumulated by the manufacturer and evaluated by government control agencies.

Dichlobenil is a herbicide with great potential usefulness in Wisconsin cranberry marshes. Many sedges, grasses and broadleaf weeds have been successfully controlled by either fall or spring applications of this material at recommended rates. Woolly plants such as leatherleaf and hardhack are not affected. Unfortunately, we find that creeping sedge is tolerant to high rates of the chemical and will not be controlled. Many other less important species are also tolerant.

We are confused by the results from Casoron applications because vine injury was sustained in many instances from rates applied below the level considered safe for vines. Experimental application over a three-year period had failed to produce injury to the degree observed following grower treatment in 1963. In general injury was found.

1. In spots where faulty equipment resulted in excess application while stopping or starting operations.
2. Freshly sanded beds were more injured than old sand or peat beds.
3. Thin vines were more injured than heavy vines.
4. Late application caused more damage than early applications.

Some marshes experienced injury that could not be related to the above factors. For those situations, an explanation of injury has not been found.

Specific recommendations on further use of this herbicide must await proper registration of the label. At the time this article is written, Casoron does not have approval for use on cranberries and may not be used on this crop. Should there be supplies on hand with cranberry growers, the supplies must be withheld from use pending further notice.

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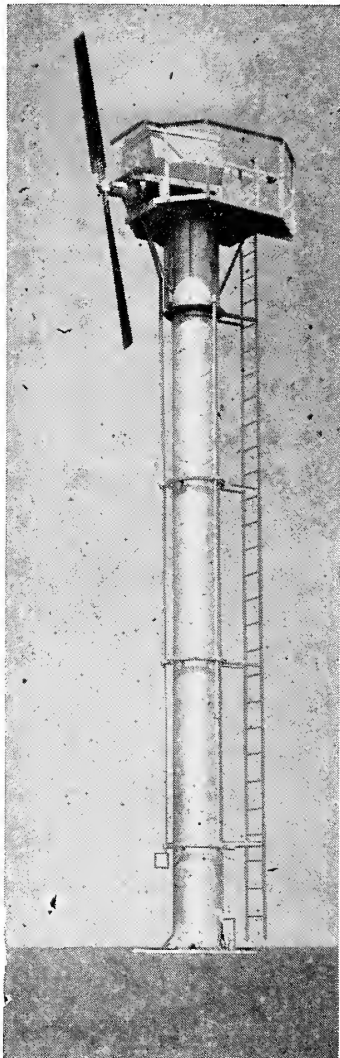
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READ CRANBERRIES

"Dave" Pryde, Retiring Ocean Spray Director Is Largest Grayland Grower In Acreage — Bought First Bog In 1942

Clarence J. Hall

by

David E. Pryde, who retired at the January meeting of Ocean Spray as a director after nearly a dozen years of service in that capacity has the largest cranberry holding of Grayland, Washington, about 18 acres and has long been one of the leading and most substantial growers of the West Coast. He has an intensive knowledge of cranberry affairs and problems, cultural and marketing. During his years as director he made many visits to the meetings of the board of directors at Hanson; frequent visits to the Massachusetts Cranberry Experiment Station at East Wareham, imparting knowledge of West Coast matters and acquiring knowledge as to what was going on in the rest of the cranberry areas and bringing this information back to Coast growers.

As a director, his last assignment was as a member of operational committee. As one of the more conservative directors his views were listened to with respect. He is quiet spoken, but may be described as an independent thinker.

Independent Thinker

In making final decisions at Ocean Spray or in any activity, including government this writer strongly believes that the views of both conservatives and the more liberal are both worthy of consideration. Incidentally, Dave Pryde, as a Republican, leaning to the conservative is often on the opposite side of the fence in politics from perhaps a majority of West Coast growers, in the largely Democratic states of Washington and Oregon, with their several "liberal" figures in national government.

In church affiliations Mr. Pryde is a member of the Christian Science Church.

He was born near Minneapolis, Minnesota, of Swedish parents on November 20, 1892. His father, Olof F. Pryde was a brick-maker, coming of several generations of brick makers in Sweden and later in Minnesota. The elder Mr. Pryde was also a farmer, operating a general farm, so young Dave has a basic farm background. His father passed away at the age of 82.

Dave had an elder brother, Hilden, now passed away and the brother went to Aberdeen, near Grayland and there learned the sheet metal trade. When he was 18, Dave joined his brother there and went into the same line of work. The two brothers organized the Pryde Brothers Sheet Metal Works in the twin city of Hoquiam.

This business is still flourishing, and is today operated by two nephews and a niece of Dave. They live

in Hoquiam. Mr. Pryde and his wife themselves lived for a number of years in that city, having built a handsome house in a fine residential section. The entire house and many of the nicer features were planned by Mrs. Pryde.

Mrs. Pryde is the former Margaret Moir and is of Scotch descent. Mr. Pryde, incidently is a 32nd degree Mason and Shriner and Mrs. Pryde is a Past matron of and still is very much involved in affairs of Eastern Star. She was also active in a number of civic matters at Ho-

quiam-Aberdeen.

Although Mr. Pryde does not boast of this, but the Pryde family, as the name is spelled in Sweden are descendants of ancient Swedish Barons.

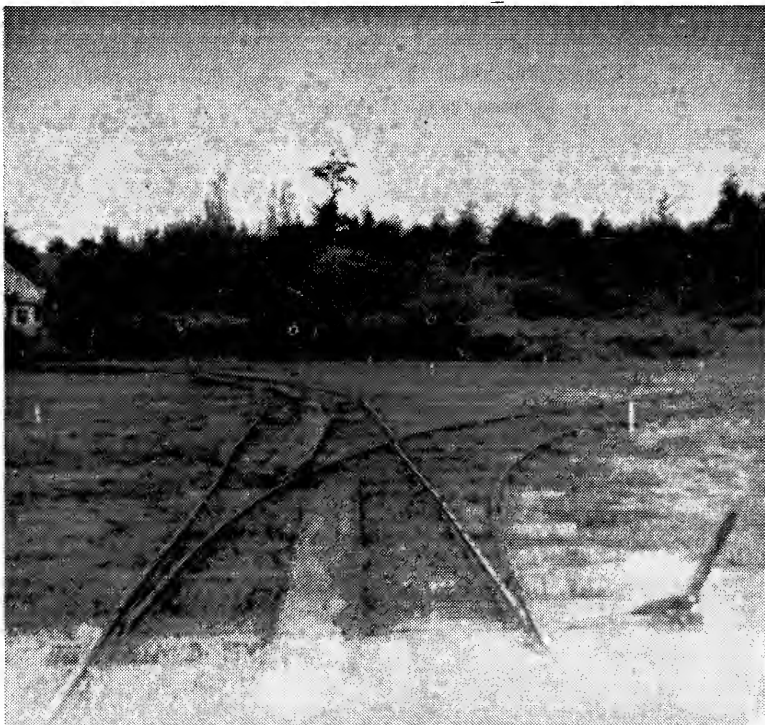
Dave and Mrs. Pryde have three children; Mrs. Gladys Hitt, who has three children; Jack G. Pryde, who has four and Arlene Rorick, who has two children.

Jack lives in Grayland and with his father operates a most astonishingly complete hardware store, with many household items such as refrigerators on route 13-A. Astonishing, that is to find a store in such a small community as Grayland with a selection in hardware, furniture and other items as maybe found in a city. As a matter of fact, Grayland is not even an incorporated town and is in two counties, Pacific and Grays Harbor. The Grayland Hardware and Furniture Store draws trade from miles around.

The Prydes, father and son bought this store from two Lillegard Brothers. Jack is manager and operator. Dave has too many other things to do to put much time into its day-by-day management.

Bought First Bog, 1942

Pryde bought his first cranberry



Showing curved railroad tracks and switches on Pryde Pacific Road Bog.
(CRANBERRIES Photo)



On mile-high Hurricane Ridge, Mr. Pryde, Mrs. Pryde, C. J. Hall. Taller, snow-capped peaks of Olympics in background. (Photo by Mrs. C. J. Hall)

bog, about $4\frac{1}{2}$ acres in 1942. This is his present "home place" bog, although he acquired this holding before he moved to Grayland to live. This holding is on Heather Road. To the original bog he added two acres. Much of this property has been rebuilt since he has operated it.

He also has additional land with $8\frac{1}{2}$ acres of bog on Pacific Road. This land was bought at different times from three growers who were ready to retire. Each piece is 165 feet wide with warehouse at the west end on a sand ridge.

Pryde runs railroads down the center of each piece and they are all connected by curved track so one small Power Car can be used for sanding, spraying, picking up berries at harvest and for other bog operations; harvested berries are delivered at the desired warehouse.

A half acre of abandoned bog has been treated with the new herbicide Casoron, while this material was still certified for experimental use. Pryde says if the weeds can be cleaned out and proper drainage obtained it is planned to reclaim this section as it once was a very heavy

producer. He also has $6\frac{1}{2}$ acres of fine bog land at the east end which can easily be cleared and planted by him, when, he says "the spirit moves him."

Sprinklers

Pryde utilized four sumps and all are supplied by spring and drainage water from the surrounding hills. He has one 20 h.p. motor with a Deming pump; he has one 30 h. p. motor driving a Fairbanks-Morse pump and two gas engines with pumps, one of which is a stand-by for his home place bog.

His sprinklers consist of approximately 200 Rain Birds.

Thermostats control the two electric motors which start the pumps when it becomes either too cold or too hot. Time clocks are used to control the pumps to operate either continuously or intermittently; except when temperatures get really cold or hot. Intermittant operation saves water and also prevents the bogs from getting a surplus of water.

He particularly has to watch the frosts in April, May and June, not generally shutting down until freezing has stopped and the ice is melting.

"Even though the system is automatic," says Pryde, "I still feel I have to watch it most frost night to make sure than nothing fails to function as it is supposed to."

He used his system of applying Parathion, but does not believe in using the system for fungicides or fertilizers as he feels better results are obtained by using power sprayers and hand spreaders.

It is small wonder that Mr. Pryde has such a well-thought-out and efficient sprinkler system, he is agent for the Deming pump and is capable of laying out a complete sprinkler system with complete equipment and to advise others as to their installation. He has the know-how and experience for this sort of work to enable him to supply other growers with any part of a complete system and assist in the engineering problems to fit their particular needs.

He has also assisted other Grayland area growers, as a director of Ocean Spray by sending out informative letters upon his return from an Ocean Spray directors' meeting. He has been a member of the Grayland Advisory Committee to Ocean Spray.

In World War I, Pryde was two

years in the army in aerial photo service. He took these air shots in France, and later was in the Army of Occupation in Germany. He has two Battle Stars from service in the St. Mihiel and Meuse-Arragon offensive in France. He is a member of the Veterans of Foreign Wars and of the Elks as well as being a Mason.

Incidentally, all the Pryde bogs are in the West-Coast popular McFarlin variety. Although the largest grower in acreage and a high producer per acre he has not yet achieved the top in production.

The Olympic Loop

The following has not much to do with cranberries, but the writer thinks it should be included in the story of the Prydes and of Washington cranberry growing and gives a better picture of the magnificent and interesting part of the country in which these West Coast growers operate.

We (Mrs. Hall and I) had expressed a desire to visit the Olympics which have been called the last U.S. unspoiled wilderness and so Mr. Pryde kindly planned a two day trip for us. This, even though he had been up the night before until four o'clock as he feared a frost that night. Promptly at 8 in the morning he and Mrs. Pryde picked us up, the Prydes taking turns in driving.

The twin cites, just a little to the north of the Grayland area are the western entrance to the "loop" around the Olympic Peninsula, and in fact there is one bog on the extreme northern part of the Peninsula near Ozette Lake on the Pacific.

There were a number of high lights on this trip. First there was a visit to a hotel in the Olympics, where the Prydes knew of a remarkable private collection of Indian objects and artifacts. The woman who conducts this, as a hobby, is Swiss and she told us a strange tale of the Quinalt and Queets Indians, who have reservations in the region.

There, there were genuine totem poles from Alaska, dug-out canoes and hundreds of fascinating objects. But the story she told was how the Indians believed in the "Little People." The Indians could not say whether they were male or female or whether or not they wore cloth-

ing. All they knew, she said, was that they continually "see" them in trees, behind rocks, almost anywhere. And they can be evil, they can climb in your bedroom window at night and do you harm. This Indian authority would not go so far as to say she believes the Indians actually see the "Little People," but they believe they do, and she sounded as if she might be a little in doubt herself.

We visited an almost tropical "rain forest," with its extremely lush vegetation, its vines and flowers, all a dark eerie green which was in sharp contrast to snow-clad peaks about us. We visited a sulphur hot spring, where people come from all over to "take the waters."

Not far from Port Angeles on the Strait, we stopped to look at the butt of a mighty Fir tree. The in-

scription said this tree, experts had decided, by studying its rings, was 11 years old when Columbus discovered America.

But the extreme highlight was the 14-mile drive along Hurricane Ridge at an altitude of more than 5,000 feet. There, at an observatory we, early in the morning, were profoundly effected by the vast, blue shadows of the mountains with their snowy peaks, the valleys, the highest peak of all being Mt. Olympus, towering 7945 feet.

These are Alpine peaks with Gaciers, Alpine meadows and Alpine flowers were in bloom at the time we saw them. Mrs. Pryde and Mrs. Hall admired these and the tall trees while Mr. Pryde was much more interested in rock formation, about which he knew a great deal. He told us that at one time he had



Pryde, beside a Douglas Fir, adjusts his camera for a shot in the Olympic rain forest. (CRANBERRIES Photo)

gone prospecting for manganese in the Olympics, with a partner, packing in all their supplies on their backs. They had found the manganese, but the venture did not, for some reason, prove profitable.

Mr. Pryde also knew a great deal about placer mining, which is panning streams for gold, and can still be done at or not far from the cranberry areas of Washington and Oregon. He said a meager day's pay could be earned. "if you are lucky."

He pointed out places where he believed manganese could still be found, and I got the impression he would like to do more prospecting in the Olympics.

Mrs. Pryde had packed box lunches and these we ate at National and State parks in the Olympics in the cool and silent shade of the towering trees. All, in all, a trip for which Mrs. Hall and I feel deeply indebted to the Prydes.

Incidentally, Mr. Pryde had not forgotten his early photographic training and took a number of carefully-timed and carefully composed color shots with a .35 mm camera.

New Fungicide For Cranberries

A new improved fungicide, Dithane M-22 Special, was recently introduced by Rohm & Haas Company, Philadelphia chemicals manufacturer. The Company announces this new formulation is a combination of maneb with zinc and possesses outstanding fungicidal effectiveness, improved retention properties, and extremely low phytotoxicity. It is effective against a wide variety of fungous diseases of many fruit and vegetable crops.

Dithane M-22 Special clearance for commercial use on tomatoes, carrots, celery, cole crops, lettuce, lima beans, onions, spinach, sweet corn, sugar beets, peanuts, cotton, tobacco, peaches, apricots, grapes, almonds, and cranberries. Because of its low phytotoxicity, Dithane M-22 Special is also recommended for use on apples and certain cucurbits which are sensitive to ordinary maneb formulations.

Another Rohm & Haas fungicide, Dithane M-45, a reacted coordination product of zinc iron and maneb was introduced in 1963. It has been

widely used on potatoes, ornamentals and turf, and will continue to be recommended for use on these crops and others as label clearances are obtained.

Dithane M-22 Special is supplied in handy 3-pound bags in case lots of 15, and in 50-pound fiber drums.

Dithane is a trademark of Rohm & Haas Company, Reg. U.S. Pat Off.

New "Soft" Pack For Cranberry Products

CANNER-PACKER Magazine in a recent issue featured the packaging of processed foods into multiply laminated pouches, which is being done experimentally by Cranberry Products, Inc. of Eagle River, Wisconsin. Cranberry Products with its pouch supplier has worked out a process, the article says, which permits full retorting of low acid foods such as corn and green beans in addition to the acid products such as cranberries.

Pouches or "flexible cans" offer shipping weight savings and the container, when emptied can be more easily disposed of, it is said.

President Vernon Goldsworthy says that apparently Cranberry Products is the only concern in the United States doing this type of work. Cranberry Products so far has packed cranberries, applesauce, crushed pineapple, green beans, corn, beans with tomato sauce, bread rolls and pound cake for the U.S. Army. There has been set up at the Eagle River plant a baking department to do the actual baking. Goldsworthy says the Army thinks in a few years the biggest part of its food will be packed in this manner as it keeps much better than in tin and is lighter as far as transportation goes.

The first pouch work undertaken by Cranberry Products was a supply contract for experimental packs of cranberry sauce. The CANNER-PACKER article says extensive tests by Food and Container Institute have shown the pouched foods to be equal or superior to products processed and packaged in conventional rigid containers. The pouches measured approximately 3½ by 6 inches between seals and contain

approximately 4½ ounces.

According to Charles Goldsworthy, sales manager, "Cranberry sauce packed in the pouch and held for two years was actually superior in color to a canned sauce, and doesn't have dark streak associated with the can seam."

As soon as possible the whole sauce and jellied sauce lines at Cranberry Products will be moved into a newly-constructed area, planned originally as warehouse space, but already required for added production.

The Goldsworthys anticipate adding several specialties, such as shrimp creole, vegetables in sauce and others as interest builds in the pouched foods.

Latest new product in a conventional pack is a new table service glass jar. Both Goldsworthys believe the glass-packed cranberry sauce without a label attracts sales and reports indicate public receptions have been excellent.

Break-Through In UK. Cranberry Market Achieved

EASTER PROMOTION IN PROGRESS

An Easter promotion program for American cranberries in the United Kingdom is going forward, announces President Orrin G. Colley of the Cranberry Institute. There is a similar but smaller program in Belgium.

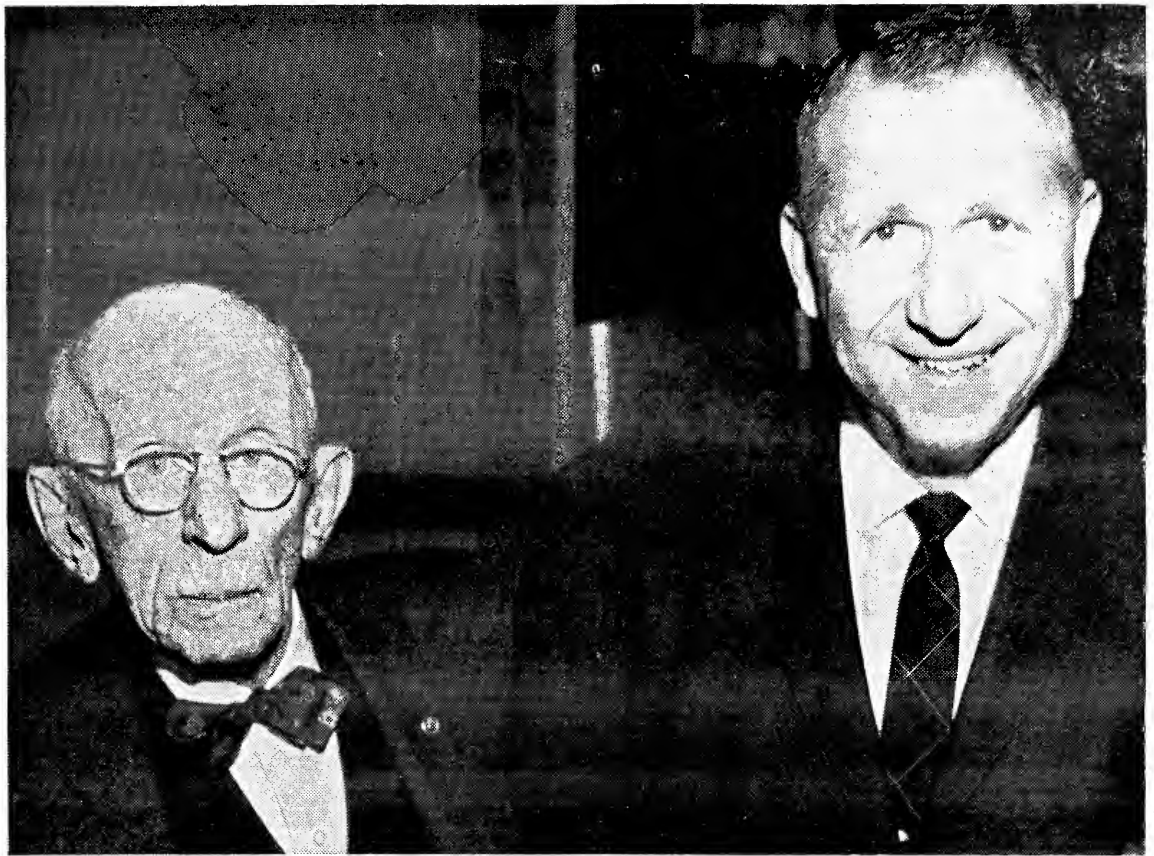
There is also to be a summer campaign in the United Kingdom in connection with a British ice cream manufacturer, which will promote ice cream and cranberries as a topping or use otherwise.

Also in the Institute plans in association with Foreign Agricultural Service of the USDA, is promotion in the Benelux countries and possibly a continued effort in West Germany, where the potential market seems favorable.

Plans are being made now for the next market year which starts September first, this in continued conjunction with FAS.

Mr. Colley is convinced now that

Continued on Page 24



Enoch F. Bills (left), retiring as Plant Manager of Ocean Spray plant in Bordentown, New Jersey, and Edward V. Lipman, New Jersey Area Manager, now in charge of processing. (Photo Courtesy Ocean Spray)

Ed Lipman Succeeds Bills As Head Of Bordentown, N. J. Plant

Edward V. Lipman, New Jersey Area Manager of Ocean Spray Cranberries, Inc., is in charge of processing at the Bordentown, New Jersey plant according to an announcement from Robert C. Lucas, Production Manager for the national cranberry cooperative. Mr. Lipman succeeds Enoch F. Bills, who retired on December 31.

Lipman has been with Ocean Spray for 18 years, serving as field man and director of grower relations. In 1956 he served on the board of Directors. He has worked closely with Mr. Bills during his tenure and will continue to have the benefit of his knowledge and long experience as consultant.

Mr. Bills' association with the cooperative goes back to the time of its incorporation in 1930, and even before that he was a "cranberry man". His father built cranberry bogs, encompassing more than 75 acres in the area, and these passed

on to Mr. Bill's management. His Aunt, Elizabeth Lee, was the first to think of making cranberry sauce from the native New Jersey berry and putting it in cans. She organized a canning company called The Enoch F. Bills Company with her nephew as president. The manufacturing plant was in New Egypt, and Miss Lee managed it herself until 1925 when her nephew answered her call for help and became superintendent of processing.

Mr. Bills is much too spritely to give away the date of his birth which took place in Bordentown. He attended Bordentown Military Institute and graduated from Drexel Institute, a civil engineer. His first job was with The American Bridge Company of New York and whenever he travels to New York today, he likes to look up at the network of steel holding up the roof of Grand Central Station and remember when he had that project on the drawing

board. He went to the N. K. Busby Company of Trenton in 1915 and it was there, ten years later, he received the call from Miss Lee which changed the professional course of his life. From then on, cranberries became his dominant interest, beginning with the quality of the berry on the vine and carrying through to the sauce in the can.

The brand name of the cranberry sauce produced by the Enoch F. Bills Company was Bog Sweet. With the need for more berries for Cranberry Sauce, the company expanded to take in more cranberry growers, and the name was changed to Cranberry Products, Inc. In 1930, the New Jersey company merged with two Massachusetts companies, the Ocean Spray Preserving Company and the Makepeace Preserving Company, to form a cranberry growers' cooperative. It was called Cranberry Cannery, Inc. and adopted the brand name Ocean Spray,

which was already well-established in New England.

In 1945, the cooperative again expanded to take in growers in all cranberry producing areas, and the market was extended to encompass the entire United States. The name was changed first to National Cranberry Association and later to Ocean Spray Cranberries, Inc. to be more closely associated with the brand name of the products.

The New Jersey canning operations remained in New Egypt until 1943 when the cooperative purchased a worsted mill in Bordentown on land once owned by Joseph Bonaparte. Mr. Bills, with engineering skill, converted the mill to cranberry processing and continued as its plant manager until his retirement this past December. Bills, last major Ocean Spray project was the current improvement and expansion of the plant. A freezer with a capacity of 20,000 barrels was built and storage space for finished

goods added. There are new receiving and screening facilities for packaging of fresh cranberries.

The Bordentown Plant currently produces about 1,250,000 cases of cranberry products annually and, besides New Jersey markets, ships to Baltimore, Washington, Eastern Pennsylvania and Metro New York.

A bronze plaque, commending Mr. Bills, contribution to the cranberry industry, is ready to be put up at the Bordentown Plant as soon as current improvements are completed. It reads: "In grateful appreciation to Enoch F. Bills for his dedication to the cause of Ocean Spray Cranberries, Inc. since its inception. Descendant of the national cooperative's founder, Elizabeth Lee; charter member and director of Ocean Spray; plant manager of New Egypt, 1930-1943; plant manager of Bordentown, 1943-1963. His wise counsel and service have earned him a place as leader and friend to cranberry growers in New Jersey

and throughout the nation".

Mr. Bills is a member of the New Jersey Society of Professional Engineers and the National Society of Professional Engineers, a Charter and Life Member of the Trenton Engineers Club, the Masons and the Kiwanis. In 1958, he received a citation from the Board of Agriculture of Burlington County.

His successor has cranberry plantations in Jackson County and Toms River. A graduate of Rutgers University, he received his B.S. in 1933 and his M.S. in 1938. He was with the Department of Bacteriology at the University of California as a Laboratory Instructor in 1935-1936. During his years with the U.S. Department of Agriculture, he worked with the Crop Reporting Service in Trenton and New Brunswick. As Administrator of War Services, he set up county war boards throughout World War II.

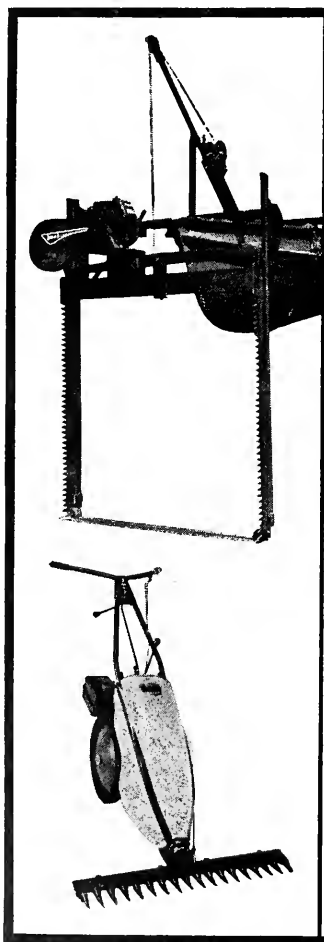
Lipman is a member of the Union Club of New Brunswick, the American Cranberry Growers Association, the Farm Bureau, Rutgers Faculty Alumni Club and is Vice President of the Board of Education of New Brunswick, where he resides on Edgebrook Road with his wife and children.

Herbert C. Leonard

Herbert C. Leonard, a partner in the C & L Equipment Company of Acushnet, manufacturers of machinery for cranberry growers, passed away recently in his 80th year. Mr. Leonard was the son of Charles F. Leonard and Susan Howell Leonard. His wife died a few years ago. The couple had two daughters who survive.

Leonard worked as a machinist and draftsman for Brown & Sharpe of Providence for a number of years, later for the Atlas Tack Factory, Fairhaven, and after that taught in the welding department of the New Bedford Vocational High School.

After his retirement from that he and Frank P. Crandon, well known cranberry grower for many years and a former president of Ocean Spray formed the C. & L. company and manufactured cranberry equipment.



NOW JARI WHIPS WEEDS ON LAND AND UNDER WATER

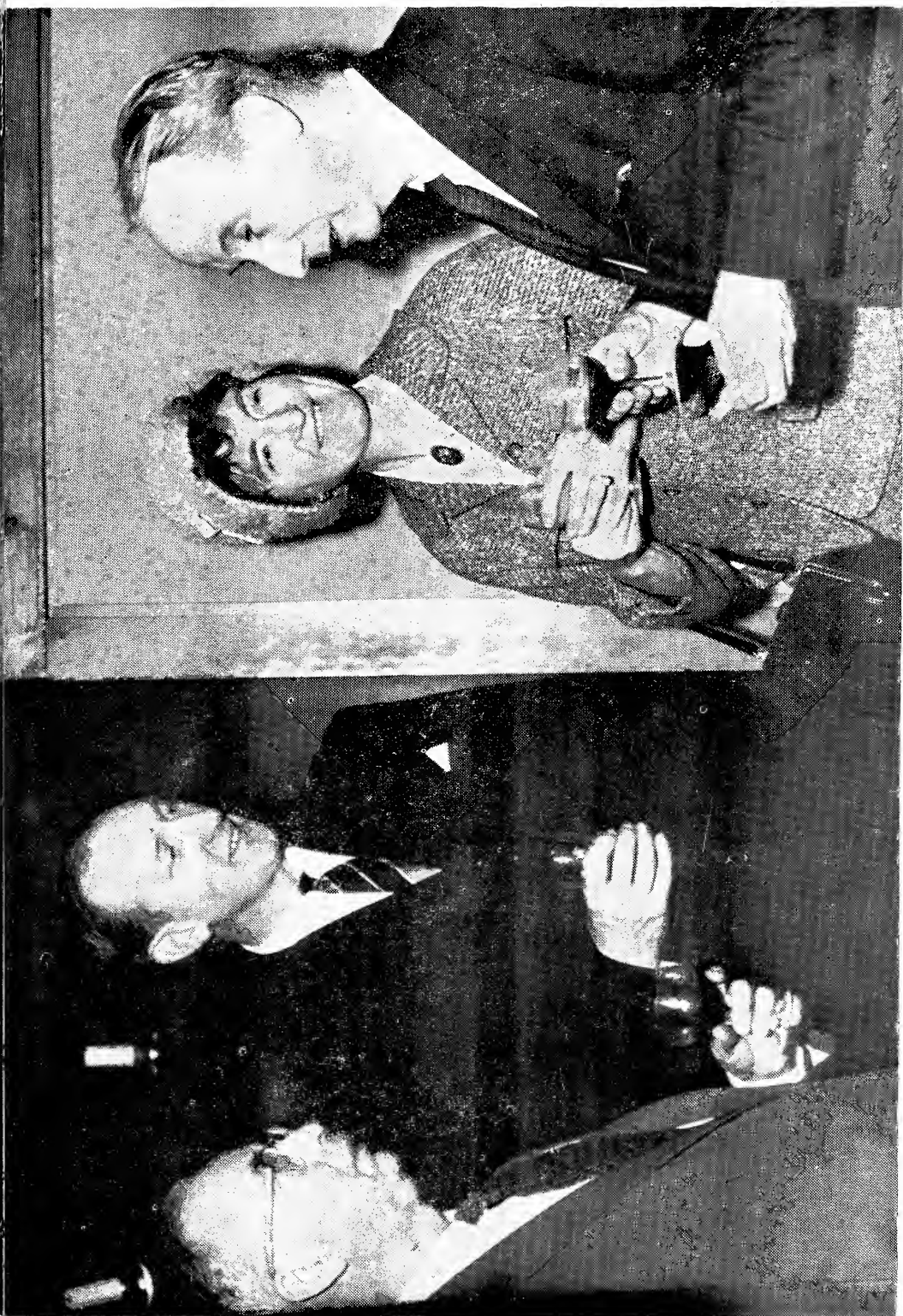
Pesky weeds have marred the beauty of lakeshore homes and spoiled the swimming and boating. With the new Underwater Mower, Jari can beat the weeds wherever they are. This Underwater model mows 'em from the surface to a depth of 42". Now, any beach can be fun. And on land, the heavy duty Monarch Sickle Bar Mower knocks weeds down even on rough, rocky ground or steep slopes.

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Dr. C. E. Cross, director of Massachusetts Cranberry Experiment Station, who with Mrs. Cross is on a Sabbatical in the United Kingdom met Orrin G. Colley, president of the Cranberry Institute in London. Shown in photo taken at a cranberry reception at the International Hotel and Catering Exhibition, Hotel Olympia are Dr. Paul J. Findlen, assistant agricultural attache, U.S. Trade Center; N. A. J. Harrison, director of G. Street & Company, ad agency of the Institute and the Dr. Cross.

(Photo Paul Wilson, London).

OCEAN SPRAY TO BUILD NEW PLANT AT LONG BEACH

Ocean Spray has purchased a site at Long Beach Washington which is conveniently located to growers of that area and contracts have been let for a new building. Also contracts for new equipment.

The total investment in this new receiving station will be approximately \$60,000 according to Robert Lucas, director of operations. The finished operation will be a modern and efficient facility for the growers of that area. Long Beach cranberries go almost entirely into processing, and therefore attention is being given to bulk handling as a means of reducing costs.

FOR SALE CRANBERRY BOG

3 1/2 ACRES IN VINES

Some Blueberries

WRITE FOR DETAILS

W. H. MORTON
Long Beach, R.I., Washington

1964 DEMAND FOR CRANBERRIES SEEN EQUAL TO LAST YEAR

Demand for fresh and processed during 1964 is expected to equal that in 1963. Massachusetts continues to be the leading producing state with its 660,000 barrels making up 51% of the nation's total production for 1963.

This production is down 15% from 1962 when the Bay State's second largest crop accounted for 59% of the U.S. total. New Jersey production also was down—37%.

As part of the 1964 demand for fresh and processed cranberries, competitive fruits, especially citrus, are expected to be much below the large volume of preceding years. Carryover stocks of berries are down considerably from a year ago, and supplies are expected to continue relatively small with higher prices. The demand for cranberries is expected to be helped further by a developing foreign demand for

deciduous fruits, Professor Be says.

Nationally, the biggest increase in 1963 cranberry production was reported in the Washington and Oregon crops—up 87% over 1962 when heavy storms and a cold season reduced production.

(Extension News, Univ. of Mass.)

IMPROVEMENTS

CRANBERRY PRODUCTS

Cranberry Products, Inc., of Eagle River, Wisconsin, next year handling its entire production with pallet boxes, thus expecting to make savings to growers. Currently Cranberry Products is installing two new spin coolers and some additional equipment, with the intention of next year nearly doubling its capacity for cranberry sauce.

Improvements are also being made in the glass line, as President Vernon Goldsworthy states the corporation has been unable to meet the demand for both whole and strained sauce in glass with its present facilities.

EASTERN STATES NOW OFFERS PROVEN PESTICIDES FOR APPLICATION BY HELICOPTER



Harry T. Fisher, Jr., Purchase Street, P. O. Box 243, Middleboro, Massachusetts, Tel. 947-2133, will forward requests for prompt helicopter service to Fred "Slim" Seoule. Eastern States is your best source of cranberry pesticide control materials . . . order now. Eastern States is close to you and your needs—there is an outlet near you.



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EASTERN STATES FARMERS' EXCHANGE

Massachusetts Cranberry Club Meeting Discuss Sprinkler Irrigation Systems

Prof. William Tomlinson Jr. Gives Advice on pesticide safety

Overhead irrigation, a matter of much interest to cranberry growers and especially those in Massachusetts at the present time was the principal topic at the February meetings of the cranberry clubs, February 18, South Shore; Kingston, Feb. 20; Cape Cod Club at Barnstable and Southeastern Massachusetts Feb. 26 at Rochester, the latter postponed a week because of a blizzard on Feb. 19. This was a panel discussion ably moderated by Prof. John "Stan" Norton, engineering department at the Mass. Cranberry Station.

The "Safe Use Of Pesticides" was the other timely topic presented by Prof. William "Bill" Tomlinson, entomologist of the Station and acting head during the Great Britain Sabbatical of Dr. C. E. Cross.

It was pointed out that it has now been two years since Dr. Cross made a "dramatic" plea for improved water management of Massachusetts bogs, particularly in sprinkler irrigation, pointing out the frost losses and how these might be lessened and systems made to pay for themselves in a relatively short time. Prof. Norton estimated there are now about 700 Mass. acres under such irrigation, a big increase over a few years ago and that cost

of installations had been lessened, saying that systems could be installed in many instances at a cost of \$400 - \$500 an acre.

Norton said the best place to begin the discussion was at the beginning and this came with the maps for the layouts of individual systems. This phase was presented by Richard Pratt, Soil Conservation Service.

He said much irrigation used took only about 20 percent of the water used in the old method of frost flooding. One advantage is the multiple use of such systems, not only for frost protection, but irrigation and the application of many agricultural chemicals. He said one "disadvantage" is the initial cost and that it is best to give the systems constant attention during a frost night since something, perhaps pumps, or a sprinkler head might fail to function.

He explained how Soil Conservation was able to help in the planning and laying out of systems even to drawing up maps for the actual systems. He said in Plymouth County alone the Soil Service now has about 50 requests for assistance in such layouts for 1964, and the amount of funds available was limited. He stressed it would be helpful if growers could decide one type of sprinkler head (regardless of

make) and this would make for faster and easier planning of the map. He discussed triangular and staggered head layouts. He said service does make such layouts and that in his experience most had been for five-acre coverages with the largest 26 and down to less than an acre.

He said also, of course, private industrial layouts could be obtained if preferred.

George Arguimbau, Agricultural Stabilization and Conservation Service told how financial assistance could come from the A.S.C. He said the service could assist in and share in the cost of reservoirs, wells, probably sumps but could not share in the cost of a pump or other part of the equipment. He said the Service now had 104 requests for assistance in water problems.

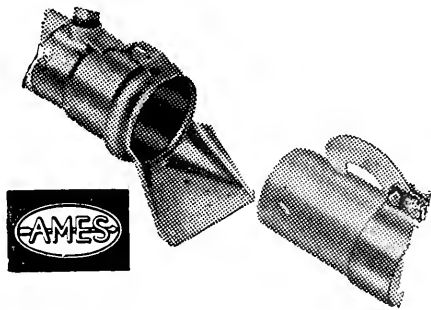
Charles Starr of FHA told how this government service can make loans for such systems, and in fact had loaned considerable money for such purposes. He said up to \$2500 could be loaned over a period of from one to ten years. He said there were certain requirements to be met, of course, and that loans must be secured by sufficient collateral. He said, incidentally, that cranberry growers in such Farm Home Administration loans were among the very best in the entire country in making prompt payments and he did not recall a single one had defaulted. He spoke of other sources of credit, commercial

AMES IRRIGATION SYSTEMS

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banks, production and loan associations, Cranberry Credit and that it was not the purpose of FHA to take away business from banks or anyone else.

"Grower's experience With Irrigation" was discussed by Kenneth "Kenney" Beaton, Wareham at Kingston and at Barnstable and by William "Bill" Stearns at Rochester. This was designed to give an idea of how such irrigation worked out in actual practice from a growers' view point, as both men have much experience.

"Bill" Stearns

"Bill" Stearns has about 60 acres in all under sprinkler irrigation. He said in part:

"I became interested in irrigation in the early 1950's strictly for survival purposes. All of my bogs at that time were short of water and they still are quite out of grade.

"My first outfit of any consequence was an O.C.D. fire pump with 200 feet of 4 inch and 3 inch aluminum pipe with a Buckner giant head and maybe 3 or 4 number 70 or 80 Rain Bird heads. This set-up depending on the shape of the bog

would cover about 2 to 3 acres and use about 400 gallons of water per minute. During drought conditions a two-hour set-up would give an inch of water to the area covered.

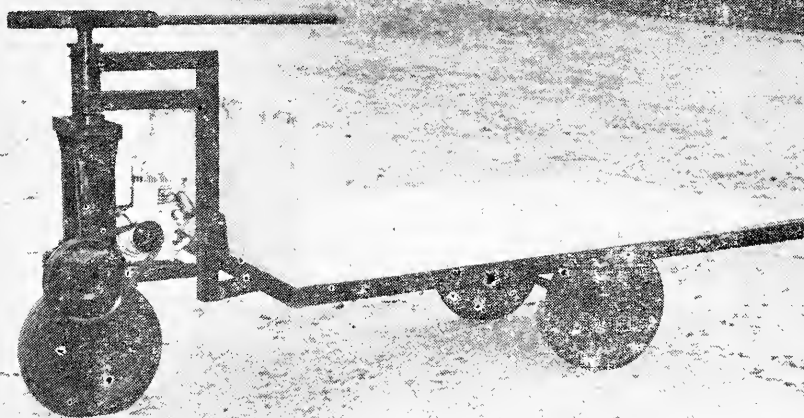
"Three or four set-ups a day would be made. Contrary to the opinion of the time, the sprinklers were, out of necessity, set up during the heat of the day with no apparent rot or scald problems. I do strongly feel, however, that a sprinkler system should not be turned on during the day unless it is to be of at least 30 minutes. I have seen bolssoms or berries cooked when the systems was turned on for a few minutes for demonstration purposes.

"A sprinkler system such as I have mentioned has to be used successfully for frost protection, but has disadvantages. Number one point against it would be the cost per acre. A large pump was required, 3 and 4 inch aluminum pipe, and a 400 to 450 gallon per minute water supply. This again will only take care of 2 to 3 acres.

"Since we have started using low pressure systems 50 to 60 gallons per acre the number of acres pro-

ected by the same amount of water and the same pump increased about 4 times. At present my systems are entirely of aluminum pipe. I can see no objection to plastic on permanent set-ups and apparently they cost less per acre. For my own system however, I feel that I would be better off to have the portability that aluminum affords. By so doing I can cover more of my bogs during drought periods. The system can also be moved in the fall for frost protection after certain pieces have been picked.

"On practically all of the systems that I have for frost protection, the heads are spaced 80 feet by 80 feet using number 8601 Buckner or number 30W Rain Birds with 5-32" nozzles, this is perhaps stretching an approved setting but it seems to give satisfactory coverage. By using 80x80 spacings one can buy aluminum pipe in 40 ft. lengths fairly reasonably. It must be emphasized that these jobs must be so engineered that no head in the system has less than 40 pounds pressure. This, of course, is determined by the pressure at the pump and



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capacity of the pipe carrying the heads.

"I could not recommend the 80x80 low gallonage set-ups on permanent systems for I feel that we will soon be able to inject more insecticides, herbicides, fungicides, fertilizers, etc. through the sprinklers. A complete coverage of these materials could not be obtained.

"Up until last year I have been using 2" aluminum laterals. This past year there has been developed an 1½ inch quick coupled pipe with a capacity for 4 to 5 heads. The cost is about 25 percent less than the 2" and suits most purposes.

"For summer irrigation on the bogs that do not have the frost set-ups we are back to the systems of 10 years ago. We take the main line and possibly the pump from a frost system, use larger heads and keep moving.

"There is a very important point I learned during the prolonged drought of the last summer. I obviously was attempting to sprinkle at least once, as many acres as possible. I know feel that it is essential not to let a sprinkled bog

go more than 10-12 days before sprinkling again. It appears that the initial application of water tends to make the vine try to produce more of its potential and this in forcing the vine to work harder than a vine carrying a normal load.

"On my own bogs, at least, I am convinced that I must have sprinkler systems to insure a series of good crops and quality crops. The frost and drought problems are pretty much under control with sprinklers. Other factors are being able to drain wet bogs early in the spring and keep them drained all year, thus promoting better berries, being able to pick a bog at the proper stage of ripeness and conserving our limited reservoir supplies for the best possible use."

In summing up Moderator Norton said aluminum portable can be taken in the fall and with proper use will last a life-time. Plastic is lower in cost—it can be buried, but the biggest problem in that is grass clippers snip off the heads and picking machines have to pick

He concluded with some suggestions as to the proper placing of a

thermometer on a frost night. It should have the bulb exactly at the tip of the vines. "I have seen a difference of ten degrees in ten inch vertical."

The following is a summary of the talks given by Prof. Tomlinson

Pesticide Safety

William E. Tomlinson, Jr.

Pesticide safety means different things to different people, depending on their point of view, but basically they are all the same but looked from differing interests and points of view. The consumer is thinking of foods that are free of harmful residues; the sportsman thinks of the effect on fish and game; the beekeeper thinks of the effects on hives of bees, and the grower a selling agent wants a product that will not be subject to seizure because of illegal residues.

I think it is pretty well agreed that pesticides are a necessity in modern agriculture and public health. However, following the publication of "Silent Spring" and other adverse publicity, as well as congressional hearing and president

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fact finding committee reports, there has been a soul searching by industry and governmental agencies producing and recommending pesticides to see if they have been derelict in stressing their proper use and safe handling.

As far as I can determine, no one has ever been made ill from pesticide residue on foods, let alone killed. However, nobody knows better than the cranberry grower what government seizure and condemnation of a crop with all of the attendant publicity and scare stories can mean financially if you don't follow the label, or if you use a pesticide before it is registered for use on that crop.

There are, however, very definite hazards associated with the use of pesticides to persons engaged in mixing and spraying operations. There are many well documented cases of death from exposure of spraymen, or mixers that could have been avoided if proper safety rules had been observed. Pesticides don't kill many more people than aspirin tablets do, and only a few more die each year of pesticide poisoning than from bee stings. The sad part about pesticide mortality figures is that well over half of the deaths are among children under 10 years old. These cases are not deaths by pesticide poisoning as much as manslaughter by careless adults who have carelessly discarded used containers, or left pesticides within access of prying fingers of normal, inquisitive children.

Your responsibility when you use pesticides is summarized in Massachusetts Special Circular #279, which you have already or will receive from your County Extension office. Don't toss it aside, but read it, digest the contents and take them to heart. The life you save may be your own.

A few of the points that I think that need stressing are:

(1) Don't give unlabelled samples of pesticides to friends. If you wish to be helpful and neighborly, lend it in the original container with the label intact.

(2) Never store or measure pesticides in food or drink containers, and never store food or water in an empty pesticide container.

(3) If you spill a pesticide concentrate on your body, wash it off immediately with soap and water. If it splashes in the eyes, bathe immediately with copious amounts of water. If it spills on your clothing, remove clothing immediately unless your dignity is more important than your life — and remember that a poison can be absorbed through the feet from soaked shoes just as readily as any other part of the body.

(4) Don't smoke while you spray and don't eat or smoke after spraying until you wash, and don't carry smokes in your pocket while spraying or cancer may not be the cause of your demise.

(5) Dispose of empty containers promptly in an approved manner. Don't just cast them aside. They are not only unsightly, they can be extremely dangerous.

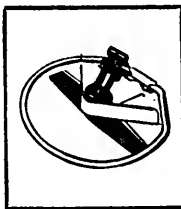
(6) Follow label directions. Much time and effort, as well as money in research and development, went

Continued on Page 24

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Chloro IPC, a time-tested herbicide made by the Chemical Division of Pittsburgh Plate Glass Company, can now be used on dormant cranberries. This is good news to growers who need an economical way to control annual grasses (bent grass, annual blue grass, turkeyfoot grass) as well as such weeds as rushes, horsetail, velvet grass, loosestrife, tearthumb and certain others. Chloro IPC is applied while the plants are dormant. It is completely dissipated before the fruit ever appears, so there's no residue problem. Chloro IPC is among the least toxic of all commercial herbicides.

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mendations suited to each area. PPG Chloro IPC is easy to apply in the form of 20% granules, 100 lb. to the acre during November or December after harvest. A repeat application in early spring before cranberry growth begins will give further control of annual weeds. Ask your experiment station personnel at the state university for local recommendations on use of PPG Chloro IPC. Write for more details and your local distributor's name to: Pittsburgh Plate Glass Company, Chemical Division One Gateway Center, Pittsburgh 22, Pa.

 chemicals

UK "BREAKTHROUGH"?

It should be encouraging news to the industry that President Colley of the Cranberry Institute is convinced that after several years of preliminary promotion in association with the Foreign Agricultural Service of the USDA that a "breakthrough" for an American cranberry market in the United Kingdom has been achieved. Also with continuing prospects of such a happening in some of the other Western European Markets.

Large sales, that is in proportion to the entire cranberry production should not be expected at once. Developing and promoting a new product in a new product in a new market is slow and expensive. But it can be done. The development and promotion of cranberry cocktail we all know about, and that it was not done over-night, but now we understand the cocktail market is "snow-balling." This is one example we know about.

A European cranberry market, need not be achieved at the expense of continued domestic expansion. The effort should be companion actions, that is Europe and other parts of the world as the time comes. This is another example of not having all our eggs in one basket, but spreading over fresh, processed (included frozen or irradiated cranberries and broadening markets.

USE PESTICIDES SAFELY

Prof. "Bill" Tomlinson of the Massachusetts Cranberry Experiment Station gave a timely talk last month to Massachusetts growers (as reported in this issue) which can be read by all growers with benefit. From other sources there is also information on the safe use of pesticides. This advise, from those who know, should be headed, for the sake of those who apply pesticides for the growers themselves and for the general consuming public.

What is a Pesticide? It is defined in Massachusetts law as: (1) Any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any insects, rodents, nematodes, fungi, weeds and other forms of plant or animal life or virus, except a virus on living man or other animal, which the commissioner

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shall decelerate to be a pest, and (2) any substance or mixture of substances intended for use as a plant regulator, defoliant or desiccant."

The proper use of pesticides is an individual responsibility. Cranberry growers, we believe, with perhaps few exceptions as in 1959, been careful in the use of these materials to keep the record good, the advice given by Prof. Tomlinson and the other authorities should be followed—to the letter.

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Break-Through In UK

Continued from Page 12

a real break-through for an American cranberry market has been achieved in the United Kingdom, and is on the point of being achieved in some of the other western European countries. He points out that sales in Europe could not be expected to be large in point of view of the million-and more barrel crops now being achieved.

Massachusetts Cranberry Club

Continued from Page 21

into the label that is there because of State and Federal Law for your protection and information. Don't take it lightly, but read it and follow it every time you use the contents.

To sum it all up, follow the 5 rights:

Use the right pesticide
On the right crop
In the right amount
At the right time.
In the right way.

Fresh From The Fields

Continued from Page 6

desired. The bogs in general look fairly good. The bud set, in the opinion of Dr. Doughty appears adequate.

More Sprinklers

Activities on the bogs have mostly consisted of installing additional sprinkler lines on some bogs, complete new systems on others; pruning, getting new ground ready to plant.

Visitor

Charles Lewis, of Shell Lake, Wisconsin, a large grower was a recent visitor in the Long Beach area.

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CO-FEATURED ARE:

Talks on the picturesque past and flourishing present of Ocean Spray cranberries.

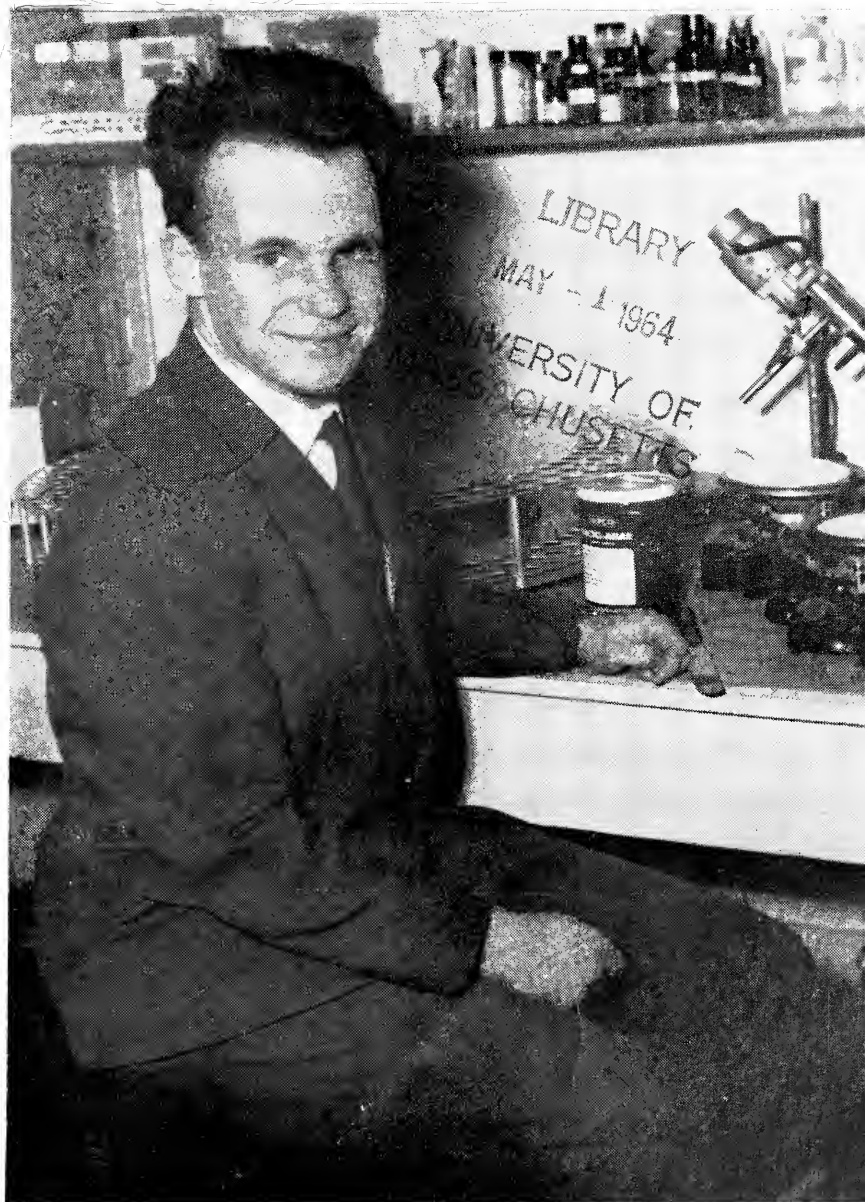
Directions for a cranberry quiz, refreshments, decor and for fund-raising cranberry festivities.

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POLISH SCIENTIST, Michal Brzeski, at Mass. Cranberry Station
(see Page 1) CRANBERRIES Photo

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Polish Scientist at Mass. Station

Dr. Brzeski Gives Talk at Cranberry Club Meetings

Dr. Michal Brzeski, a polish nematology expert who is engaged in experimental work at the Massachusetts Cranberry Experiment Station, East Wareham was guest speaker at three meetings in March of the Massachusetts Cranberry clubs, these being the South Shore at Kingston, South-eastern at Rochester and the Cape Cod Cranberry Club at Hyannis. He also spoke at a meeting of agricultural leaders of Bristol and Plymouth counties at Bridgewater, April 7th.

Dr. Brzeski's topic was "Agriculture in Poland."

He is on a ten-month leave of absence from his duties with the nematology section, Vegetable Research Institute, Skieraiewice,

Poland, and while at the Massachusetts station he is working with Dr. Bert M. Zuckerman of the Station staff who has become an authority in nematology.

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Brzeski is a 1960 graduate of the University of Warsaw where he specialized in zoology. He received his Ph.D. from the institution in 1962, and is the author of about 40 publications. Since 1959 he has worked at Skierniewice on nematodes injurious to vegetable crops.

Soil samples, which Dr. Zuckerman sent to Brzeski last year accidentally contained a new species of nematode. Brzeski later officially named and classified the microscopic plant parasite, *H. Zuckerman. sp. n.* in honor of Dr. Zuckerman.

Dr. Brzeski is familiar with the American cranberry as there is a small experimental planting grown from cuttings from the United States at Skierniewice. Skierniewice, he says, is a small town in the northeast of Poland and is a center for agricultural research for the whole of Poland. There is, besides the Vegetable institute, one of pomology and plant genetics. In Poland at Skierniewice the small cranberry planting is a part of the pomology section.

A native cranberry grows in Poland, as in many other parts of northern Europe, a species of Lingonberry, which is smaller than the American cranberry in commerce. This native berry, Dr. Brzeski says is not cultivated but is widely picked and prepared for a fresh fruit sauce, going with fowl and meats. It is also preserved in glass jars and a quantity is exported.

Dr. Brzeski's visit to the country

Continued on Page 4

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Mass. Cranberry Station and Field Notes

by Prof. William E. Tomlinson

Cranberry Station Notes

The old saying about March coming in like a lamb and going out like a lion certainly held true this year. After building up to about 4 degrees a day above normal by mid-month, temperatures skidded later in the month with the result that we ended up only about a degree above normal for the whole month. This cool weather early in the season is felt to be beneficial because it holds back bud development on exposed bogs until later on in the spring and thus shortens the frost season.

Water Supplies Back

March precipitation fell below normal by about an inch. Some water supplies could use more, but most streams and reservoirs have come back quite well from the low levels of last summer and fall so that they are going into the spring frost season

quite well supplied.

Spring sanding, ditch cleaning, weed control, grub control, and activity in general started early this year on many bogs because they have been exposed since late February and early March. The optimism in the marketing outlook is no doubt also stimulating renewed interest in bog care that should show up in improved production in the years ahead.

Personals

Our old friend and writer of this column for many years, J. Richard (Dick) Beattie, is recovering at home from a recent disc operation. I am sure that his convalescence would be cheered by any of his old grower friends and acquaintances that care to drop him a line or a card at 36 Hartman Road, Amherst, Mass.

Following a month's silence, we were beginning to get worried about our representative on sabbatical leave in the British Isles until we saw his picture in the March issue of this magazine. We could see that he was in good hands and that the tea has been agreeing with him. It will probably be morning and after-

noon tea now instead of coffee at the Station.

Ferbam

An additional note to add to the comments on the Insect and Disease Chart of last month in this column is the fact that this year there are several commercial formulations of ferbam being manufactured in a finer grind. Preliminary testing at the Cranberry Station indicates that these finer grind formulations will not clog the screens and nozzles of concentrate spray applicators as the coarse grinds previously available did in seasons past.

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BREZESKI

Continued from Page 2
try is under the joint sponsorship of the College of Agriculture, University of Massachusetts, the Church of the Brethren and the Polish Department of Agriculture, and it is brought about by the Polish Agricultural Exchange program for 1964-65. The purpose of the exchange, which brought 11 Polish scientists to America this year is to place visiting agricul-

turalists in a university department at an experimental station or on a farm to share agricultural techniques in theory and practice.

Dr. Brzeski is married and has one child, his family remaining in Poland. He is living at Mat-tapoisett while engaged in work at the East Wareham Station.

After concluding his work at the Cranberry Station it is expected he will be assigned to time spent with working with Dr. A.

C. Tarjan at the Citrus Experiment Station at Lake Alfred Florida.

GUIDO FUNKE

Guido Funke, 78 of Cranmor north of Ilwaco, Washington passed away last month. Mr Funke was one of the earlier and better known cranberry grower of the Long Beach Peninsula area.

He was born July 2, 1885 in Germany and came to the United States in 1910. He settled in Ilwaco in the early 1930's and entered the cranberry business.

He is survived by a widow Hedy, a son Albert, a brother Edwin, and two sisters, Mrs. Martha Goepel and Mrs. Flor Poeschel, all in Germany, and several nieces and nephews.

Funeral services were at the Ilwaco Presbyterian Church, and cremation followed in Tacoma. Among the pall-bearers was D. J. Crowley, former director of the Long Beach Cranberry Experiment Station.

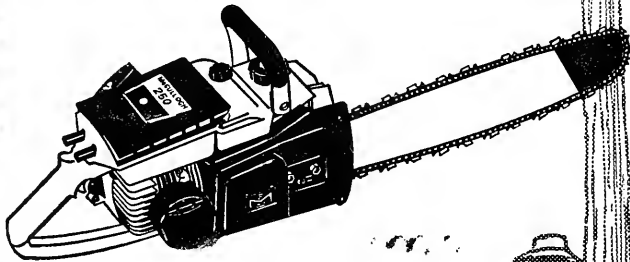
Mr. and Mrs. Funke had all plans completed to leave shortly for a trip back to Germany, since they recently sold their cranberry property.

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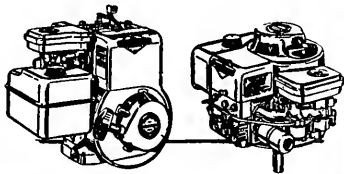
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Cranberries

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Middle of Month More Like March

Although March came in like a lamb, towards the middle of the month, the lion began to prevail more, and there were high winds, snow flurries, and some rain. On the 18th there was a sudden, unexpected minor "blizzard," with blinding snow over Southeastern Massachusetts for a couple of hours. Although this brought on some of the most hazardous driving of winter, the slight fall was gone within a few hours.

March a Dry Month

March was a drier than normal month with precipitation being recorded at the State Bog as 2.45 inches. Average is 4.39. Of this precipitation snow was recorded at 2.85 inches. A drier than normal March could be a favorable factor in keeping quality of the coming crop.

March Was Warmer

Even though temperatures turned much colder towards the end of the month, March ended with a plus from the normal. The last day of March was bitterly

cold, with a biting wind, but the plus was nearly two degrees a day. The plus since January first was about 70 degrees.

Vines Dormant

The month started alarmingly warm, and might have forced the vines, but the colder weather after the first prevented this and at the end of March the vines were still dormant.

Much Bog Work

Work on the bogs, however, started in March with a "bang," work of all kinds being done, indicating a better feeling on the part of most growers.

April Comes In Cold

April came in anything except springlike. There were bitter winds, frosts and even a few snow flakes over the cranberry

area. Temperatures for the first five days totalled a minus 22 degrees.

Precipitation Heavy

Rainfall for the first nine days of April was heavy, about three inches, as well as the weather being cold. This chill was holding back vine development, and was on the favorable side.

By the 9th the temperature for the month was again a minus 22.

Frost Warning Service

From the 15th on the State Bog was watching the nightly temperatures and ready to give out warnings to inland bogs if necessary. The regular frost warning service was to start April 20th, with George Roundsville "at the controls," as he so efficiently has been for the past

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several years. An answering service, with a tape recording of the forecast will again be ready for growers, the number being 295-2696 as it has been.

NEW JERSEY

Continues Dry

March was dry and slightly warmer than normal. Only 1.41 inches of precipitation occurred. This is more than two inches below normal. So far this year rainfall has totaled 9.13 or about 0.60 shy of normal.

However, in the first week of April over 2½ inches of rain fell. This has allayed the fears of growers concerning forest fires. Last year under almost similar March conditions very destructive forest fires occurred in South Jersey.

The temperature during March averaged 42.9° F. or about 1° warmer than normal. Blueberries appeared to be heading for an early season at the end of March but unseasonably cold weather the first 9 days of the month has set them back. As of

April 9 we know of no cranberry bogs which have been drawn yet. Several were to be drawn around April 15.

WASHINGTON

March Wet and Cold

The weather for March was rather wet and cold. There were few days without measurable rain, nine to be exact. Total precipitation for the month was 7.72 inches, even though there were very few days without some sun in between the rain.

The maximum temperature for the month was 70 degrees on the 28th and 29th. The minimum was 25 degrees on the 23rd and 30 on the 27th. The mean maximum for the month was 49.5 and the mean minimum was 36 degrees.

Sprinklers Used

Growers were sprinkling for frost, and were going on three occasions during the first week in April.

Work on the installation of sprinkler systems is continuing, and applications of granular herbicides were made during the brief dry spells, and also the application of sprays, particularly for fungus control.

New Plantings

It is the intention to plant 1½ acres of new bog at the Experiment Station, and also there are a number of new small plots throughout the Long Beach area

OREGON

About 20 acres of new bog is going in in the Bandon area, this spring, according to Jimmy Olson. Included in this is about six put in by Mrs. Pearl Tucker, giving her a total of about ten. Most of the work was done by Mrs. Tucker despite a recent illness.

It is reported the buds for the coming crop look good and so do the vines.

WISCONSIN

Above Normal Rain

Weather continues to be the main news maker in the state. March came in like a lamb and went out like a lion. The mildest readings of the year occurred the first two days of the month, with below zero readings the latter part. Surprisingly and welcome was the slightly above normal precipitation, which marked the

Continued on Page 20

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West Coast Bogs Not Damaged in Quake Tidal Wave

The tremendous earthquake which originated in Alaska and caused much of the West Coast to be swept by a giant tidal wave or waves, as far as CRANBERRIES magazine has ascertained, caused no damage to any cranberry property, even though many of the bogs lie very close to the shore.

In fact, many of the growers, in Washington and Oregon, along with the other residents, did not know there had been a quake and tidal wave until the next morning.

Nearest damage to cranberry property was at Copalis Beach in Washington, where there is a growing development in cranberries. But there, two or three bridges were badly damaged or toppled. One occupied house was smashed by logs hurled ashore by the tide, and several cars were trapped and one car and driver

fell through the Copalis Bridge, but the operator escaped. However, hundreds of beach residents were surprised at about midnight by the tidal wave, according to the Aberdeen Daily World, which carried photos of the damage.

There was no damage at nearby Grayland, but people at nearby Westport, where one or two cranberry growers live, were "scared to death and took to the hills," reports David Pryde of Grayland, prominent cranberry grower, who himself did not awaken. Westport, being on the south side of Grays Harbor had considerable protection from two jetties which jut into the Pacific.

The great wave, according to the Chinook Observer, a newspaper of Long Beach, fortunately did not cause damage at Long Beach. The Cape Disappointment Coast Guard was partly evacuated and some members went to higher ground at Ilwaco. Dr. Charles C. Doughty, director Coastal Washington Experiment Station, reported a tidal wave of three feet.

"We appear to be in a rather fortunate location here at Long Beach," Dr. Doughty said. Whether or not this results from the continental shelf that is just off-shore and to the effect of the Columbia is rather difficult to say. During the past few years several tidal waves have hit to the north of us and to the south of us, but have not struck in this immediate area."

The area oyster industry, which is an important industrial factor, suffered loss close to \$400,000, the Observer declares. Oystermen who were at work in Willapa Bay were forced to retreat to their boats by a secondary wave the following morning.

Ray Bates, cranberry grower at Bandon, in southwestern Oregon said there was no damage to cranberry bogs in that area. Bandon is not too far to the north of Crescent City, California, where a number of lives were taken and tremendous damage was done.

The First Street area of Bandon which is near the mouth of

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the Coquille river was swept for a short distance and debris left behind.

Greatest damage at Bandon told by the Western World was at the Moore Mill Lumber Company where a boom was broken up and about 100 of the enormous and very valuable logs were washed away. It was reported the next morning that the seashore seemed to be strewn with these logs. Immediate recovery with a big-tired front loader recovered much of the timber. A worker at the boom at the time the wave struck nearly lost his life.

There was considerable damage at Seaside, on the Oregon side of the Columbia River, where, in Clatsop County, there are several bogs.

As an incident of the great storm, "ham" radio operators did great service to Washington coastal area residents, many of

whom have relatives and friends in Alaska. There were no other means of communication for a time.

Dr. F. B. Chandler of the Massachusetts Cranberry Experiment Station, who made a study of the injurious effects of salt water on bogs in the hurricanes which have occurred in the East was of the opinion, before receiving word from the Coast, that there was probably little damage to bogs. He said the newer West Coast bogs are generally more nearly level than the older Massachusetts and New Jersey bogs, and that a quick surge and retreat of salt water would not have caused any vine damage. It was where the water remained for hours on eastern bogs in "pot" holes" and low spots that the injury was done in the hurricanes.

Of the tidal wave, Jimmy Olson, large grower and Ocean

Spray director said, "This was very fast high and low tide—the tide was fairly low and within about a minute low and behold it was a high tide, then it went out creating a terrific current and presto, it was low again. We are just naturally fast people out here, although a high and low tide interval in three or four minutes is a little quick even for us."

Norman Holmes, cranberry grower of Lulu Island, Vancouver British Columbia asserts there were effects from the earthquake at low-lying Lulu Island and a Vancouver. He says at the time of the quake and tidal wave, he was on a cruise in British Columbia waters and knew nothing of the disaster until he heard of it on radio.

American Cranberry Growers Meeting

The 94th annual Winter Meeting of the A.C.G.A. was conducted at the American Legion Hall Pemberton, N. J. recently with president C. E. Budd presiding. About 40 growers were in attendance.

The group paid its respects to four members of the organization who died in 1963. These were Vinton Thompson, Isaac Harrison, Harold B. Scammell and Walter Shinn. A resolution recording the great loss to the cranberry and blueberry industries was read into the minutes and an expression of sympathy from the group was sent to the relatives. These growers made important contributions to the New Jersey cranberry industry, were warm and sincere friends of all growers in the state and are missed very much.

Dr. Allan Stretch, Rutgers pathologist, reported on rot control tests using a mist sprayer from dam. Control dropped off sharply from 60 to 80 ft. from the dam and was very poor beyond 80 ft. Adjustment in volume may make this method practical and further tests are contemplated in 1964.



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Dr. Paul Eck, Rutgers horticulturist, reported on phosphorous nutrition of cranberries. In 1963 tests berry size and production per unit area were not significantly bettered by use of phosphorous in the year of its application. However available phosphorous in the soil and phosphorous content of cranberry tissue were significantly increased by phosphorus fertilization and this may bring about higher production in 1964. The source of phosphorus which yielded the highest increase in phosphorus content of plants was superphosphate, followed by monoammonium phosphate and rock phosphate.

In a paper co-authored by Philip E. Marucci and Robert S. Filmer results of cross pollination tests in cranberries were described. In cages in which pollen of several varieties were made available in sections of turf and in which a colony of bees was placed, the percentage pollination of Early Blacks, Howes and Champions was notably higher than in check areas surrounding the cage. This may have been the result of extremely high concentrations of bees in the cage. However Champion vines set berries much more heavily than average at a location on a bog where Shaws Success and MacFarlins surrounded the Champions on three sides.

Phil Marucci reported excellent control of cranberry tipworm by commercial applications of a combination of parathion plus D.D.T. This mixture greatly reduced damage by this serious pest from several old properties which usually had severe infestations. Sparganothis fruitworm was well controlled commercially with sevin. In experimental plots guthion, parathion and sevin have given very good control for six successive years.

Milton Stricker, a prominent New Jersey beekeeper, gave a very interesting talk on bees. He used an actual hive for purposes of illustration. Mr. Stricker pointed out that bees can normally barely make a surplus of honey on the nectar which they can manage to gather from cranberry blossoms in New Jersey. Most any blossoming plant around a cranberry bog will be pre-

ferred to cranberries. Normally there is very little activity on bogs until about the 4th of July. In a drought year, such as 1963, nectar secretion is low and bees will not work cranberries as well as in a normal year.

In a business session Edward Lipman reported on the 1964 State Agricultural Convention. He and Stephen Lee ably represented the organization. Through their efforts a resolution was passed urging the state to resist in acquiring cranberry properties for the "Green Acres Program."

Rogers Brick described the futile efforts to prevent the state from seizing the old Clayberger property by right of eminent domain in a court procedure. It is obvious that the state is determined to acquire a few more cranberry bogs. Mr. Brick avers that the court will not accept cranberry growers' appraisal of land since they are not professional appraisers. Real estate people only can qualify as expert witnesses. These people start from the assumption that cranberry land is rather worthless property, the industry having been ruined by the amino-triazole debacle.

The election of new officers resulted in the following:

President, John W. Haines, Medford Lakes, N.J.

1st Vice-President, Clinton Macauley, Tuckerton, N. J.

2nd Vice-President, Walter Z. Fort, New Lisbon, N. J.

Secretary, Philip E. Marucci, Pemberton, N. J.

Treasurer, Paul Eck, New Brunswick, N. J.

The Association's Frost Committee was given permission to install a teletype tie-up with the Weather Bureau at the Cranberry and Blueberry Lab. The growers voted unanimously to underwrite the cost of this installation by agreeing to triple the frost warning fee.

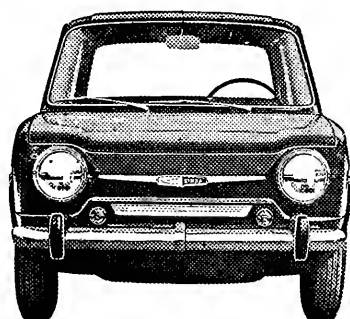
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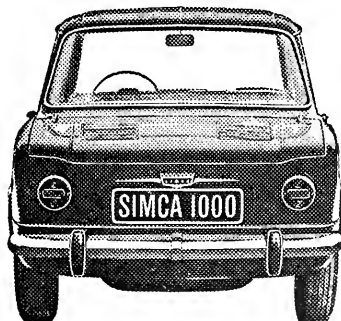
Hear Informative Talks at Final Winter Meetings

Final meetings of the Massachusetts Cranberry Clubs elected officers for the coming year, and a fair attendance of growers listened to a number of timely talk.

The South Shore elected R. Stanwood (Stan) Briggs of Duxbury as president, Larry Cole of North Carver as vice president and re-elected "Bob" Alberghini as secretary-treasurer.



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South Shore group re-elected William M. Atwood, president; Robert St. Jacques, vice president and Paul Morse secretary-treasurer.

The Cape Cod Club re-elected Francis Kendrick, president; Carlton H. Collins, vice president; secretary, Mrs. Mary Hollidge; treasurer, Victor Adams.

Dr. Bert M. Zuckerman of the Cranberry Station spoke on "Cranberry Disease" and Nematode Investigations." Irving Demoranville discussed the new weed control chart and Prof. William Tomlinson spoke on "Insect Control" for the coming season.

Dr. Chandler on Fertilizer

There are no great changes in the fertilizer chart. It is substantially the same as it was in 1949, with only changes in grades of fertilizer to bring it more up to date. Dr. Chandler suggested reading the Cranberries Magazine article by W. G. Colby in the October 1945 issue, pages 6-7. This article gave the amount of nitrogen, phosphorus and potash removed by 100 bbls. cranberry crop and a ton of vines. It also pointed out that some of the soil samples from Wisconsin are high in potassium. Many crops use more potash when high nitrogen fertilizers are applied. The cranberry crop removes more potash than any other element, so cranberry growers should use a complete fertilizer.

Split applications are better than a single one but may not produce enough more crop to justify the added cost. Airplane applications are good general applications but cannot spread the fertilizer in relation to the amount of crop or the needs of the bog as hand applications may. Applications through the sprinkler system are in proportion to the distribution of water.

New Varieties

All of the named varieties have come from the first 2000 U.S.D.A. seedlings from which Mr. H. F. Bain selected 40 for further testing. As soon as a selection is named, the vines belong to the grower who has helped to test them; before they are named, the

vines belong to the U.S.D.A. There are three more selections which should be tested further. AJ, a midseason selection; CN, also a midseason selection; and 35, a late selection, ripen on the vines October 10 (approximate date).

The members of the Cape Cod Cranberry Growers Association committee controlling the distribution of vines are: Arthur David Mann, Buzzards Bay; and Clark Griffith, Carver. There are few or no vines available of AJ and CN for 1964 planting.

DR. ZUCKERMAN ON ISRAELI AGRICULTURE

This past year I spent 6 months in Israel while on sabbatical leave from the University of Massachusetts. My work was sponsored by our University, the National Institute and University of Agriculture, Israel, and the American Institute of Biological Sciences. The purpose of my visit was to teach research methods in Plant nematology, and simultaneously learn about the nematodes which attack crops in a subtropical area.

Israel is approximately the size of the state of New Jersey and has a population of 2,300,000 people. About 1/5 of these work in agriculture and related industries. The southern 60% of the country is desert (the Negeb), and the northern portions uplands or mountainous. Rainfall varies from 1 inch in the south to 40 inches in the north. All of the rain falls during the winter. Temperatures range from temperate in the mountains to extremely warm in the desert. In the Dead Sea area temperatures of 100°F for several months running are common.

Israel's agricultural economy has developed rapidly during the 16 years of the state's existence. The most important fruit crop is citrus, but large acreages are devoted to bananas, olives, other tree crops, and grapes. The agricultural unit in Israel takes one of three forms, all of which are communal in nature, and vary principally in the degree to which property is considered as being

private or belonging to the group. In addition to crops, dairy and cattle, poultry and egg production, and raising of fish are included. In the past 5 years small industries have been added in an attempt to diversify the income of the unit. Capitalization of farms is extremely high. About 50% of all acreage is under irrigation and the amount of equipment in use is in excess to that found under comparable conditions in the U. S. As a result of these efforts, many products were in surplus this past year and the trend towards surplus production probably will accelerate within the next few years.

Agricultural chemicals are mostly imported and formulated in Israel. Two exceptions are phosphate fertilizers and bromine compounds (principally nematocides) which are produced by the Dead Sea Works. Application of agricultural chemicals is on the same technical level as in the U. S.

Agricultural research in the past has been mainly directed to bettering crop production. As the need in this area has decreased greater emphasis is being placed on basic research and improved food processing. The development of export markets is progressing but is hampered by complex political factors.

From my viewpoint as an American, the most compelling aspect of Israel's agricultural success is derived from its relation with the newly formed African States and certain neutral countries in Asia. Suspicious of both the Russian and American spheres, these nations have turned to Israel for help in training technical personnel and assistance with technical problems. Since Israel is the only nation in the Mid-East which is firmly committed politically to the Western sphere, the United States apparently is providing the funds for this extensive program. As a result, Israel, though only a small country, currently has more African students and delegations than any other country of the world.

Did Prehistoric Elephants Roam Cranguyma Farms?

Cranguyma Farms, Long Beach, Washington, has grown or produced a number of other products than Pleistocene-Quaternary Cetacean. It was while dredging on Dear Lake, one of several lakes on the property in order to install a pump for a sprinkler system for 12 acres, that the find was discovered.

These bones, taken to the University of Washington by Frank Glenn son of Frank Glenn Jr., who owns and operates the property, were identified as being either from a Mammoth or a Mastodon. They may be the bones of a prehistoric elephant and if so might be those of a large extinct species which resembled the present Indian elephant. Presumably the elephant had a hairy coat and long curved tusks, or they may be bones of a Mastodon.

On the Long Beach Peninsula, where Cranguyma is located about half way, there is no rock, merely sand and peat. But there have been a lot of sticks, pieces of old stumps and such material that has clogged sump pumps.

"Since we do not have a cutter head on the end of our suction pump" says Mr. Glenn, "the suction is usually stepped up; then the engine is slowed down and the end of the suction line is raised just below the surface of the water and a man goes out and pulls the sticks off the end of the suction."

"Now in doing this, they started to pick up some bones and brought them to the shop at Cranguyma. We thought they were just old whale bones and didn't think much more about them. However, our foreman, Ed Bostrom, wanted to know more about it and he enlisted the aid of my son, Frank, to take them to the University of Washington."

The University seemed much interested and has tentatively identified them. Mr. Glenn says that if the university can get a sample of the peat the bones were dug in, by the use of activated carbon, the ex-



SIX GEOLOGICAL SPECIMENS: Pleistocene-Quaternary Cetacean (Prehistoric Bones, to You) at Cranguyma. Photo Courtesy Chinook Observer, Long Beach, Washington.

act age and a more positive identification can be made.

Mr. Glenn says this will probably be done and that when spring comes Frank may try to recover more of the skeleton which is apparently buried in the peat.

If the prehistoric, hairy elephants or Mastodons once roamed the land where cranberries are now being grown at Cranguyma, in southwest Washington that seems one more for the book for Cranguyma and for the "cranberry book" of history.

Cranberries Were At The London Catering Show

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London**

In London, especially for the Hotel and Catering Exhibition, held at Olympia, recently, Orrin G. Colley, president of the American Cranberry Institute, sampled the many delightful dishes prepared with cranberries, when he visited the Institute's stand, No. 195.

Introducing cranberries to the United Kingdom, the Cranberry Kitchen prepared a catering recipe leaflet, especially designed to assist Hotel Groups, Industrial Canteens, Catering Departments, Hospitals,

School Canteens, Restaurants and other catering establishments, to obtain maximum enjoyment from this fruit.

A member of the Cranberry Kitchen is in daily attendance at the Stand, both to answer questions and discuss the many tempting and economical ways in which cranberries can be used throughout the year.

On the 24th of January, the Cranberry Kitchen held a reception for catering buyers and general press. This included cranberry tasting leaflets and general information were available at both functions.

Throughout the exhibition, top Executive Chefs from New York, demonstrated the latest cranberry recipes.



Supervisor of Hanson Juice Cocktail Plant

Lemoin McArthur has been appointed Supervisor of the Ocean Spray Cranberry Juice Cocktail Plant at Hanson, Massachusetts, according to an announcement from Maynard Holmes, Eastern Production Manager of the national cranberry cooperative.

Mr. McArthur has been employed with Ocean Spray for two years, coming to Hanson from the Markham, Washington Plant where he was Supervisor of Fresh Fruit. He was previously associated with the 125-acre Cranguyma Cranberry Farms in Long Beach, Washington, and before that held executive and sales positions in the oil business.

A former resident of Lovell, Wyoming, he attended high school there. He continued his studies at Centralia Junior College, Centralia, Washington.

Mr. and Mrs. McArthur and their two children, Joann and Linda, are now making their home in Monponsett, Massachusetts. They attend the Church of the Latter Day Saints in South Weymouth, Massachusetts.

Cranberry Juice, was made available to consumers in 50 States when Ocean Spray put Cranberry Juice Cocktail in national distribution last year. To

meet increasing national demand for the juice, Ocean Spray now produces it in three locations, Hanson, North Chicago, and Markham. Cranberry Juice Cocktail is currently packed in pints and quarts, featured for family use, and in gallons.

Ocean Spray Has Quality Control Director

Clifford J. Walton has been named quality control director for all plants of Ocean Spray Cranberries, Inc., according to an announcement from Stanley I. Skelskie, director of research and development. Mr. Walton is headquartered at the executive offices of the national cranberry cooperative in Hanson, Massachusetts.

With Kraft Foods Company for 10 years, Mr. Walton has been plant quality control manager for the past three years at the jelly and preserve plant in Dunkirk, New York. Starting in research and development he became plant quality control director and after six years in Palmyra, Pennsylvania, moved from the confections to the jelly plant in Dunkirk in 1960.

Born in Harrisburg, Pennsylvania, he holds a B. S. degree from North Carolina State College, Raleigh, North Carolina.

He is a Mason and was a member of the Palmyra Junior Chamber of Commerce.



Institute Included In Fruit Tariff European Trade

The so-called "Kennedy round" of tariff negotiation for fruit exports to Europe is to take place at Geneva, Switzerland in May. A brief has been prepared by the U.S. National Fruit Council. This is a six page manuscript, which discusses, among other things the removal of "unjustifiable non-tariff berries," which would make possible increased sales of American fruits and fruit products in the so-called "European Common Market Countries."

The Cranberry Institute is one of the firms represented. It is stated that more than 80,000 growers are engaged in the fruit and fruit products industry, the acreage involved in the production is approximately 3 million, with an aggregate annual production averaging nearly 17 million tons of fruit. The farm value of these crops, which of course includes cranberries is estimated at \$1.1 billion with a retail value after harvesting, packing, storing, processing transportation and distribution of nearly \$4 billion.

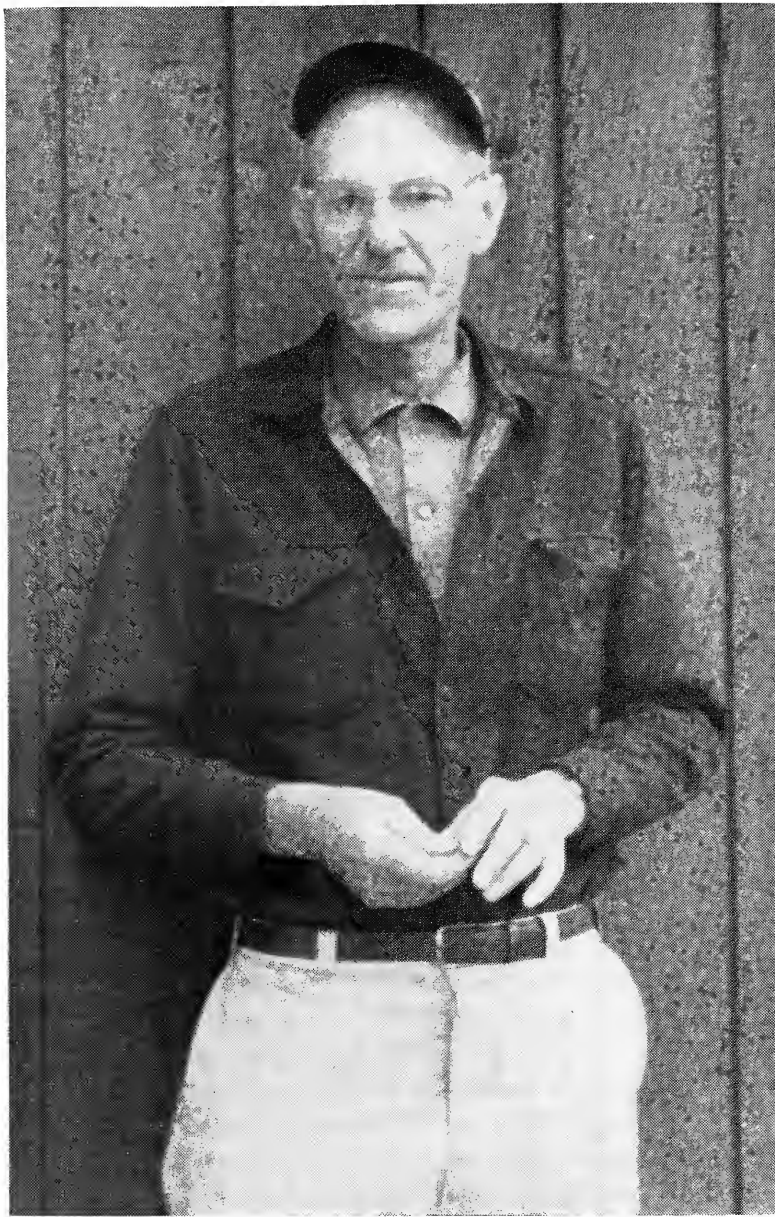
CRANBERRY PRODUCTS IMPROVEMENTS

Cranberry Products, Inc., of Eagle River, Wisconsin, next year is handling its entire production with pallet boxes, thus expecting to make savings to growers. Currently, Cranberry Products is installing two new spin coolers and some additional equipment, with the intention of next year nearly doubling its capacity for cranberry sauce.

Improvements are also being made in the glass line, as President Vernon Goldsworthy states the corporation has been unable to meet the demand for both whole and strained sauce in glass with its present facilities.

BREAKFAST TASTES

A nation-wide survey shows that consumer research has revealed that New Englanders drink more fruit juice at breakfast time than other areas, folks in the Rock Mountain States drink less coffee, people in the South Atlantic States eat more eggs and Westerners eat more pancakes and waffles.



Tall "Bill" Dufort is the Right-Hand Man for Ocean Spray Bandon Oregon Area Operations

About 130 Growers Depend on Him for Advice in Growing and Berry Handling

Tall genial, but determined William T. (Bill) Dufort is manager of the Ocean Spray enterprise at Bandon and serves the Bandon area growers with cultural advice, suggestions as to the growing of quality berries for the co-op. He is a "determined" type of man, although perhaps "firm"

would be a better word to use, in seeing that berries which do not meet Ocean Spray requirements are not accepted at the Bandon plant for processing or for the fresh fruit market.

Operating the plant at harvest time and visiting and giving suggestions at all times keeps him busy the year around.

Dufort is not a cranberry grower, but he knows the cranberry business "from the ground

up," as he and his father, Henry, have, in all, built about 25 acres of bog.

He is married to the former Martha Felsheim, daughter of Lou D. Felsheim, editor of the Bandon weekly, "The Western World," the two having been married in 1937. There is a son, Henry, and four daughters, Mary, Margaret, Molly and Melinda. Bill's father, who is more familiarly known as "Hank," than Henry, is still interested in cranberries, and was one of the earlier Bandon area growers.

The Bandon Ocean Spray Plant

About 30 work in the plant during harvest time, and there is a peak capacity of 600 cases a day — cellophane and window box pack. Fruit not so utilized is shipped in bags to the freezer at Centralia, Washington.

Ocean Spray screens all fresh fruit for its members, but all processing berries are screened by the growers, themselves or commercially so screened by others.

Growers in the Bandon area under the supervision of Dufort number about 130 and the area extends from Port Orford south of Bandon to Florence to the north, a distance of about 120 miles. During the "off season," that is after the harvest rush, Dufort visits and talks with growers. During the busy season he has the assistance in office work of a temporary girl clerk.

The Ocean Spray plant has about 8,000 square feet of usable space. As high as 4,000 barrels a day have been received during the height of the fall rush.

Ocean Spray has purchased land for a new building program. It is hoped to build, in the near future, this being a modern plant of around 25,000 square feet.

Modern New Home

The Duforts have only recently completed a most modern single-story home; "Bill" planning it and building it himself. He says he, "thought is out item by item, and now we have everything just about where we want it." The structure is at Dew Valley, south of Bandon.

The house has four bedrooms, opening off a corridor, two baths, the most moern and best equipped kitchen imaginable, and handsome living room with fireplace and three large picture windows. The house interior is finished in wood paneling.

So, it may be added, the Duforts, live in the tradition of so many of the West Coast growers in that still comparatively "pioneer" country, that is, having the "mostest" in modern home construction.

**ADDITIONAL ALLOTMENT
FOR CRANBERRY MARKET
IN EUROPE**

An additional \$75,000 or the equivalent in counter-part funds has been allotted by the Foreign Agricultural Service, USDA to be spent in developing a cranberry market in Europe, Orrin G. Colley, president of the Institute announces. This brings the total amount allotted for this purpose to \$185,000.

This fund concerns ten West European countries, including the United Kingdom, where a "break through" in sales has been reached and also West Germany. In West Germany, Mr. Colley says there may be possible a "tie-in" with the Poultry Institute, which has its own FSA funds for increased development of an American poultry market in Europe.

**WISCONSIN FROST
WARNING SERVICE**

The frost warning service for Wisconsin cranberry growers is to start May 1, and continue until October 15. Warren Wallis will again be the meteorologist in charge.

A letter sent to members of the Wisconsin Cranberry Growers Association by Bruce Potter, president, declared he hoped it might be possible to have 100 percent participation in the program and that the cost is 60 cents per acre, to be paid with membership dues of \$5.00 a year.

**USDA Makes
Recommendation To
Order Amendments**

The USDA has sent out the following recommended amendment, dated April 10, to the present marketing order, for a hearing,, this to be separate from the hearing on the retention of the marketing order as a whole: **USDA RECOMMENDS**

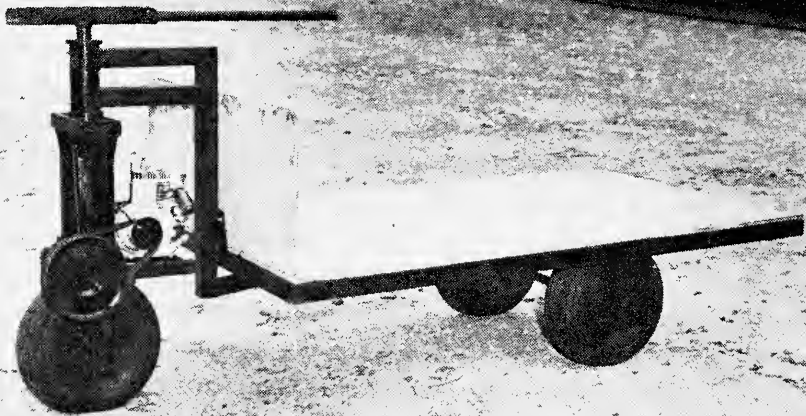
The U. S. Department of Agriculture today recommended an amendment to the marketing a-the handling of cranberries grown greement and order regulating on Long Island, N. Y., and in the States of Massachusetts, Rhode Island, Connecticut, New Jersey, Wisconsin, Michigan, Minnesota, Oregon, and Washington.

USDA's Agricultural Marketing Service said the amendment i based upon evidence received a a public hearing held in Ware ham, Mass., February 10, 1964 and continued at Moorestown, N. J., Feb. 12 and at Wisconsin Rapids, Wis., on Feb. 14.

**CARLSON
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**KINGSTON, MASS.
TEL. JU 5-2409**

\$399⁰⁰



\$100 Down—Balance Due October 31

- 1500 lb. Capacity
- 35 Picking Boxes
- 35 Picking Bags

● Platform Area: 48 x 78 inches.

Engine — 3 h/p Briggs & Stratton with Reduction Unit. **Tires** — 800-6-1000 lbs. capacity each tire. 8 inches wide - 18 inches diameter. **Frame** — 2¼" square tubing ⅜" wall thickness. **Axles** — 1" round cold roll. **Tiller** — operated tricycle arrangement for ease of reversing and to minimize scuffing.

This unit has been used for 6 yrs. on our bogs. Ideal for wheeling off berries, cleaning inside ditches, carrying fertilizer and sanding. We carry 1½ yds. per load which is double our rated capacity.

The amendment would (1) provide wider authority to specify the time and manner for handlers to meet withholding obligation; (2) allow handlers to be credited during the next fiscal year with any excess withholding resulting from a modification of the free and restricted percentages; (3) require the committee to fix and announce the price, per barrel, at which handlers may obtain release of withheld cranberry release to accompany the request with full payment for the berries for which release is requested; (4) provide for the disposition of monies acquired in connection with the release of withheld cranberries; and (5) amend the withholding provisions to establish and maintain, among handlers, uniformity of application of the restricted percentage.

Persons desiring to file written exceptions to the recommended decision may do so with the Hearing Clerk, U. S. Department of Agriculture, Washington, D. C., 20250, not later than April 21.

Copies of the recommended decision are available from the Director, Fruit and Vegetable Division, Agricultural Marketing, U. S. Department of Agriculture, Washington, D. C., 20250.

Wisconsin Growers To Have Hearing On State Order Would Provide Funds For Research

Wisconsin cranberry growers will attend a public hearing May 3 at the auditorium, Courthouse, Wisconsin Rapids, Wisconsin on proposed state marketing order for cranberries. This is the first state order for cranberries and came about as the result of a vote by the Wisconsin State Cranberry Growers' Association for such an order. Monies collected from the growers on a per barrel basis will be used for applied research on cranberry growing and an educational program on cli-

matic conditions as they effect cranberry production.

The proposal is to assess each grower (producer) two cents per barrel for all berries sold or delivered to his respective sales agency or processor. An advisory board is to be established consisting of five members who shall assist the director of the Wisconsin State Department of Agriculture in the administration of the order. These five members are to be active producers, nominated and elected by active cranberry growers. The five receiving the highest number of votes shall constitute the board and the next highest five shall become alternate members.

Oregon Growers To Have Frost Warning Service

At a spring meeting of the Southwestern Oregon Cranberry club at Bandon, with about 60 growers present, a frost warning service for the growers was discussed. A plan for such a system has been worked out.

The U. S. Government has weather stations scattered over different altitudes in the Bandon area, one being at the bog of Ray Bates. These observers are to telephone to the Portland Weather Bureau twice a day, giving the temperatures, humidity, wind velocity and cloud cover, also the highs and lows of the previous night. Bates makes his final call promptly at 4 p.m. daily.

At Portland a meteorologist is to correlate all the reports, and then teletype the city of Eugene and the report comes from there over local television at 6:15 p.m. There is also a teletype from Portland to nearby Coquille, the seat of Coos County, and from there it is broadcast on radio.

Jimmy Olson intends to put in a telephone answering service (similar to that at Massachusetts Cranberry Station) the message to be on tape so that any grower can dial his business number after 6:15 and get the report.

"So, all in all, we should have a fairly complete system, with TV, radio and phone," Olson declares.

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NOTES FROM THE INSTITUTE

This month the Cranberry Institute in cooperation with the Foreign Agricultural Service of the U. S. Department of Agriculture is participating in Scotland's annual food exhibition in Glasgow.

This is the third of a series of promotional campaigns scheduled for U. S. cranberries and other U. S. agricultural products. The first was held in London in January and the second in Cardiff, Wales in March and constitutes the most intensive effort yet made to promote cranberries in the United Kingdom.

The cities selected present the best immediate potential sales expansion on surrounding areas. In addition wholesalers, importers and other contacts have indicated

the desire to participate in a sponsored food campaign.

The promotions include a cranberry exhibit and demonstrations. Coverage of each city's food outlets, distributing banners, posters, recipe leaflets and other merchandising aids to participating retailers. Also publicity releases, advertisements and special supplements to be carried in local newspapers plus other features using the theme "Enjoy American Foods."

In addition to the interest being created in Europe for cranberries inquiries are being received from other countries of the world as well. Recently an inquiry was received from a food processor in Australia seeking raw cranberries in barrels.

Several British cookery editors have informed the Cranberry Institute that they will be featuring cranberries in prominent magazines and books in the months to come.

Word from cranberry processors indicates that the U. S. Armed Forces are purchasing cranberry products in sizable quantities.

It is apparent that these purchases are in excess of any previous year at this season. A large percentage of the supplies is destined for overseas bases.

New Glass Pack For Whole Cranberry Sauce

This serving package for cranberry sauce was featured, in color, on the cover of "Glass Packaging," a publication of the glass industry, recently. Inside caption was: "Cranberry Sauce, Cranberry Products, Inc." Eagle River, Wisconsin is distributing its new sauce throughout the middle west in this squat 13 ounce glass table jar. The manufacturer is relying on an attractive closure for brand and product identity, and is not using a body label on the container. He has thumb-print decorations.

"Glass containers supplied by Owens-Illinois Glass Company, Toledo, Ohio; closure by White Cap Co., Chicago."

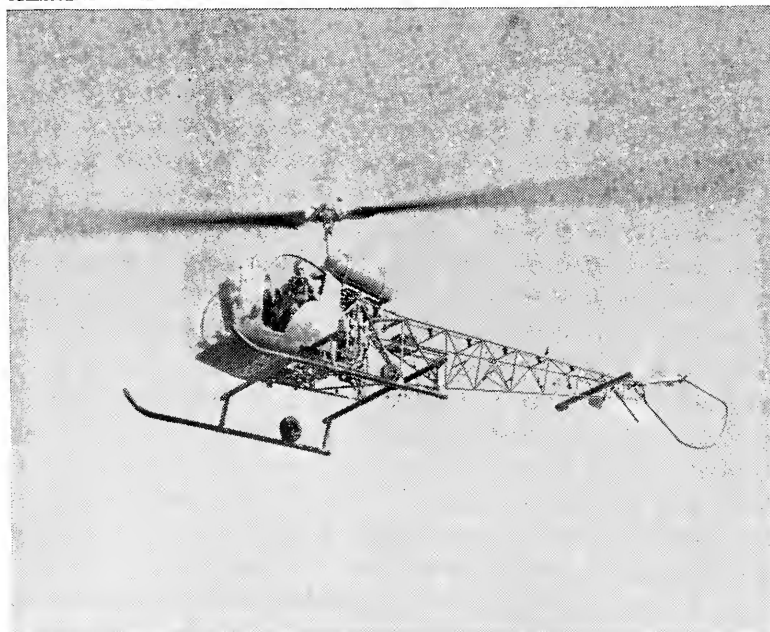
— See Photo on Page 24 —

"SPACE AGRICULTURE"

There seems to be a new type of agriculture. This of growing food aboard space ships and on other planets. This was an assertion of the general manager of American Cyanamid Company, in a recent address.

Plymouth County (Mass.) has placed 65th in US counties in agriculture, according to U.S. Census of Agriculture, just announced. It was one of 7 Massachusetts's counties the top 100. Rating was for fruit which would be largely composed of cranberries. Figures released were for the year 1959.

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Spare That Bee

A recent talk by Dr. Johansen of the Washington State University, tells us that honeybees and bumblebees are very important in the pollination of your cranberry bogs. This, of course, we already know. He tells us a little bit about our bumblebees, which I think will prove interesting to you. I will relate this to you.

The bumblebee is very important to our cranberry industry. He will work at much cooler temperatures than honeybees will. This is important, especially during the cool end of May and June weather.

This is the life cycle: The queen bumblebee goes to hibernation apparently fertile in nature. She will house in mice nests, or material where she can stay dry and warm in the winter. In early spring she breaks her hibernation and comes out to find a nesting place so she can lay her eggs in the early spring of the year. She seeks such areas as the edge of your bog, where old vines or mouse nests or grass has accumulated, and provides her a suitable house for her young.

Here she will form her nest and lay her eggs. She has to accumulate either a substance known as honey, or the pollen which she will feed her young when they hatch out. When they hatch out, they are of three characteristics, either queen, drone, or worker. Then the proceeding starts up where the drone fertilizes

the new queen eggs while the worker provides food for the hatching or hatched bumblebee. While these workers are seeking food they will visit your cranberry bogs and other areas around and doing a job for you of pollinizing your cranberries and also providing food for young workers, drones, and queens that are hatching out. About the first or middle part of August, the fertile queen again seeks her hibernating area for the winter. Here she stays until the following spring.

Recently Dr. Johansen, in cooperation with Dr. Doughty, the experiment station and Mr. Bud Bailey, two sets of nesting boxes have been provided for bumblebees as a nesting experiment. We are not recommending this practice yet, as this is purely in the experimental stage. We feel that anything we can do to encourage the increase in population of bumblebees and honeybees, will be important to our cranberry grower.

Remember, in working your cranberry bogs, give the bumblebees and honeybees every possible chance that you can. Use your sprays late in the evening and this will save a number of bees and bumblebees as the product is not as potent as in the morning. Also, be sure to use the same precautions of spraying the edges of your bogs as the bumblebee is probably nesting in this area.

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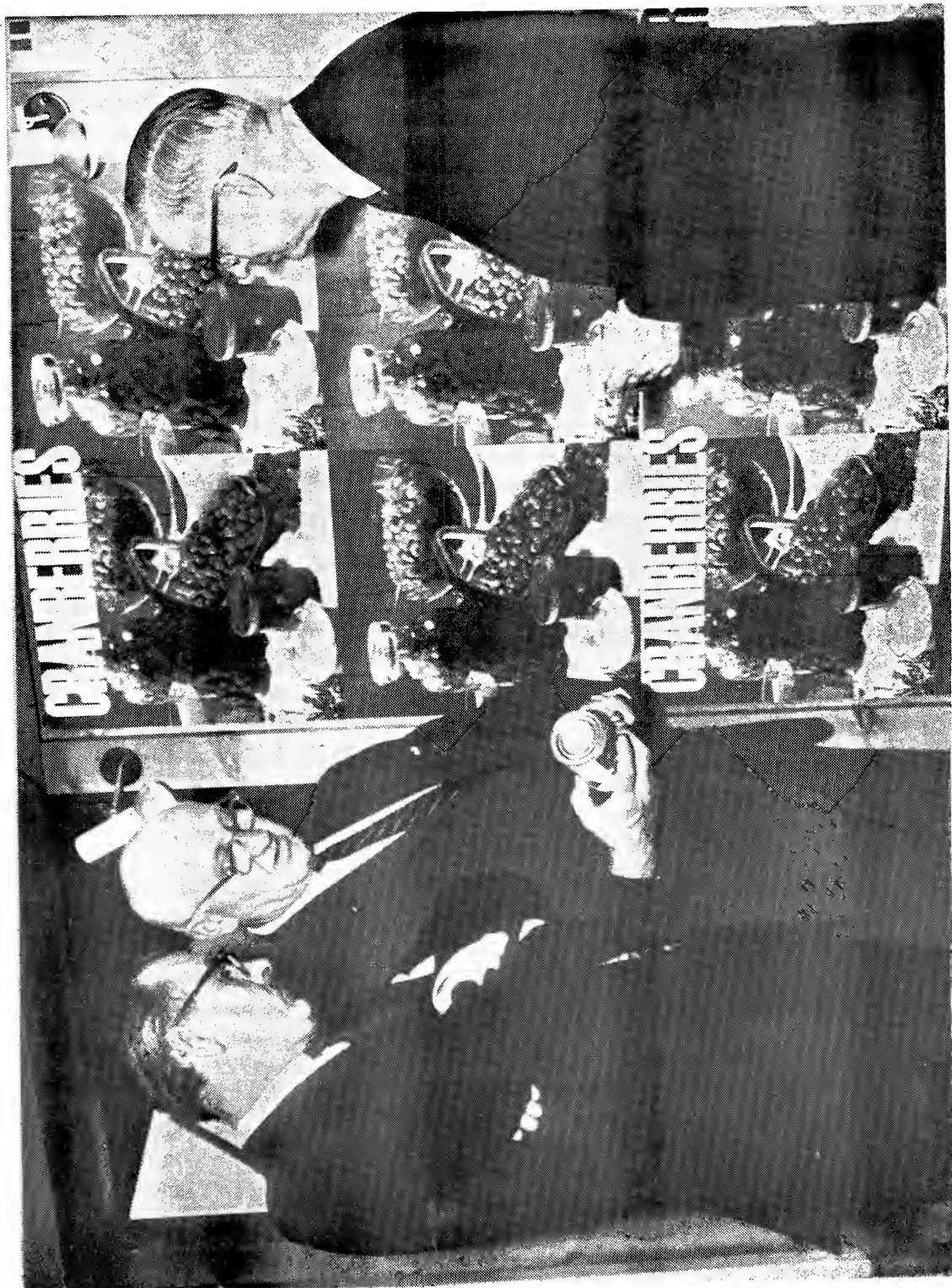
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LEADING NAME IN SPRINKLERS FOR OVER 50 YEARS



Orrin G. Colley, second from left, president Cranberry Institute, Malcolm Sheriff, left, trade specialist, Dr. P. J. Findlen, assistant agricultural attache of the USDA Trade Center, visit the cranberry stand at the Catering Exhibition at Olympia, London.
(Photo Paul Wilson, London)

Of Interest To Fishermen

Anything new on the daily horizon—whether it's the "twist" or some development in the fisherman's paradise—often awakes a surprisingly large market.

Now Agricultural Market Service researchers have come up with something of a novelty; it's instant fishbait, which has shown an unexpected appeal. In fact, it appears to be lightening the fisherman's heart second only to the thoughts of instant money.

Nothing could have been farther from the researcher's intentions when they studied how to control the mealworm, an insect smaller than a paper clip. To the uninitiated, mealworms are the larvae of certain beetles that insect granaries, bakeries and so on—and are injurious to flour and meal.

But, since mealworms are considered a tasty morsel by many fish, the researchers began getting inquiries—not only on how to control the insects—but also on how fishing enthusiasts could raise them.

When the researchers issued a leaflet describing how to control the mealworm they also included information on how to raise a colony large enough to supply an average fisherman's needs whenever he gets the urge to take off for the old fishing hole.

Easy-to-follow instructions tell how worms. And it's as simple as casting a line; all it takes are scraps of lumber, a few nails, and a thin sheet of aluminum from the hardware store.

The leaflet "Mealworms" tells where to find the insects needed to "pioneer" the colony. Some wheat bran, a little graham flour, and

commercial dried meat scraps—an occasional piece of carrot, potato, or lettuce—plus a couple of handfuls of mealworms, are all that's needed to get started.

The results: inexpensive, instant fishbait, conveniently available whenever the lure of fishing brightens the day. Single free copies of the revised mealworm leaflet, No. 195, may be obtained from the Office of Information, United States Department of Agriculture, Washington 25, D. C.

READ CRANBERRIES

FROST CONTROL TEMPERATURE CONTROL SPRINKLER IRRIGATION **SHUR-RANE SOLID SET SYSTEMS**

These minimum gallonage systems are ideally suited to meet the needs of the Cranberry grower. The special 1½" and 2" solid set couplers are designed for use with light weight, low cost aluminum tubing.

Wide, flat foot pad keeps sprinklers upright—easy twist-of-the wrist coupling action. Conventional portable and automatic Sequa-Matic Shur-Rane systems also available.

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JOHN BEAN DIVISION

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REDUCE LABOR COSTS AND IMPROVE FRUIT QUALITY WITH FROST PROTECTION BY FMC TROPIC BREEZE WIND MACHINES

Tropic Breeze Wind Machines have been widely used in citrus groves and orchards. They are a thoroughly proven piece of equipment. And now they have been shown to be highly effective in cranberry marsh frost protection.

One man can efficiently operate one or several wind machines, saving the labor costs of a whole crew required for flooding. Protection is fast too—beginning in 3 to 5 minutes after the machine is started.

In addition, an authoritative report recently released indicates that Wind Machines substantially reduced the number of floods. This brought improved quality and yield over marshes where Wind Machines were not used.

Wind Machines have also been found ideal for protection of blueberries and other bush fruits.

FMC Tropic Breeze Wind Machines are available in a variety of models to meet your requirements. Get all the facts—fill in the coupon and mail it today.



FRESH FROM THE FIELDS

Continued from Page 6

first above normal readings in this department since April 1943. Most areas had from one half to three quarters inch above normal. The heaviest amounts over the largest area occurred in a eight inch snowfall on the 25th. For the year however the deficient in precipitation is about one inch. Temperatures averaged about two degrees above the normal marking the third straight month that temperatures were above normal. The outlook for April calls for the continuation of above normal temperatures and normal precipitation.

But Water Supplies Still Low

At months end the entire state was covered with snow, ranging from two inches in the extreme south to twenty inches in the far north. Frost depths were starting to surface thaw during the month and several inches were reported out of the open fields and very little in the woods. It was quite a contrast to a year ago when the snow melted rapidly the latter part of March, but frost depths were deep. Fortunately most of the precipitation that occurred soaked in the soil and there was no flooding. Sub soil moisture deficiencies remain low and ground water supplies several feet below normal. Storage reservoirs along the Wisconsin River are reported at an all time low and river flow at this time is only half of normal.

Probably No Serious Winter Kill

Considerable vine exposure occurred during March, but most marshes reflowed the exposed tips. Shallow frost in the beds themselves will probably prevent any serious winter killing of vines. The heavy snow prior to the severe cold of the 29th covered all exposed vines. Growers were expected to be careful in pulling their winter floods until sufficient frost was out of the vines.



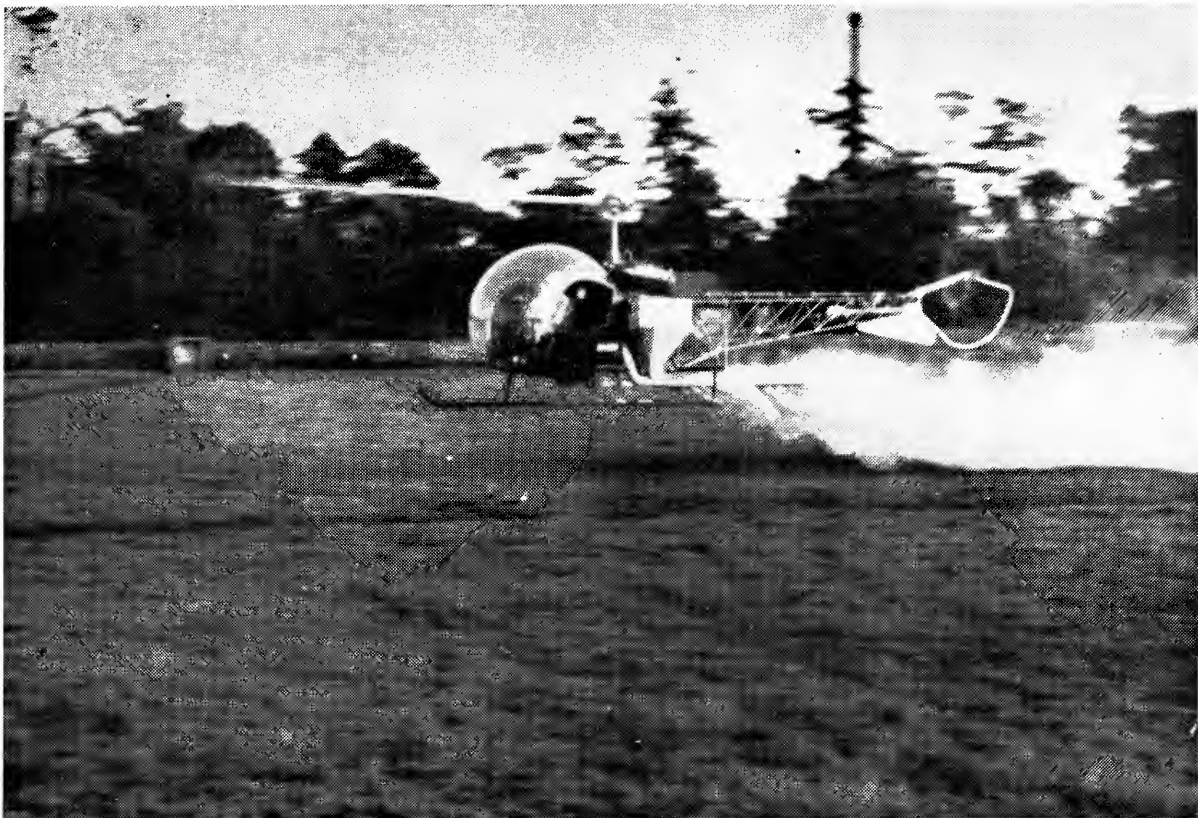
FMC CORPORATION, FLORIDA DIVISION
FAIRWAY AVENUE, LAKELAND, FLORIDA

- ☐ Please send me sales literature on Tropic Breeze Wind Machines
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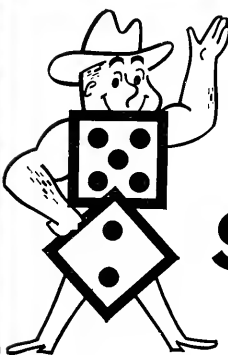
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Cranberry insects?

SOCK 'EM with SEVIN[®]

INSECTICIDE

New, effective and safer-to-use SEVIN insecticide is ideal for control of major insect pests that attack cranberries. Use SEVIN in the late blossom period and again whenever insects attack. SEVIN destroys cutworms, fireworms, fruitworms, Japanese beetles and leafhoppers, including the leafhoppers that spread false blossom disease.

The long-lasting residue of SEVIN assures continuing kill of insects between applications.

Even in the hottest weather, SEVIN residues provide long-lasting results.

Safer-to-use than many insecticides, SEVIN is low in toxicity to humans, livestock and fish. Spray or dust operators, using SEVIN, do not require special protective clothing. They only need to observe simple precautions. Workers can return to the bogs soon after application. SEVIN is effective in concentrate or dilute sprays and dusts.

It will pay you to use SEVIN this year. Ask your supplier for SEVIN now. Or write Union Carbide Corporation, Chemicals Division, 270 Park Avenue, New York, N. Y. 10017



**AGRICULTURAL
CHEMICALS**

Chloro IPC

the new answer to dormant weed control in Cranberries



Chloro IPC, a time-tested herbicide made by the Chemical Division of Pittsburgh Plate Glass Company, can now be used on dormant cranberries. This is good news to growers who need an economical way to control annual grasses (bent grass, annual blue grass, turkeyfoot grass) as well as such weeds as rushes, horsetail, velvet grass, loosestrife, tearthumb and certain others. Chloro IPC is applied while the plants are dormant. It is completely dissipated before the fruit ever appears, so there's no residue problem. Chloro IPC is among the least toxic of all commercial herbicides.

Thorough field testing of Chloro IPC on cranberry bogs in Massachusetts, Wisconsin and Washington has developed local experience and recom-

mendations suited to each area. PPG Chloro IPC is easy to apply in the form of 20% granules, 100 lb. to the acre during November or December after harvest. A repeat application in early spring before cranberry growth begins will give further control of annual weeds. Ask your experiment station personnel at the state university for local recommendations on use of PPG Chloro IPC. Write for more details and your local distributor's name to: Pittsburgh Plate Glass Company, Chemical Division, One Gateway Center, Pittsburgh 22, Pa.

 chemicals

AN ALARMING PROSPECT

A situation, alarming, not only to the New Jersey cranberry industry, but possibly to other growers lies in the proposed acquiring by the State of cranberry property. The acquisition would be for the so-called "Green Acres," or providing of open spaces for the public.

This is being fought by the American Cranberry Growers' Association and by the New Jersey Farm Bureau. Active in the fight are such staunch members of the industry as Edward V. Lipman, Walter Z. Fort, and Phillip E. Marucci, the latter not a grower but secretary of the ACGA and operating the New Jersey Cranberry and Blueberry Station. Also the veteran grower J. Rogers Brick.

It is estimated the state may lose one-third of its present 2600, and in terms of potential lose more than one-half. There are seven processing plants utilizing cranberries in New Jersey.

The above is not intended to imply that Jersey growers are opposed to "Green Acres," and open spaces. In fact, they favor this, and think this is being achieved in South Jersey, by maintaining cranberry bogs and reservoirs. Moreover the growers are optimistic and are anxious to expand bog acreage and not to retrench.

A FOREIGN MARKET — INSURANCE

There seems to be a rather general feeling within the cranberry industry that the surplus problem in the cranberry market is being "licked." And, if this is true, it is cause for rejoicing.

But, it is now not anticipated there will be any cranberry school lunch this coming fall as there has been for the past two or three years if cranberries are taken off the surplus products list of the United States Department of Agriculture, as they probably will.

Yet, it may be anticipated that there could be a cranberry crop of perhaps 1,400,000 barrels this fall to be disposed of. Just suppose the domestic market can take care of no more than 1,100,000 barrels. This, even though we may expect a constantly-growing market for cranberry juice cocktail.

CLARENCE J. HALL

Editor and Publisher

EDITH S. HALL — Associate Editor

Wareham, Massachusetts

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Director Mass. Cranberry Experiment Station

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New Jersey

P. E. MARUCCI

New Jersey Cranberry and Blueberry Station

Pemberton, New Jersey

Where is the remainder of the crop going? If, there should not be a market for quite all the berries we can grow, it would be reassuring to have a foreign, and particularly European market for some of this fruit. That is what the Cranberry Institute is trying to develop, for now and future years. We believe this effort merits the interest and support of cranberry growers.



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Ocean Spray News

PUBLISHED MONTHLY

BEST CRANBERRY DISH OF THE YEAR CREATED BY PETALUMA, CALIFORNIA COOK

Although cranberries do not flourish in the Sonoma Valley of California, good cranberry cooks do, according to the results of a nationwide contest to find the Best Cranberry Dish of the Year. Mrs. Elmer J. Starke won the Grand Prize of \$2,500 for her recipe of Ham Loaf with Cranberry Meringue Frosting. It topped more than 10,000 recipes entered in the contest from all parts of the United States and Canada.

The contest was first announced last October, as soon as newly harvested cranberries were in the stores, and each contest entry was accompanied by the Ocean Spray trade mark from a bag or box of cranberries. The Arthur Godfrey Show carried the contest on 209 CBS stations and the Don McNeill Breakfast Club on 317 ABC stations.

Contest judges have been cooking and baking ever since the close of the contest, January 31st, and have just narrowed down their selections to 126 winners, divided among 40 states, including Hawaii and Alaska, with one winner in Canada.

CRANBERRY MERCHANT PRESENT PRIZE

Ocean Spray Fresh Cranberry broker, James Hunt of Grant J. Hunt in Oakland, California, travelled to the egg capital to present the top prize to Mrs. Starke at her home on April 20.

Each of the five cranberry growing states had winners. Wisconsin did the best with 8 winners, New Jersey had one, Oregon and Washington had two apiece and Massachusetts had three.

The State of California had the Grand Prize winner and 13 others and Texas was in second place with 11 winners.

There are 4 men among the winners. They came from Tennessee, New York, Kentucky and Georgia.

WISCONSIN IS TEST STATE For FRESH FROZEN BERRIES

Because consumers often ask, "Why can't we get frozen cranberries on the market," Ocean Spray is currently testing a 1 pound package of Quick Fresh Frozen Cranberries and chose the state of Wisconsin for the test area.

The first shipment of 30,960 pounds of frozen cranberries were sent from Massachusetts at Easter time, concurrent with a barrage of information and serving suggestions for the press, radio, TV, teachers, home economists and women's clubs.

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JACK DEAN, A Leading grower in the Bandon, Oregon Area.
(CRANBERRIES Photo.)

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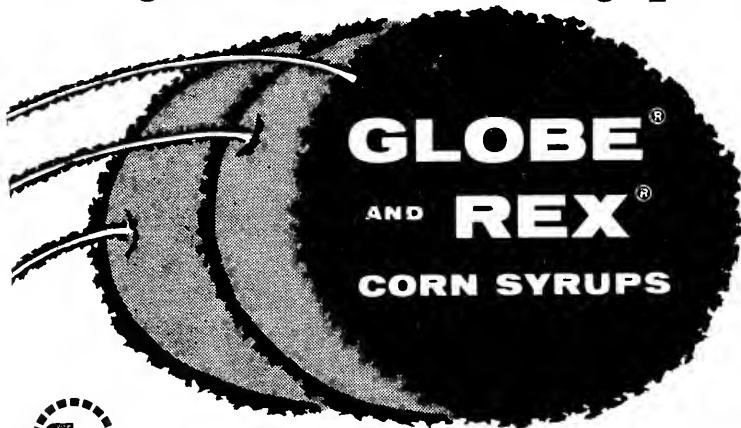
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Southern Oregon's "Black" Beaches Rich Mineraally

Coos and Curry counties, where Oregon growers are "mining red gold," as cranberries have sometimes been called, now seem about to mine the black coastal soils, which may have a sort of golden lining. This is according to the Western World, Bandon newspaper, the basis of a mining report. Some of this mining of the dark sand of the beaches was done during the last war, giving a basis of experience.

The future in mining the beach sands was called "very bright." It is the beach sands of Southern Oregon that are rich in industry type materials, and not those in northern Oregon, or Clatsop County, where cranberries are also produced.

The "black" sands contain chromite, zircon, garnet, rutile, magnetite, ilmenite and manazite to name the major ones, and also even precious metals such as gold and platinum. These minerals come from the wearing down of the Klamath Mountain whereas the Clatsop sands are mostly iron ore from Columbia river gorge erosion.

The report said that one mining expert when questioned as to how soon this mining of the black sand might start, said; "We are right on the edge of when this can be done economically, think within five years."

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Mass. Cranberry Station and Field Notes

by Prof. William E. Tomlinson

April in the Cranberry growing area of Massachusetts was a disagreeable month with cool cloudy, showery or rainy weather prevailing most of the month. Precipitation shut off on the 24th, however, and at the time of writing (May 12) serious forest fire danger prevailed because of dry conditions. Bogs have not, however, suffered from lack of moisture.

There was no frost injury during April, in fact it was one of very few Aprils when no frost warnings were sent out. George Rounsville started watching and taking readings on the 15th, and the answering service went into operation on the 20th.

Do You Have Gall Enough?

Incidentally, it is still not too late to contribute toward the expense of the answering service, which amounts to about \$100 for the frost months. This expense is now borne by the Cape Cod

Cranberry Growers Association and the subscribers to the frost warning service. If you have the gall to use it and not contribute, examine your conscience, get out your check book, and send your contribution to Mrs. Ruth Beaton, Treasurer, Cape Cod Cranberry Growers Association, Jefferson Shores, Buzzards Bay, Mass.

Pesticide Rules

Cranberry Growers should realize that the Rules and Regulations of the Massachusetts Pesticide went into effect on March 13, 1964. All of the provisions, except 8 on licensing and 9 on record keeping, apply to farmers as well as commercial applicators. A copy of the Rules and Regulations can be obtained from the Massachusetts Pesticide Board, Department of Public Health, State House, Boston, Mass. It would be worth your while to obtain a copy and familiarize yourself with it because you could be subject to up to a \$100 fine for the first violation, and up to \$500 for any subsequent ones.

Pesticides, according to the Rules and Regulations, are any

substances intended for preventing, destroying, repelling or mitigating any insects (insecticides), rodents (rodenticides), nematodes (nematocides), fungi (fungicides), weeds (herbicides), or other forms of plant or animal life or virus, and any substance or mixture intended for use as a plant regulator, defoliant, or desiccant.

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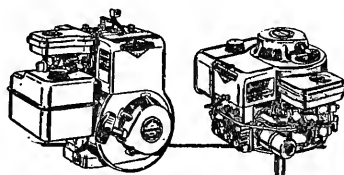
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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of May 1964 — Vol. 29 No. 1

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FRESH FROM THE FIELDS

Compiled by C. J. H.

NEW JERSEY

April Was a Wet Month

Precipitation during the month of April was 2.80 inches above normal, as compared with .67 inches last year. Total rainfall through April was 15.34 inches above the average as compared with last year of only 9.55 inches.

Also Was Cold

The average temperature was 2.2, 2.7 less than normal. The highest temperature was on April 3 (as in Massachusetts), the only day of the month of more than 60 degrees. On April 2nd the minimum temperature was 18 degrees, the coldest in April in the 35 year's history of the Cranberry-Blueberry Station at Pemerton, with the exception of 15 degrees on April 8, 1956.

WASHINGTON

Growth Well Started

Cranberry growth was well started by the first of May. A few tips were in the rough-neck stage. It was the critical frost period. Past experience has shown that this state often gets much more injury from frost temperatures than when the buds

are on the "pop-corn" stage later on than when they are in hook. Our sprinkler systems had been on ten times during frost nights in April.

6 to 9 Hours of Sprinkling

On the colder nights the systems were on for 6 to 9 hours. Most are started at 34 degrees and continue in operation during the period until the temperature of air returns to this level. Most of the cold nights followed clear, warm days when no cloud was present.

The maximum temperature for the month was 61°F. on the 19th. Temperatures were only above 55 on five dates. The mean maximum was 51.4, and the minimum mean was 35.3 degrees.

Month Dry

Measurable rain was recorded

on 21 days.

Much Bog Work

There is a lot of bog work going on . . . much of the business was planting new acreage and applying herbicides, fertilizer, and so forth.

Most of the budding looked fairly good, so a good crop was being looked for.

New Ocean Spray Warehouse

Ocean Spray's new warehouse at Long Beach was completed, except for the installation of the grading and cleaning equipment. All the berries from the Long Beach area will be bulk handled this year and cleaned at the plant.

MASSACHUSETTS

April a Cool Month

At the middle of April the weather turned somewhat warmer, but it remained a cool month.

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There were two or three slashing rain storms, not at all in the usual Cape Cod tradition that "April Showers Bring Forth May-flowers." The month ended with a minus temperature of 10 for the 30-day period.

April of 1964 went down as the coolest April in three years,

according to the Boston Weather Bureau. This despite summer heat on the 18th, with temperatures into the high 70's and low 80's.

April a Very Wet Month

The month ended with a total rainfall of 5.87, as recorded at Massachusetts State Bog. The

normal is 3.85 inches.

May Started Cold

May also began cold, but with vines still behind normal development no general frost warnings were sent out by George Rouns-ville of the Station for the first week. This, despite the fact there were white frosts. Also although early mornings were foggy, the woodlands were get-ting rather too dry.

The dry conditions which had caused several woods fires, were alleviated on the night of May 1: when there was some rain. How-ever, precipitation, as measured at the Cranberry Station, was only .14 of an inch.

WISCONSIN

Highest Winds

Weather was again the bi-newsmaker in Wisconsin. This time it was two consecutive day of the strongest winds ever re-corded in weather bureau history. They occurred on April 6th and 7th with winds clocked up to 8 miles per hour in the wester-marshes. Exposed vines with root systems frozen in were prime targets of the dessicatin winds causing considerable dam-age in some isolated instances. The month as a whole was slight-ly above normal in temperature and also in precipitation, which was all in the form of rain. The weather outlook for May cal-culates for temperatures to be about normal and precipitation to exceed normal.

Winter Floods

The winter floods were pulled in the south about April 10th and in the north on the week of the 19th. With the exception of those marshes who were unable to re-flow exposed vines, most of the vines appeared to have come through the winter in good shape. There was a pronounced lack of deer frost in the beds, as was expected due to the mild winter Wisconsin experienced.

Spring Work

Growers were busy fertilizing, combing and pruning at month

Continued on page 26

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CARVER, MASS.



OREGON is the only state which still has a "Cranberry Harvest Festival." Here is a scent from a recent event, a girls' riding contest. This is tag race with the baton being passed from rider to rider. (PHOTO, Courtesy of Western World, Bandon.)

Bandon-by-the-Sea is Center of the Growing Cranberry Industry in the State of Oregon

The Region Is the Home of Many Firsts — Generally-Approved Picking Machine, Now the Water Reel Picker, Aluminum Dikes and Terraced Bogs.

by
Clarence J. Hall

Oregon and the Bandon area in Coos County, down near the southeastern corner of that state, which has an ever-changing coast line of about 400 miles, was the last place visited on our West Coast trip, but by no means the least interesting. Leaving Astoria, that most attractive city at the Oregon mouth of the Columbia, the city where commercial enterprise—fur trading—was begun in 1811 by John Jacob Astor, Mrs. Hall and I flew to Portland and from that "City of Roses," across and down the wide and extraordinarily-fertile valley of the Willamette, between the High Cascades and the low Coastal Range to the North Bend-Coos Bay airport where we were met by Jimmy Olson, Ray Bates and Jack Dean and taken to "Bandon-by-the-Sea."

It was near North Bend, at a place called Hauser, that the first planting of the American cranberry of commerce, west of the Rockies was made in about 1885 by Charles Dexter McFarlin, a cranberry grower of Carver Massachusetts. He shipped out some of the vines from his native town, a vine which bore the McFarlin name as a variety and is today the berry so widely planted along the Pacific Coast. This bog at Hauser, now operated by Mr. and Mrs. Frank O. Zorn is still bearing, but was not visited on this trip as stories of

the bogs and the Zorns have previously been published in Cranberries.

The water reel method of harvest, growing in use on the Coast, now used very extensively in New Jersey the past two years, by a few marshes in Wisconsin and experimentally in Massachusetts, was developed in Oregon at Bandon. This, although Oregon did not even become a state until 1859, long after cranberry growing was well under way in Massachusetts and New Jersey and just about to start in Wisconsin in a small way.

The First Water Reel

The first reel was made by Sumner Fish from an idea developed by the late "Joe" Stankovich. The next one was made by Jimmy Olson, who has made several others since, these being improved as more experience indicated they should be. Incidentally, today Olson says there is another picking machine in the embryo stage, a new type of water picker and also a dry picker. Also there are experiments with two types of pruners and a different method of screening.

Now several Bandon and Bandon area growers are "terracing" their bogs on a slope of land, so that scanty water may be used more than once on a lower level for harvest. These growers also find that it is cheaper to leave an area out of level by dividing it in small sections, permitting one small area to remain much higher than others at a lower level on the same area it is planned to develop into bog. The water is dropped through small gates.

Aluminum Dikes

A few years ago some of the growers started to experiment with making dikes of aluminum. It was believed that dikes of earth took up too much space, for one thing. These growers regard dirt as fine for outside ditches but not for cross. Only perhaps about a foot of space is sacrificed when aluminum is used. This can also be put in a straight line or curved when desired. As to dikes of wood, they long-lasting partitions of growers not, aluminum alloy does not.

The relatively inexpensive and using the aluminum enable them to water pick areas which they otherwise could not flood. As to the terracing it is said that if the ground is say 10 feet out of level in 500-600 feet lot of earth would have to be moved to obtain a single level. So, the theory of these growers is to make the bog in three or four sections, and by so doing move less dirt and to build the bogs more economically.

This article will not concern the four or five growers of Clatsop county on the Oregon side of the Columbia; one the Dellinger property of considerable size having been discussed in previous articles. Again these Clatsop growers are more closely allied with those of Pacific County in Washington and in a list of Washington growers compiled by Ocean Spray, they are listed in one section with the Washington growers. Clatsop is the Oregon scene of the end of the explorations of Lewis and Clarke who wintered their expedition at Seaside, not far from the bogs of Clatsop.

First Picking Machine

It was Oregon which gave the cranberry industry the first picking machine which came into general use, as it developed into the Western Picker; this invention changing harvest from human to mechanical picking. The first machine was developed in the Bandon area by the late Joe Stankavitch; then improved by

Rudy Hillstrom and brought to the East in the 1940's.

Cranberry History

After the McFarlin bog was built in 1885, according to "A Survey of Oregon's Cranberry Industry," 1957, Dr. F. B. Chandler) no more bogs were built until 1905 as far as Chandler could ascertain. From 1906 to 1925, 8 bogs were started. From 1926 to 1945, Chandler reported about 179 acres were started by 43 growers. The greatest number of acres were started after 1945 and after Ocean Spray had begun operation on the West Coast. During the decade, of that time 87 growers started bogs totaling slightly over 277 acres. "Sixty one percent of the present growers," he wrote, became interested in cranberries during the last ten years and have built nearly 53 percent of the acreage now growing cranberries. In 1962 Oregon (USDA) had 41 harvested acres. Its production was 28,000 barrels and the state yield per acre was 81.1 barrels.

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EASTERN STATES FARMERS' EXCHANGE

Production per acre reached 89, although many growers on individual bogs and portions of bogs far exceeded that.

Today, using Cranberry Institute figures Oregon growers total 135. When I made my first trip to Oregon I found only 250 growers on the entire Coast with the big majority in Washington, so the number increased in the 1950's and since then there has been decline in numbers, as is true in every cranberry area.

There are no "big" bogs or "big" growers in the "Bandon Area," which is mostly Coos county, although bogs extend south into Curry. The largest holdings are not more than about 18 acres. Some growers have achieved the status of being full-time cranberry men; most have not, but must still work at other occupations. To become "full-time" is the goal towards which many are working, as well as to increase production per acre and to grow better quality for the fresh fruit market.

The larger growers of the Bandon area with about the same acreage and production would include (not in order) the Kranicks, Charles St. Sure, Curt Simpson, Jack Dean, Jack Windhurst, Frank Ison, Carl Incram, Jimmy Olson and Ray Bates.

The total acreage of the "Bandon area," as listed by "Bill" Bufort of Ocean Spray as 552.92. Of this 527.42 is in McFarlins, 1.50 in Howes, 16.00 in Stankovich; 1.00 in Centennial and 3.00 in Searles.

About 75 percent of the crop is harvested by the water-reel. About 5,000 barrels of the crop has been shipped as fresh fruit; the rest going to Markham in Washington to the Ocean Spray plant for processing. The high fresh pack has been actually 400 barrels.

We believe we found a strong desire among some growers to grow better quality and to increase the fresh pack—this is certainly being encouraged by Ocean Spray.

Harvest in the area of Oregon



ERWIN L. RICHERT, Sr.

CRANBERRIES Photo

generally starts around September 25th and ends about November 25th, a long harvest season.

Of Bandon area acreage about 70 acres are new plantings. The average holding in acres is about $4\frac{1}{4}$ and perhaps the average production per bog is 360 barrels, that is over a period of years.

Average Production

Average production (1951-1960) has been 32,490. Production per acre for the same period has been 66.5 and the high production per acre was reached in 1961 which was 81.1 barrels.

Bandon Itself

Something about Bandon, itself, the heart of the Southwest Oregon cranberry growing. Bandon is not large, a little more than 1600 in population, but it is an incorporated city. The first time we visited Bandon was only a few years after the gigantic forest fire which all but destroyed the place, with considerable loss of life in 1938. Bandon had been more rebuilt during our second visit in 1949 and today the city has progressed much farther.

Bandon beach is a fine one, intriguing in beauty with the fan-

tastic rock formations, surf at Bandon Harbor, the harbor being the mouth of the Coquille River; in the harbor there being lumber ships, off-shore trawlers unloading catches of salmon. Bandon produces butter and cheese; it is the home of the famous Croft lily; also the more famed myrtle wood is on display for sale there; "Agate hunting," on the shore is one of the prime "rock hound" attractions, and there is an inexhaustible supply of driftwood in all shapes and sizes.

Bandon is the one cranberry region which still has its "cranberry harvest festival," a big event there each fall.

A visitor to Bandon will be taken to the oceanside to see "Inspiration Point," espically when the sun is setting into the Pacific; he will be taken a short ways up "over the loop," where Bandon has a number of most modern and beautiful homes; its modern hospital, its modern school, past the Ocean Spray plant, supermarkets, a saw mill and back into town.

There is no cranberry experiment station in Oregon, but Fred Hagelstein, County Agent of Coos, located at nearby county-seat Coquille is working with the growers and research is also being provided by the Oregon State College at Corvallis.

Cranberry Club Active

The growers have organized a sound Southwestern Oregon Cranberry Club of which, as this is written, Jack Dean is president, the other officers being, Mrs. Fern Peterson, vice president, Mrs. Evelyn Bowman, secretary-treasurer; with Floyd Shortridge, (chairman) H. H. (Pete) Hull, Irwin (Butch) Richert, Carol Hull, who acts as secretary making up the board of directors.

These same officers and directors make up the local membership of the West Coast Advisory Board of Ocean Spray, the functions of which body has been explained in previous instalments.

Jimmy Olson has been a director of Ocean Spray for the past 15 years, and is the oldest director of the co-op in point of years

of service and can keep Bandon area growers informed of the doings of the company. Dean has been a director and Ray Bates was a director of Eatmor Cranberries, Inc. when that co-op was functioning.

Lanky, hardworking William T. (Bill) Dufort is manager of the Ocean Spray plant at Bandon, where berries are stored and handled, and he is active the year around as an official of Ocean Spray giving growers cultural and other advice and assistance. His daughter, Mary is the "star" reporter and excellent photographer on Bandon's weekly, "The Western World," which prints considerable cranberry news; and the writer might add that all growers receive copies of Cranberries Magazine through the rurrent Cranberry Institute Group subscription, and in many homes visited it was found that scrap books of Cranberries Magazine clippings were kept. Bandon may be far from the main cranberry stream but growers are well informed of all cranberry matters.

Route 101, the U. S. portion of which runs down the entire extreme edge of the Pacific Coast from Canada to Mexico passes through Bandon as it does through Grayland. Bandon, being a resort seacoast town, it is needless to say does a thriving summer and tourist business, just as do Grayland and Long Beach in Washington. This summer business accounts in part for the year-round income of some of the cranberry growers and the other year-round residents. Busses run through Bandon and the Coos-Bay airport of the West Coast Airlines is not far.

Growers Hard-Working

There is no question but that these Oregon growers have been and for the most part are, extremely hard-working in their cranberry growing; they work at all hours, and is not rare for a wife or other member of the family to do much of the weeding, especially, and other work, although perhaps not quite as much as was the case a few years ago.

There are several women, who

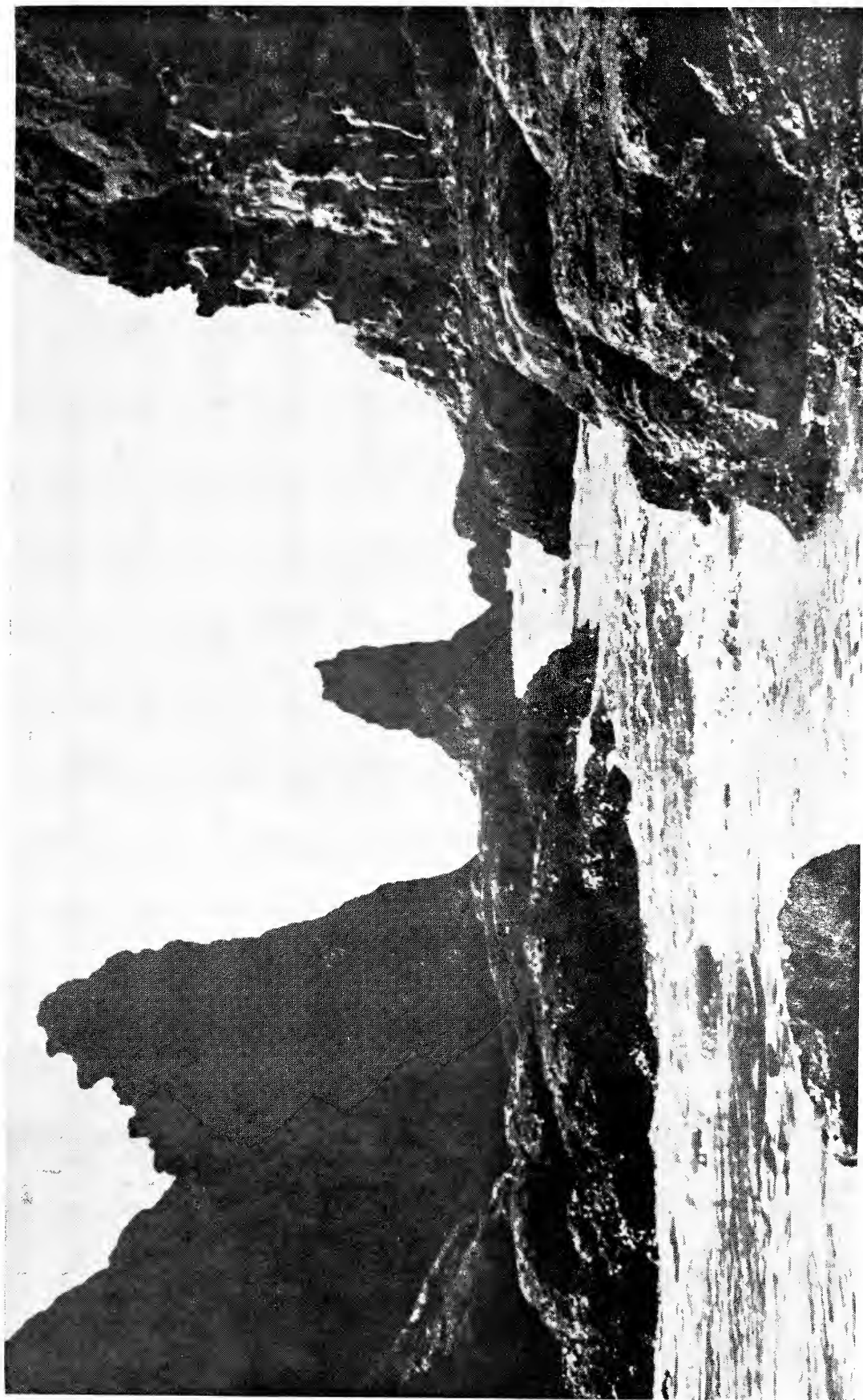
are growers in their own right. One is Mrs. Pearl Tucker, a courageous woman who was left a widow to continue cranberry growing. We visited her just before dusk one evening at her holding on Rosa Road, being taken there by Olson and Bates. She has a small bog enclosed by a high "deer" fence and is putting in two new pieces, each of 2½ acres, clearing the new sections and installing sprinklers on part of her property.

In 1962 she had 352 barrels on 3½ acres, in 1961, 489.

We found Mrs. Tucker, hard at work, putting on a fungicide. She was grimy and would not shake hands as she said her hands were dirty. She was extremely friendly but complained, as cranberry growers often do that "this was one of those days when everything goes wrong." She was having trouble with the spray pump, nozzles clogged, and so forth. (Jimmy Olson fixed the pump while we talked. She then said she could use a mechanic or a foreman and someone asked her why she didn't re-marry. She replied "I've got enough trouble now, without having a man around." And since we three were all married there wasn't much we could reply to her, but somehow Mrs. Hall seemed to find it rather amusing. As we drove off, a almost full dark she went back to her spraying. Such determination as hers obviously will grow cranberries, or accomplish other things in other walks of life.

Not Much Winter Flooding

Although some Bandon area bogs ran be flooded, the water being held in by narrow, low dikes of wood or earth, not many are winter-flooded. For sprinkler use some growers lift water many feet, a number as much as 40, a few 100 feet and one as much as 200. Dr. Chandler reported in his Oregon survey. He found that 70 percent of all growers used sprinkler irrigation and this covered 73 percent of all bearing acreage. This percentage has increased since then and is still increasing. During the "heats" of summer many Southwestern



Treasures of sea life and beach "booty," (driftwood) attract visitors and residents to picturesque Bandon Beach, so different from the beaches of Coastal Massachusetts and New Jersey. (Photo by Warren Strycker, Western World, Bandon.)

Oregon growers irrigate several times a week.

As to sandin or not sanding, this does not seem to be so regularly practiced as in the East or Wisconsin.

Perhaps Oregon growers do not have quite as much of a problem with insects and possibly fungus diseases as in some other areas; the worst insects are fireworm, cranberry girdler and black vine weevil. The most common controls are DDT, malathion, parathion. A rather serious disease is tip blight the most common used being captan, ferbam, Bordeaux mixture and sulfur, the latter two to small extent. More fungicides have been used in the past year or two than ever before indicating the desire to produce more quality fresh fruit.

There is no air application, fertilizers being broadcast, and by spray rig or some through sprinkler systems. There is no, or little bog track used in Southern Oregon as at Long Beach and Grayland in Washington.

Weeds A Problem

Weeds as everywhere are a problem, despite the fact that most Oregon bogs are kept unusually clean. Some of the worst are dandelion, horsetail, astors, ferns (braken) loosestrife, running tussock, bent grass, sorrel and nuthead. Adding to the weed trouble is the fact that weeds and spring flowers come early to Southern Oregon, which, after all is not too far from California, and the Bandon area is only a relatively few miles north of the mighty "Redwood Empire," which incidentally we passed through by bus after leaving Bandon. Palms grow in Bandon area; there are bamboo groves and rhododendron is everywhere, wild and cultivated. There is also the madrone, a tree grotesque in shape which sheds its bark and not its leaves. Flowers bloom in February and weeds and grass grow all the year.

All growers have their berries screened for delivery to Ocean Spray for processing. There are some commercial screening plants

owned by some growers to take care of those who do not have these facilities. Fruit for the fresh market is creened by Ocean Spray at the Bandon plant.

Many of the Bandon area bogs do not have marginal ditches. Margins are mostly of earth and some have these boarded and also boarded cross ditches. Some of the Coos County bogs are not planted on peat, according to Dr. Chandler, but a considerable number of plantings have been on podzolic soils. This soil is gray in color and Chandler found it to be a leached layer of soil and very acid, looking something like ash. This is sometimes referred to as "Upland Peat," but Chandler says there is actually no peat in this soil.

A High Terraced Bog

One example of this podzolic soil is on one of the greatly-terraced bogs on a hill-top, or actually a slope, according to Olson. This is a bog owned by Erwin L. Richert off Two-Mile road, not far from Bandon, the location being about 600 feet above sea level and about three miles from the ocean. It is a property of four acres in six sections, the second section from the top being eight feet below and the final section 12 feet below. The terraces were for flooding purposes. The object in building on the slope was said to be because of weather conditions, less frosty, less weeds.

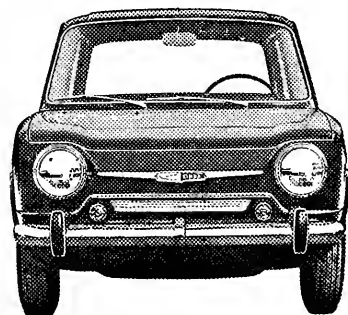
To get to this property Olson drove us up a dirt road, winding, through trees and almost tropical foliage with immense quantities of rhododendrons, having to shift to low gear several times to make the grade. The dikes were of earth and sand, with outlets for the water to drop down to sections below and on that day Mr. Richert and a friend, "Bill" Bowman were installing pipe for a sprinkler system.

Erwin owns about 80 acres of land on a slope and this is not far from a ranch of about 1400 acres. He is engaged in cattle and sheep ranching and also is a logger. He has a son, Erwin L.

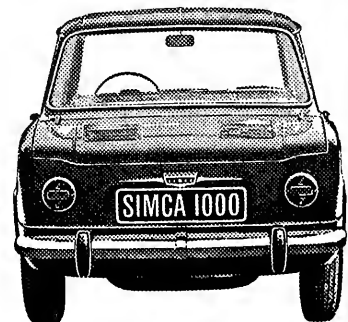
the Second who has three bogs and is a member of the Ocean Spray Advisory Board for the Bandon area. Many of the elder Mr. Richert's friends are cranberry growers and this was probably a contributing factor in his decision to build a bog.

At present he has four acres, but owns property suitable for about 30 more. He has been making the bog for a little more than three years. His water supply comes from a creek in a canyon 75 feet deep.

The average rainfall at Bandon is about 65 inches, much less than the enormous rainfall at the Long Beach area, more than the



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average 44.31 in Massachusetts and the average of 43.16 at Pemberton, New Jersey. The greater part of this precipitation falls from November through May and summers can be dry. There is very seldom ice or snow in Southeastern Oregon.

Spring Frosts Worst

Spring frosts start in March and can continue into July. Ray Bates, who is a U. S. Weather Bureau Observer at Bandon estimates the average number of frosts at about 20, with relatively few in the fall. Temperatures however, rarely get to 90 in the summer and hail is not often a problem.

Will Area Grow?

Will the Bandon area grow in acreage and production? Some insist it will; certainly the areas of Coos and Curry counties to the South, all of which is included in the so-called "Bandon Area" have grown from a slow start. Some are inclined to attribute a slight "cranberry boom" evident in the district. Probably the best conclusion to draw is

that there will be no rapid advance in either acreage or perhaps much in production—as elsewhere generally in the industry—(again with the probable exception of Wisconsin) until better returns are coming in to the growers.

It is to be noted that the most rapid advance was in certain years of the 1940's when cranberries were selling at the high prices.

Subsequent Bandon articles will deal with a few individual growers, the development in aluminum dikes and the "terraced bogs."

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CRANBERRY DISH WINS \$2,500 PRIZE

40 States and Canada in Ocean Spray Contest

Although cranberries do not flourish in the Sonoma Valley of California, good cranberry cooks do according to the results of a nationwide contest to find the Best Cranberry Dish of the Year. Mrs. Elmer J. Starke of 517 Fourth Street, Petaluma, was presented the Grand Prize of \$2,500, April 20th, by James Hunt of Grant J. Hunt in Oakland, representing the cranberry industry. Her recipe for Ham Loaf with Cranberry Meringue Frosting topped over 10,000 entries.

The \$10,000 cash prize contest was first announced last fall during the cranberry harvest, and deadline for recipes using fresh cranberries was January 31. The judges have been cooking and baking ever since in their search for the Best Cranberry Dish of the Year and finally narrowed down their selections to 126 winners, four of which are men. Be-

sides the Grand Prize of \$2,500, there are 50 prizes of \$100, 25 of \$50, and 50 of \$25.

Mrs. Esther Trammel of St. Paul, Minnesota, Professor of Home Economics at the University of Minnesota, and Mrs. Arlan N. Ferking, consultant Home Economist, Excelsior, Minnesota, headed the judging committee.

The contest was sponsored by Ocean Spray Cranberries, Inc. 40 states and Canada are represented in the list of winners with the highest number in California and Texas, two non-cranberry growing states. Leading cranberry state of Massachusetts had only 3 winners, New Jersey 1, Oregon 2 and Washington 2. Wisconsin, second largest cranberry producing state did better with 8 winners.

Mrs. Strake's vocation is cooking and experimenting with recipes. She likes things different

and her husband, Elmer J. Starke, a retired insurance representative, enjoys taste testing her ideas. She is a secretary for the State Board of Equalization in Santa Rosa where she has worked for 17 years in the Sales Tax Division.

Large British Importer Visits Massachusetts

Interested In Cranberries For Next Fall

This month a large British importer visited the Cranberry Institute and Ocean Spray. He was W. G. A. Craig, from the firm of Gilbert J. McCauley of Croyden.

He was entertained while in Massachusetts by Orrin G. Colley, president of the Cranberry Institute and officials of Ocean Spray.

He expressed interest in cranberry imports next fall.

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without hazard to you or your workers;
without drift problems in populated areas;
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Years of experience in bogs across the country have demonstrated malathion's superior control of fireworms, leafhoppers, fruit worms and other destructive cranberry insects.

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CYANAMID SERVES THE MAN WHO MAKES A BUSINESS OF AGRICULTURE

Prof. William E. Tomlinson, Jr. to Mass. Growers On Girdler, Gypsies and 1964 Insect and Disease Chart

A girdler condition that has been causing us concern for the past few seasons developed in 1963 to the point where widespread flights of moths occurred. That injury resulted from developing infestations in 1963 is probable, but the full impact may not be obvious until the winter flood is removed, or later in the season, when defoliation and browning becomes apparent after the bog greens up.

That this is no new pest is attested by citations of its injury to cranberry so long ago as 1894 by Scudder in "Insect Life," while Felt in the same year described its life history and habits on grass in New York. In 1903, J. B. Smith in U. S. D. A. Farm Bulletin 178, "Insects Injurious to Cranberry Culture," advised flooding for at least a week, and better two immediately after the fruit was off. Also, burning of infested areas with a gasoline torch when vines were wet was suggested. In 1907 in Mass. Bul. 115, "A Preliminary Report on Cranberry Insects," Dr. Franklin advocated a 7-10 day flood immediately after picking, or a day or two about June 10 if the fall flood was missed. On dry bogs burning of infested areas and sanding were suggested as probably advantageous. In the 1908 revision: Mass. Bulletin 126, "How to Fight Cranberry Insects," the treatment for bogs that could be reflooded was the same, but for dry bogs sanding was preferred over burning because of its effectiveness in reducing frost injury as well as preventing girdler infestation. This sanding was to be done during the first two weeks of May. Scannel in 1917 published a detailed study of the girdler in New Jersey — description, life history, habits and remedial measures such as late holding (July), fall flooding and sanding. In 1925, Beckwith in New Jersey proposed flooding for 12 hours in August with fresh water from streams or heavy rains. Bordeaux before and after,

if possible, to reduce rot was recommended.

With prosperity and consequent renewed sanding activity following the second World War, and general adoption of DDT dusts for cranberry insect control about the same time, girdler became a minor pest from the late 1940's to 1961 or thereabouts. This happy condition is apparently now past.

Girdler Again Major Pest

DDT is no longer used by many cranberry growers, the intervals between sanding have tended to lengthen, and more fertilizers are being used, which results in more vines and leaves which in turn produces more trash to produce an ideal environment for girdler increase. These factors, plus a series of drier than normal summers which have favored larval survival, finds us now with girdler a major rather than a minor pest.

That cranberry girdler is not confined to cranberry for a source of food is apparent from its distribution as it occurs throughout most of the United States, whether cranberries are present or not. Sheep sorrel and the sedge "three square," as well as various grasses, are known food plants and it is a pest of importance to Merion bluegrass in the Pacific northwest. As a cranberry pest it has been troublesome mainly in Massachusetts and New Jersey. Trouble in Wisconsin in the past has followed a series of dry years. Surprisingly, it has not been of any consequence on the West Coast bogs in view of the fact it is a grass pest there.

Control methods haven't changed appreciably in the 60 years or so since Dr. Smith's recommended flooding after harvest and Franklin's sanding recommendation. Late holding and August flooding as suggested in New Jersey are not recommended for Massachusetts. Burning is not effective, and keeping the bog floor wet, though effective, is poor cultural practice.

Aldrin and dieldrin applications at rates suggested for root grub, or less if applied every few seasons to treat new trash accumulation, is effective and cheaper than regular sanding. Sanding values, however, in terms of insect and frost control that should not be discounted.

Control of the moths has been advocated as a control, but is a stop-gap measure at best. It only delays the final reckoning and reduces to some extent the final impact but does not correct the conditions that allowed the infestation to develop. Concentrate sprays have not been too helpful in reducing moths, probably because they don't penetrate the tangle of vines to the floor of the bog where the moths hide when disturbed. Dusts, on the other hand, have given control because of their superior penetration of the vine cover. High gal-lonage sprays would no doubt be effective, but are too expensive to be feasible for girdler moth control alone.

In general, other cranberry insects were no more than normally abundant in 1963. Fruitworm again was the cause of trouble because of prolonged egg laying which necessitated a third spray on some bogs. Fruitworm emergence started as usual about the first week in June at the State Bog and reached the first peak about June 26. Other peak activity occurred on July 2, 13-14 and surprisingly on August 4.

Black-headed fireworm was generally not a serious pest in 1963, but on the few bogs where it occurred it worked long and late. It even caused trouble in the picked berries in the shed in one instance.

Gypsy Moth Again?

One other pest that needs a word is our old enemy the gypsy moth. After several seasons of quite localized infestation in Mashpee and North Falmouth widespread dispersal of small larvae occurred in the spring of 1963. Male moths were trapped at the State Bog and larvae were collected there as well as in most of the upper Cape region. Our

1. The acres that will be sprayed by a tank load.
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SEVENTEEN

JACK DEAN IS A LEADING GROWER OF BANDON—STRONGLY BELIEVES IN ALUMINUM DIKES—HIS BOGS ENGINEERED—TERRACED

**Jack Started Out To Be
A Pharmacist, But Found
The Work Too Confining
—Became A Grower
In 1946**

Growers in the Bandon area are now using aluminum dikes to divide their bogs into small sections for water-reel harvest, and prominent in the use of them is Jack Dean.

With water supplies generally not too plentiful, relatively small amounts of water are thus adequate. After the first section is released of water on these aluminum-diked areas, the water is dropped down through a small gate for harvesting the next one.

This water flow is by gravity as bogs are engineered in such a manner, as at the Dean property, and a number of others on these "stepped down" or "terraced bogs," the sections are only about

8 inches lower than the one above. In making these bogs, after the raw land is scalped, the grading is done by the use of a spirit level. This makes each section as truly flat as it is possible to get it.

The aluminum dikes may be in straight lines, or they may be curved to suit the individual bog. The dikes are about 18 inches above bog level.

Dean used corrugated roofing, 26 by 12 feet wide. Where the 12 foot length is used, one could divide up to 48 feet, Dean believes.

The dikes are made of regular aluminum roofing, 26 gauge.

These dikes are cheaper to install than dikes made of earth and do not take up much of the bog areas, as would dikes of earth such as are generally used in most other areas.

Whether these dikes are more

permanent than wooden dikes, such as are common in the Oregon area, or not, has not been definitely determined, but again, Dean believes they may be. Any aluminum of manufacture is used and the supply is any roofing house.

The construction consists of 4 by 4 treated cedar posts. These are set 30 inches deep and 47 feet apart, giving a three foot lap on the 12 foot aluminum sheets. Plastic roof cement is used at the top. For stiffening, Dean used 2 by 6 treated cedar posts at ground level.

It is considered necessary to place the posts about 2 inches between the stiffening to provide a flat surface for nailing the aluminum roofing to post and for stiffness. Dean advises the use of aluminum nails and nailed in valleys instead of on ridges.

Some of these dikes have been

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in use for 7 or 8 years now. One of the first to install these was Frank Ison. About ten growers have them now and more are planned.

Jack Dean is one of the larger growers of the Southwestern Oregon area, with 14 acres, and he operates on a partnership basis. His bog is about a mile from "down-town" Bandon. He was a director of Ocean Spray in 1956-1957. He was a member of the West Coast Advisory Board of Ocean Spray from 1957 to 1959. He is currently president of the Southwestern Oregon Cranberry club, which has 80 to 90 members.

He was born in nearby Coquille, which is the county seat, on February 5, 1911, so he is a true native son of Oregon. His father is W. R. Dean, who was with Standard Oil, but now retired. He attended school in Bandon and was graduated from Bandon High in 1928. He then

went to Oregon State College, as he had decided he wanted to be a pharmacist and took a course in that but found the work too confining. During the depression of the 30's he worked in a paper mill at St. Helen's in Oregon.

He then became a radio repair man, working in electronics in Portland. His employer was the Manchester Chandler Company, which was a pioneer firm in school sound systems—that is inter-communication. He found this work more to his liking.

With the Second World War he went into service in 1945, being assigned to Navy Electronics School at Chicago and also Treasure Island. At the end of the service he was at rather "loose ends," but in 1946 he decided to become a cranberry grower. He had met the former Margaret Slagle while attending Bandon High and the two were married in 1932.

Mrs. Dean's father had some good land on Rosa Road which Dean felt was suitable for cranberries. So he began to put in bog. He did much of the work himself, using heavy equipment.

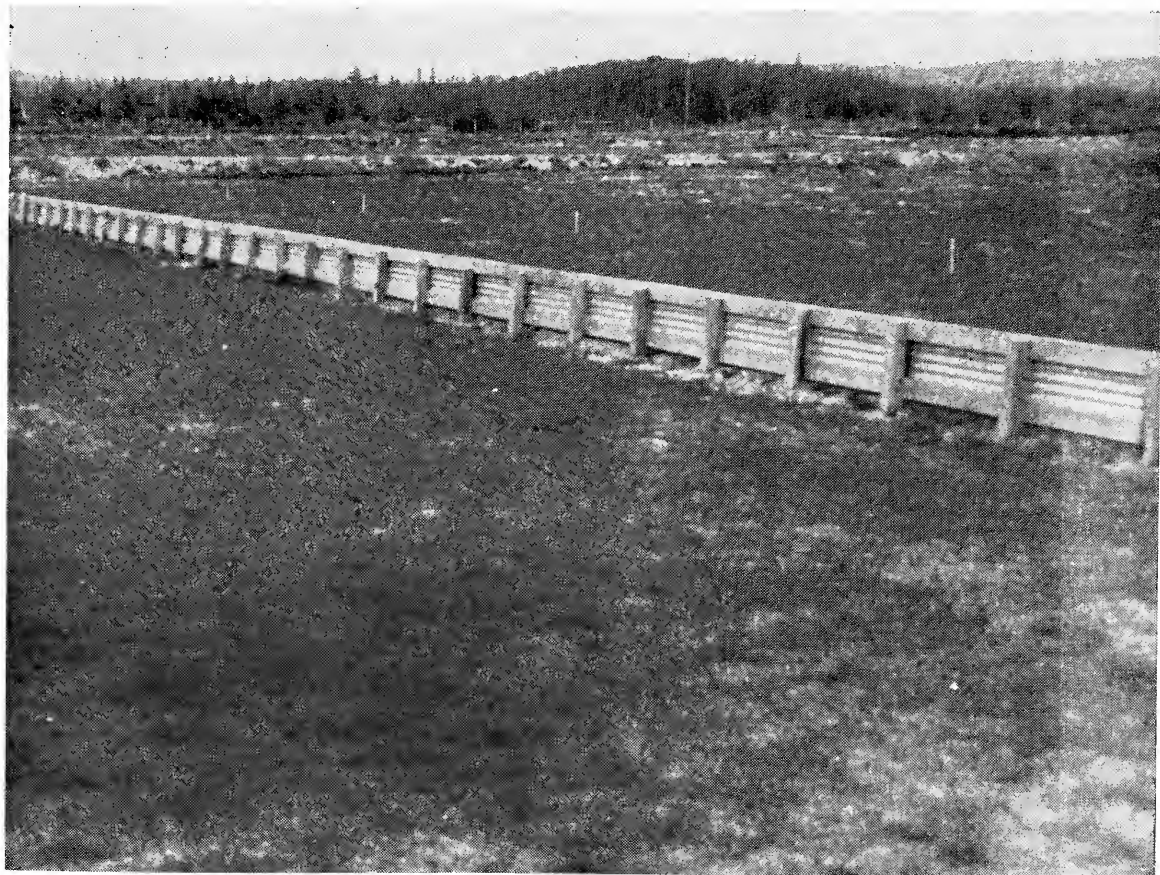
He made two sumps in what is called on the Coast "borrow pits," by which is meant, the sand and water are "borrowed" from neighbors.

One sump is 30 feet deep, because it is necessary to go down at least 18 feet to get to the water table.

His bogs are built on a slope and in building them he had to cut down three and a half feet in some places and in others to four. This was in order to engineer and level the sections as he had planned.

Each bog is built in a three-acre section. He was one month in the fall getting this work done.

Each of his bogs is cut in two with the aluminum dikes for the



Showing the aluminum dikes on the Jack Dean Bogs.

(CRANBERRIES Photo.)

harvest, by water reel. His entire bog is sprinkled and the system is placed under ground. Roads around the bog are built up with sub-soil and provide easy access.

Only one pump is necessary, because the bogs are terraced. This single pump enables him to get on sufficient water for harvest. All the flooding, with the exception of the single pump is by gravity flow.

He has two water reels, one of which he made himself and he, with one helper, is able to get his whole crop in, this taking about two weeks.

On some acres he has produced 200 barrels. His variety is all McFarlins. His average production is 130-140 barrels per acre.

Dean, as do so many Oregon growers, has a lot of trouble from deer. Around his property is a seven-foot deer fence. He also has difficulty with gorse, not in bogs but on dikes and roadways and fence rows.

The Bandon bogs, including those of Dean are rather odd to Eastern eyes because the margins are not ditched. The bogs are not ditched until a ground cover of vines is obtained. Ditches are then dug 8 to 10 inches deep.

Dean, as all growers in Bandon

does his own screening.

The major insect problems are away Plymouth, England, last fireworm, fruit grub and girdler, which he controls by two Malathion and DDT sprays. There are practically all the weeds which growers have to contend with in Massachusetts and they are controlled by much the same methods.

He fertilizes once in the spring with approximately 300 pounds per acre, using 6-20-20, and his applications have a light concentration of nitrogen, in August to set the buds for the following year. He applies two applications of fungicide in June and again about the last of July, or the first of August.

Dean is a past master of the Bandon Masonic Lodge. His hobbies are sail boating, fishing or salmon and steel head in the winter.

BEYOND THE FARM GATE

Grower interest in his product does not stop at the farm gate. It continues right until the satisfied consumer is reached.

There was a time when interest and research were almost exclusively devoted to growing the crop. To these had been added storage,

and handling, mechanical harvesting, and bulk handling. Unfortunately, the economics in growing and in handling which have been passed on largely to others in the chain from the farm gate to the consumer - and the grower has gotten precious little.

But growers are now becoming increasingly aware of their interest in their products after they leave the farm. They realize that they have a stake in the manner and form in which their products are processed and sold.

They are beginning to inquire into whether the processing industry, for example, is putting up the type pack that will help the fruit industry in the long run. They are demanding research in areas beyond the farm gate and they wish to be a part of it.

Some say that this is none of the farmer's business, but they are wrong. It is no longer enough that growers co-operate with growers. Everyone is in the same boat together, although some fail to see it so. The new demand is for ever closer co-operation greater confidence and improved working relations between grower, handler, processor and retailer alike. It may take a little time but it will come.

(American Fruit Grower)

This Issue of Cranberries

Begins our 29th Year of Publishing A

Monthly Magazine for the Cranberry Growers.

If it was not for loyal subscribers and loyal advertisers, the publication of this magazine, would not, of course be possible.

To those who have an advertizing message of any kind to the cranberry growers of the United States and Canada, CRANBERRIES Magazine is, and has been the only publication offering this opportunity, from May 1935 to the present. CRANBERRIES offers this specialized coverage of this particular market.

To subscribers, each month we offer a "round-up" of cranberry news and information from every cranberry-growing area. The editors of CRANBERRIES have visited every cranberry-growing area from Lulu Island at Vancouver, British Columbia to Bandon and Curry County in Oregon on the West Coast; from Nova Scotia to Cape May in New Jersey, and in the mid-west Wisconsin.

We have written many articles concerning cranberry growing and cranberry growers from all these areas over the years. We hope these articles and photographs have helped for better kinship among all growers. We have published many articles by researchers in cranberry culture. We have reported many new developments in cranberry-growing techniques and in cranberry marketing, including markets overseas.

We hope you have enjoyed and benefited from all this "cranberry news."

We intend to continue this, and hope we will have your continued support.

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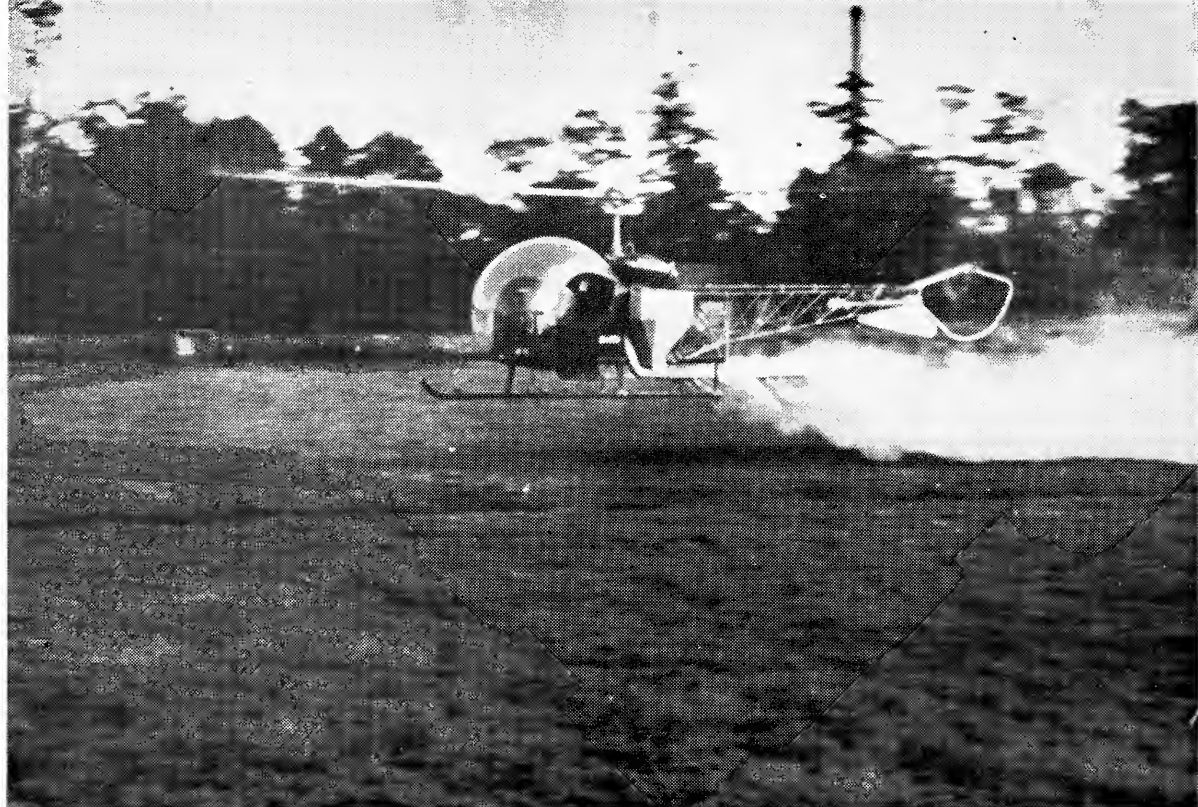


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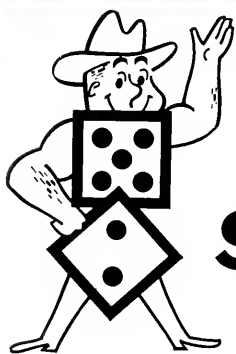
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The 20th century is sometimes spoken of as "The Century of Progress," observes Hill Flitcraft, food marketing specialist at Rutgers University.

"This is certainly true in this country when it comes to food," he continues. "We have new foods, new forms of older foods, foods that are better nutritionally, foods that are more convenient and, in terms of the time it takes to earn our food, we have cheaper food."

In 1959, one hour's factory labor would buy 2.1 pounds of round steak as compared to 1.8 pounds in 1939 and only 1.2 pounds in 1929, according to Mr. Flitcraft.

The hour's labor would buy 17.6 pints of milk compared with 10.4 pints in 1939 and 7.8 pints in 1929. It could buy 3.3 dozen oranges as against 2.2 dozen in 1939 and 1.3 in 1929.

Almost any food you name costs less today in terms of the time you have to work to pay for it than at any other time in our history, Mr. Flitcraft notes.

THE PUBLIC IMAGE

National Apple Institute is the latest to retain a public relations firm "to create within the American public an appreciation of good health, good eating and good value which are incorporated in the American apple."

This is excellent progress along the line we have been editorializing for several years. We hope that the program will include the creation of the proper image of the fruit grower as a human being — who he is, and how he operates, some of his problems, and his contribution to society. Promoting the product is important, but we have too long neglected the techniques of big business in creating a good name and a good reputation and a proper public image. (The American Fruit Grower)

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Hail Insurance For Wisconsin Cranberries

By Francis Martin

Crop Hails Claim Supervisor Rural Mutual Insurance Company

In 1963, the Rural Mutual Insurance Company of Wisconsin offered Wisconsin Cranberry Growers a Crop Hail Policy which would protect the cranberry grower against all direct loss or damage to his cranberry crop as a result of hail.

The Crop Hail policy is based on the percentage plan. The crop is insured for a specific amount per acre, which is chosen by the grower. If a total loss occurred, due to hail, the insured would receive the total amount for crop was insured. In event of a partial loss, the insured would receive a percent of the total amount of insurance, depending on the degree of loss incurred.

The cranberry grower can insure his crop up to \$600 per acre which will protect his cost of production, but not his profit. Low amounts of coverage per acre should be avoided and the minimum coverage offered is \$100 per acre.

The Wisconsin cranberry grower has a choice of purchasing a policy affording either Full Coverage or as Excess over 20% — Increasing Payment coverage. The Full Coverage pays for the full percent of loss as determined in the loss adjustment from 1% through 100%.

The Excess over 20% Loss-Increasing Payment policy protects the cranberry grower for all hail damage in excess of 20%. If hail damage occurs causing a loss in the amount of 20% or less, ac-

cording to the policy, the insured has no claim. If the amount of loss exceeds 20%, the adjuster will take the total percent of loss, subtract 20%, and multiply the result by 1.25 to get the percent of loss to be paid to the insured. Under these terms and conditions the grower will collect the total coverage afforded by the policy for a total loss.

The effective date of the policy is 12:00 noon, (Standard Time) on the date the application is written and signed by the applicant provided: (1) the premium is submitted in accordance with one of the payment plans and (2) that no hail damage has occurred to these crops prior to the time of writing the application.

Coverage under this policy ceases when the crop has been harvested, or for any reason abandoned by the insured, but in no event later than 12:00 noon (Standard Time) November 1st of the current year. The policy allows time for all normal harvest operations of the cranberry grower to be concluded.

When an application for Crop Hail insurance is submitted, arrangements must be made for payment. On the "cash plan," the premium must be submitted with the application for insurance. If the applicant chooses the "deferred payment plan," he shall sign a deferred check for the full amount of premium indicated on the application for insurance. Payment on the deferred check will become due November 1st of the policy year.

The "cash plan" represents approximately a 10% savings to the grower, over the "deferred payment plan. The rates for the "Excess over 20% Loss-Increasing Payment" policy represents 33% savings over the Full Coverage plan to the grower, if he wishes this type of coverage.

This policy provides that when an insured shall sustain a loss due to hail he must notify the Rural Mutual Insurance Company at its Home Office in Madison, Wisconsin, by registered mail or

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Continued on page 26

ANOTHER YEAR STARTS FOR US

This month marks the beginning of the 29th year of publishing a cranberry magazine for the cranberry growers. We start the year with anticipation.

For one reason your editor has ceased (mostly) work in the weekly newspaper field. There will now be more time to devote to CRANBERRIES, Magazine.

Your editor has been associated with the Wareham Courier, the weekly of Wareham, Mass. since 1927 in a full capacity job, and since 1946 has been managing editor. Now the publishers, of whom he was one have sold the newspaper.

Since the first issue in 1936, with a few exceptions due to hurricanes or other troubles, the magazine has been at the Courier Print Shop. Now we have obtained a new printer, but it will still be the "same old CRANBERRIES, Magazine," we hope with a few improvements such as a few new type faces. And, just, maybe, with more time we can make some more progress.

And, we are beginning to feel quite venerable, starting our 30th year.

ON HAIL INSURANCE

Hail, as every cranberry grower knows is one of the hazards of growing the crop. Sometimes hail loss can be 100 percent on a bog or marsh. Although mostly much less. This would seem to be a problem every grower in any area should take more seriously than perhaps he does.

In this issue we are publishing an account concerning hail insurance for the Wisconsin growers. It may interest growers in other areas, as well as in the Badger State.

CLARENCE J. HALL
Editor and Publisher

EDITH S. HALL — Associate Editor
Wareham, Massachusetts

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REFERENDUMS

The growers have now voted on the referendum on the Marketing Order amendments. As this goes to press, the results are not known, nor the number of growers voting.

Next will come the referendum on the order as an entirety, to see if the industry wants it continued for another two years.

SERVING WISCONSIN

HAIL INSURANCE

Continued from page 24

certified mail within 5 days of loss. The Company shall not be liable for a loss not reported within this specified time limit.

Experienced and qualified hail adjusters are available to adjust all hail losses. Adjusters are assigned to losses and adjustments are made as promptly as possible after policyholders have reported their losses.

All losses are paid in the field by the adjuster with a draft immediately after the claim has been adjusted and an Agreement of Settlement has been signed by the insured.

The Rural Mutual Insurance Company provided crop hail protection on cranberries in all sections of Wisconsin the past year. Crop hail policies were issued to growers in Wood, Juneau, Portage, Monroe, Jackson, Vilas, Oneida, Barron, Sawyer and Washburn Counties. Hail damage was reported in all sections of Wisconsin

during the 1963 growing season with the damage ranging from very minor to fairly severe.

The cranberry grower in Wisconsin holds the control over everything which tends to influence his yield. Insects, diseases, moisture and frost are well under control but the falling of hail is not controlled. The Crop Hail policy offered by the Rural Mutual Insurance Company fills a definite gap in the growers program year after year.

FRESH FROM THE FIELDS

Continued from page 6

end. Excellent weather conditions the week of the 19th in the south enabled most properties to get this early spring work done in record time. Fog, rain and high humidity the last week of April hindered much of the marsh work such as applying fertilizer or herbicide granules.

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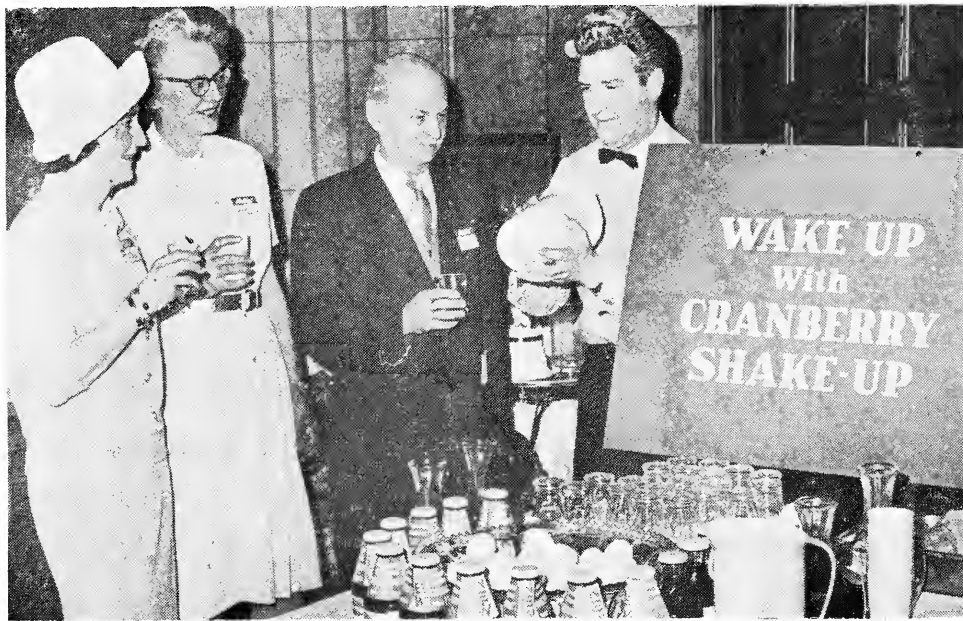
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Ocean Spray News

PUBLISHED MONTHLY



Introducing Cranberry Juice Cocktail Concentrate in Portland, Maine were Ocean Spray's Janet Taylor and Betty Buchan, hostesses to Press, TV and Radio in Portland area. Pictured Waking Up With Cranberry Shake Up are (left to right) Miss Edith Webber of WGAN-TV, Mrs. Janet Taylor, Harold L. Cail of Portland Express and the Press Herald and the shaker upper.

BIG CRANBERRY SHAKE-UP IN STATE OF MAINE AS OCEAN SPRAY INTRODUCES NEW CONCENTRATE

Cranberry Juice Cocktail Concentrate, one of Ocean Spray's new products, is holding a primary in Maine and if it gets a strong vote from consumers, it expects to throw its hat in the national ring next fall.

A Drop-in Breakfast to introduce the product was held May 7th in Portland with guests from newspapers, radio, television, utility companies and schools.

Highlight of the menu was Cranberry Shake-Up. Shake up or beat together 1 cup of Cranberry Juice Cocktail Concentrate, 1½ cups water, ½ cup prune juice and 1 egg. It's a meal in itself.

Hot spiced Cranberry Punch was another menu favorite. Served hot, it blended 1 pint Cranberry Juice Cocktail Concentrate, 6 cups of water 1 pint apple juice, ½ cup orange juice, ⅛ teaspoon cloves, and 2 tablespoons brown sugar. Small bits of butter were floated on the top of each piping hot cupful. Recipe serves 12.

The new Concentrate is a boon to people who like their Cranberry Juice either stronger or weaker than the ready-to-serve Cranberry Juice Cocktail. The Concentrate may be mixed to individual taste or served as recommended, 1 quart of water added to 1 pint of Cranberry Juice Cocktail Concentrate.

Mrs. Janet Taylor, Director of Home Economics, and Betty Buchan, Director of Public Relations, were Ocean Spray hostesses at the Portland Party and hosts were Larry E. Proesch, Director of Sales, and Tom Hodgkins, Eastern Sales Representative. Ocean Spray brokers, Arthur G. Curren Co. and Spear & Roberts, Inc., were also represented.

Ballots are starting to come into Hanson from consumers who tried the Concentrate. "It's wonderful as are all your products" — from Mt. Desert. "Like it immensely and so does the family" — Biddeford, Maine.

So far, Maine is voting YES!

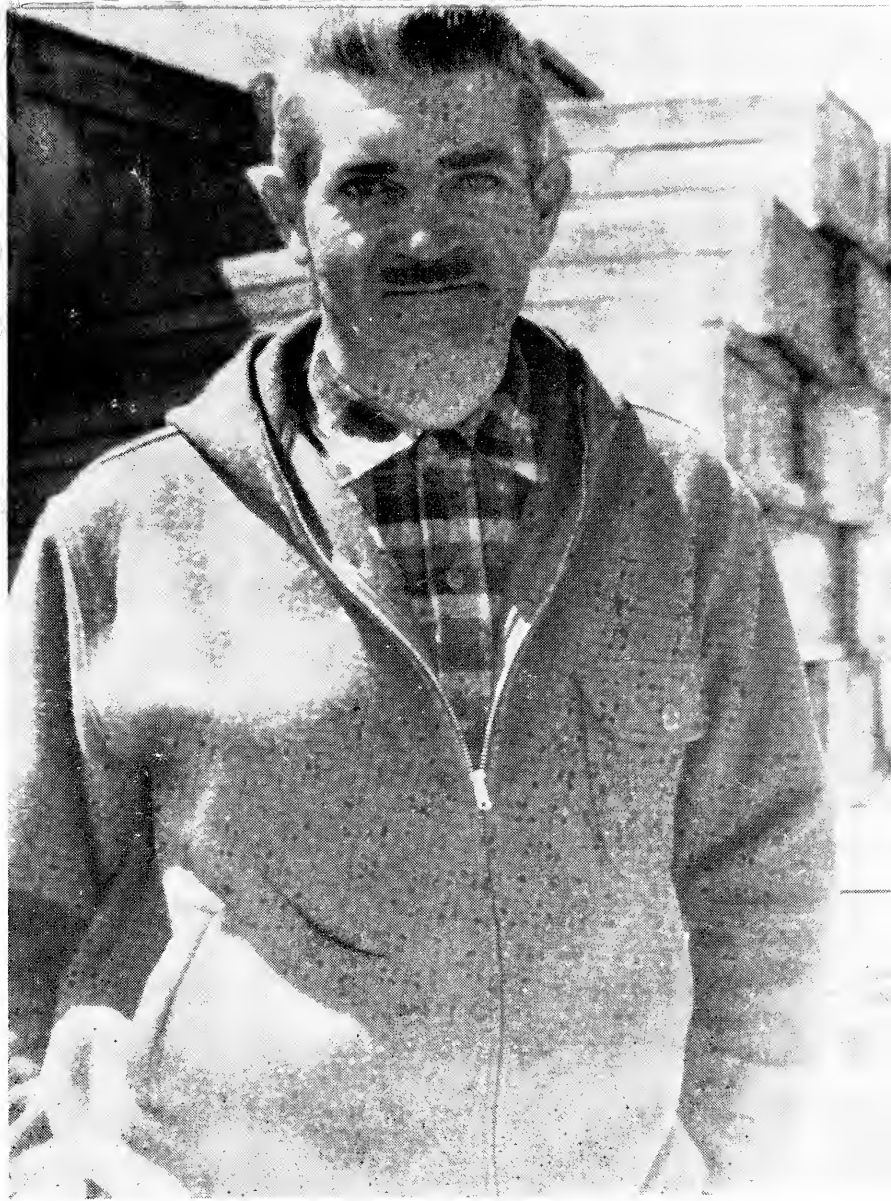


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CARLETON H. (BUZZ) COLLINS, Ex Navy Pilot Goes "All Out" in Cranberries. (CRANBERRIES Photo)

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CRANBERRY AMENDMENT APPROVED

Washington, May 27 — Producers voting in a referendum favored amending the marketing order regulating the handling of cranberries, the U. S. Department of Agriculture has announced. The program covers cranberries produced in Massachusetts and nine other areas.

USDA's Agricultural Marketing Service said that more than 84 percent of the growers voting approved the amendment. A total of 79 growers voted for the amendment; 88 voted against it. More than 75 percent of the total production of cranberries was voted in the May 3-9 referendum, with 9 percent favoring the amendment.

Processors of more than 50 percent of the volume that was processed have voted their approval of the amendment, and handlers of more than 50 percent of the volume of cranberries handled have signed an identical amendment to the companion marketing agreement.

The amendment, based upon evidence received at a public hearing in February:

(1) Provides wider authority to specify the time and manner for handlers to meet the withholding obligation.

(2) Allows handlers to be credited during the next fiscal

year with any excess withholding resulting from a modification of the free and restricted percentages.

(3) Requires the committee to announce the price, per barrel, at which handlers may obtain release of withheld cranberries and requires handlers requesting such release to accompany the request with full payment for the berries for which release is requested.

(4) Provides for the disposition of money acquired in release of withheld cranberries.

(5) Amends the withholding provisions to establish and maintain uniform application of the restricted percentage among handlers.

WISCONSIN SENTIMENT FOR STATE MARKETING ORDER

**Assessment Against Growers
Would Provide Funds for
Frost Warning Service and
More Research**

An overwhelming majority of Wisconsin cranberry growers voted in favor of a proposed state marketing order at a public hearing at Wisconsin Rapids last month. The proposed order calls for a 2-cent a barrel assessment on all cranberries produced in Wisconsin. This is to provide funds for research and for the frost warning service.

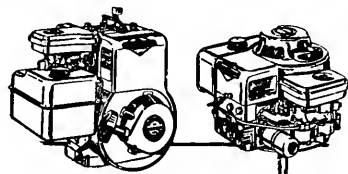
Approximately 30 of the 140 listed growers in the state attended the hearing, conducted by Douglas Milsap of Madison, attorney for the Wisconsin Department of Agriculture.

The director of the department now has 45 days in which to study the testimony and make a decision on whether to issue the order. If the order is issued, growers will have the right to reject it in a subsequent referendum.

Two in Opposition

Only two outright objections to the order were voiced at the hearing.

Andres Basso of Wisconsin Rapids, speaking in behalf of Ben Pannkuk of the Winnebago Cranberry Co. said that Pannkuk



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favors a voluntary program rather than state-directed

"He feels the same objective can be accomplished by the Wisconsin State Cranberry Growers' Association," Basso explained.

Clarence Rezin of Tomah said he was not in favor of the order "because I don't think anybody should be forced to pay for something they do not want." He also complained that the present frost warning service is not efficient especially on week ends.

One suggestion was that the assessment be based on acreage rather than the barrel was voiced by A. C. Bark of Wisconsin Rapids, he representing the Dubay Cranberry Company, the Dubay being recognized as one of the outstanding marshes in Wisconsin. He said that acreage is constant while production fluctuates. He recognized \$2.00 per acre as a fair figure. Several other growers favored the barrel assessment.

Among these was Ed Gryglesk of Tomah who said that several growers in his area had already been wiped out for this season by hail losses. For those who suffered losses he said the acreage method would be most unfair.

Mrs. Clair Habelman, Tomah questioned the provision which requires growers to report the price per barrel and gross dollar value of their crop. "This," she said "is an infringement upon the privacy of the individual."

Miss Jean Nash of the Biron Cranberry Company stated that the frost warning service alone would be of more value than the annual assessment. She also viewed the research program as highly beneficial, eliminating costly individual trial and error. "Order Handsome Investment"

The order was described as "an investment that should pay handsome dividends," by Charles L. Lewis of Shell Lake, whose statement was read by his son Charles H. Lewis.

Donald Duckart, Rte. 2, called the two-cent assessment "moderate and equitable."

Continued on Page 4

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Mass. Cranberry Station and Field Notes

by CHESTER E. CROSS

Director

It was good to have left this more behind for six months, but it is also good to be back at it. There is a thrill associated with foreign travel, unfamiliar places and strange people, but there is a heartwarming joy in returning to familiar scenes and faces— even to familiar tasks.

How many times while in England I looked forward to coming back to an area that would have at least three sunny days in a row! Now I've had enough— only 0.66 inches of rain in the last 43 days. Frost has struck repeatedly since May 15 and is expected to strike again tonight (June 5). We now have possibly 25% frost damage against the 1964 crop, and some damage of unknown extent traceable to held-over frost floods at Memorial Day. If drought conditions con-

tinue, the frost hazard is likely also to continue. The records show that most of the damaging frosts occurred during dry spells, and it is further true that as dry conditions intensify there is a tendency for bog minimums to go below the computed frost hazard.

Weather records, and my observation of a few bogs, both show a substantial crop prospect. Since returning on May 9 I am impressed at the increased optimism which abounds amongst growers. It would appear that some extra effort to protect this coming crop from further frost injury, from dry weather and from insects would very likely prove rewarding next fall.

Good progress is being made in the weed control field and I am sure that by another season Prof.

Demoranville will have engineered some new helps for cranberry growers. Prof. Tomlinson has earned my gratitude not only by writing this article in my absence but in managing the Cranberry Station in his genial and deft fashions.

You will be glad to learn that your old friend J. Richard Beattie returned to his duties this week after being hospitalized last March with a back ailment. I'm sure we all wish him the strength to carry out his duties with enough left over for at least occasional visits to Cape Cod.

CRANBERRIES and DIABETICS

Under the heading "Deficiencies Are Plague for Diabetics," the Miami Herald printed the following:

"You may recall how he (Sec. of Health, Welfare and Education) scared America about the cranberry farce a few years ago (1959) then weakly admitted you could have eaten a carload with no significant medical ill effects."

(Editor's Note: the item was sent in by Bert Leasure of Fort Lauderdale and large cranberry grower of Wisconsin.)

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WISCONSIN SENTIMENT

Continued from Page 2

Others expressing favorable opinion included: Lloyd Wolfe, area manager for Ocean Spray, who read letters from three members of that organization; F. W. Barber, Warrens, Newell Jaspersen; Richard Indermuehle, Manitowish Waters; Irving Benett, Rte. 3; Mrs. Leone Amundson, Babcock; Mrs. Grace Kruger, Rte. 3; Robert Gottschalt, Rte. 3; and Dale Johnson, Wisconsin Rapids.

Officials of the State Department of Agriculture were present to provide background information and answer questions of the growers.

MARKETING ORDER AMENDMENTS PASSED BY BIG MAJORITY

**However, Protests were
Made by Several
Independents**

Growers voted 479 to 88 in favor of the amendments to the

marketing order. Anthony R. Briggs, manager of the Marketing Order said; "The overwhelming vote cast by the growers will help streamline and make more workable and fair the marketing agreement."

He said the U. S. Department of Agriculture's marketing service reported more than 84 percent of the growers voted approval for the amendments which contained five provisions.

Producers of more than 75 percent of the total production of cranberries voted in the May 3-9 referendum, favoring the amendments.

Processors of more than 50 percent of the volume of cranberries processed voted their approval of the amendments, also.

However, not all growers or processors were in favor of the amendments. Protesting were John C. Decas, Wareham, secretary of the Marketing Order Committee, and member of the Decas family, who produce more cranberries than any independent. Also protesting was Vernon Goldsworthy, large grower and president of Cranberry Products, Inc. of Eagle River, Wisconsin.

A SOCIAL NOTE

Miss Ellen Stillman, only woman director of Ocean Spray and chairman of its advertising committee, and grower in her own right, was featured in the Boston Sunday Herald last month in the Herald magazine. The heading was "A Kookie Pancake," and the article features her recipes in a section called "Celebrity Cookbook."

The story tells how Miss Stillman entertains at her penthouse apartment at 270 Beacon Street. "Tall, slender Ellen, one of Boston's most sophisticated hostesses features her 'talented' pancake as an annual party"

"But cooking has always been one of her dearest hobbies . . . her curried chicken balls are a innovation devised from a recipe used at the American Embassy in India."

Another social item in the same issue tells how she discussed George Frazier, leading Boston columnist at a party at her apartment, Brad Washburn, Jim Ullman, the author, his brother Rodman and his wife. Both Ullman and Washburn have conquered the world's highest mountain in far-away Tibet.

(Editor's Note: But Ellen's greatest ambition, perhaps is to be an author herself and we are willing to bet that she eventually becomes one.)

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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of June, 1964—Vol. 29, No. 2

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

May Turns Colder

From the 12th until the 15th, the weather turned abruptly colder, this being due to storms off the New England Coast which brought winds from the north-east and north.

There were rains, miserable, driving and raw, which, for the time being eliminated danger of drought and woods fires. Early morning of the 15th brought an especially heavy downpour with sharp lightning and thunder.

Temperatures to that date had been recorded as a minus 8, with the departure from normal since January 1 of 15 plus.

Three Frost Warnings

On the night of the 15th there was a frost warning sent out by State Bog of a "rather dangerous frost." Temperatures did reach as low as 23 on the Frog-foot bog of the A. D. Makepeace Company in Carver; with others reported at 24 and 25. It was a little colder on the Cape in Barnstable County. Warning was for 24 degrees.

Those were the first general frost alarms of the year in

Massachusetts.

The night of May 19 brought a severe thunder and lightning storm, with flashes the sharpest in a long time in many areas. This storm, with "banshee" winds caused considerable damage in a number of N. E. points by fire from struck structures.

The night of the 20th brought the second general frost warning of the season, when a forecast was sent out from the State Bog for "a rather dangerous frost, 25 degrees, balance against us." Early Blacks tolerance of 28 degrees. Growers sprinkled or flooded, many holding the water for the third frost which came the following night.

Again a warning was sent out for the night of the 21st, "possible frost 27-28, tolerance of Early Blacks 28." No frost developed.

Hot! Hot! Hot!

May 23 brought temperatures up to 93 in the cranberry area, bringing the plus to the month to 39.

May 24 brought another dangerous woods fire to the Cape cranberry area. This was one of several which have already occurred. The blaze, which apparently started in two places, burned all around the Carver bog of the A. D. Makepeace Company, destroying in all about an acre of vines. The bog sprinklers were turned on and this proved to be another advantage of a sprinkler system.

Breaks Out Again

About three o'clock in the afternoon of the 25th this terrible fire broke out again. It was called the worst forest fire in Cape

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history. 875 men fought the blaze which was fanned by howling winds. Great clouds of smoke rising hundreds of feet into the blue sky were visible for miles around.

State Police Assist

Cranberry growers in the area flooded their bogs, being assisted

by State Police in getting through the burning woods to do this.

This tremendous fire blackened six thousand acres of valuable woodland, destroyed about forty-five cottages and some 400 people were evacuated from the pond locations and spent the night at

Wareham Memorial Town Hall, being cared for by the Plymouth Chapter of the American Red Cross. At one time the fire was racing in the general direction of the Cape Cod Canal miles away and it was feared it might not be checked before it had gone that far. The upper Cape was thick with woods smoke making it difficult to cross the Sagamore bridge. The bog flood was a much to provide available water for the fire fighters as to protect the bogs.

Into Third Day

The flames flared anew on the morning of the 26th but the flames were believed to be contained as winds were less. Apparatus from 60 towns fought the blaze, helicopters patrolled the sky, directing the fighters and a light plane, piloted by "Les Holmes for the A. D. Makepeace Company also circled and gave directions.

The Plymouth woods fire was still smoldering on the 27th as no rain had fallen, as predicted. It was for a "very dangerous frost might continue to burn for weeks.

Very Dangerous Frost

On the 28th the evening reports were for a "very dangerous frost 25-26, balance against us. Early Blacks can stand 29½, late water 29½."

A very similar warning was sent out on the night of the 29th for "a very dangerous frost, 27-28, balance even, Early Blacks and late water tolerance 29½."

The night of May 30th brought still another warning, "Possible frost in cold spots, balance even minimum 28, tolerance Early Blacks and late water 29¼."

Fires were Still Raging

On the Holiday, May 30, there were no less than 61 fires in the woods raging in Massachusetts but none in the cranberry area.

May Warmer Than Normal

The month was warmer than normal, although with high winds prevailing most of the month felt like a cool month.

May Was Dry

May was an exceedingly dry month, rainfall as measured at
Continued on Page 25

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GO INTO IT 'ALL OUT,' OR GET OUT OF CRANBERRY BUSINESS

**So, Young Cape Grower, of Long Cranberry Tradition
Decides on "In" — He is Carleton H. (Buzz)
Collins, Vice President Cape Cod Cranberry Club**

By Clarence J. Hall

"Either get into the cranberry business, or get out," says Carleton (Buzz) H. Collins of Waquoit, Mass. He is speaking of the cranberry business, and that was what he told himself a few years ago. As a small grower, with several small bogs, not in the best of shape, he was at the crossroads. He says he had to make the decision to either give up cranberry growing as a business with no future for him — or "go into it all out."

Having been "steeped" in cranberry growing all his life and being a fourth generation grower on both sides of his family, he decided to go in, and on the Cape, where various members of his families on paternal and maternal sides had been interested in cranberries since one great grandfather started a bog way back in the 1880's. This, although he was fully aware that interest on the Cape, where cranberry cultivation began, has been admittedly diminishing.

Wants More Good Acreage

A main answer, he decided, to successful cranberry growing is to attain the utmost in mechanization. That is what he is trying to do in his operations, slowly, but with foresight, and as fast as finances permit. He believes to really make a go of cranberry growing he must expand his bog acreage from its present 30 acres or so (with only 20 in "reasonably good bearing") to about 50 good-producing acres.

Collins, a six-footer, is a former U. S. Naval airplane pilot, who, due to a training accident, spent several years in and out of hospitals. He was recovering from a leg which sustained a compound and comminuted fracture. He was ½ years on crutches, and under treatment. Now, he says, his leg bothers him scarcely at all and he is doing hard bog labor himself and operating bog equipment.

He was born in Waquoit on the Cape, March 29, 1924, the son of Seth Collins, a well-known Cape grower and Mrs. Collins, also of a cranberry-growing family. He was graduated from Lawrence High School at Falmouth, of which township Waquoit is a part. After this he entered Tilton Junior College at Tilton, New Hampshire, where he was taking

a course in liberal arts. Then in November of 1942 he joined the Navy as an aviation cadet.

In Mid-Air Collision

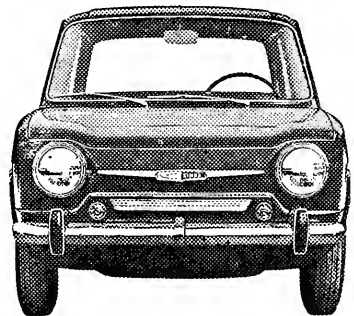
He completed the prescribed course of training and was designated a naval aviator at the Naval Air Training Center, Pensacola, Florida. On December 17, 1944, Ensign Collins was on a routine training flight out of Daytona flying a F6-F Gaumon, a single-seater fighting ship. He became involved in a mid-air collision while out over the Atlantic. He says another plane, the presence of which he was totally unaware, came up from beneath him and sheared off a plane wing. The pilot of this plane escaped without injury. In bailing out of the spinning plane, Collins was snapped against the side of the cockpit, breaking his leg. Later he was picked up by a Coast Guard vessel.

"Following that," he tells, "I spent 4½ years under treatment in hospital after hospital, where sliver plates, screws and bone grafts were tried. It was June, 1945 before I was finally discharged. I had not been in the hospital all that time, as I had been home for various periods, and been called back again." In October of 1947 he had been re-

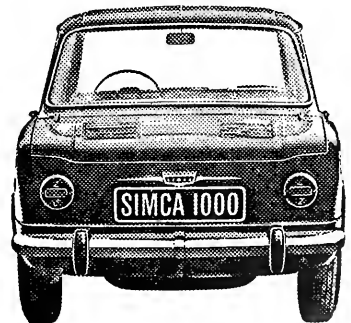
tired from the Navy with the rank of Lieutenant (JG).

Has Long Cranberry Background

As mentioned, his father, Seth who died about three years ago, had been a cranberry grower and an official of the Upper Cape Cod Cranberry Club. Seth had owned about 14 acres of bog in and around the Waquoit-Mashpee area. Simeon, Seth's father, before him had been a grower and also Seth's grandfather had gone into the cranberry business in Waquoit. Simeon at one time had been captain of a whaling ship,



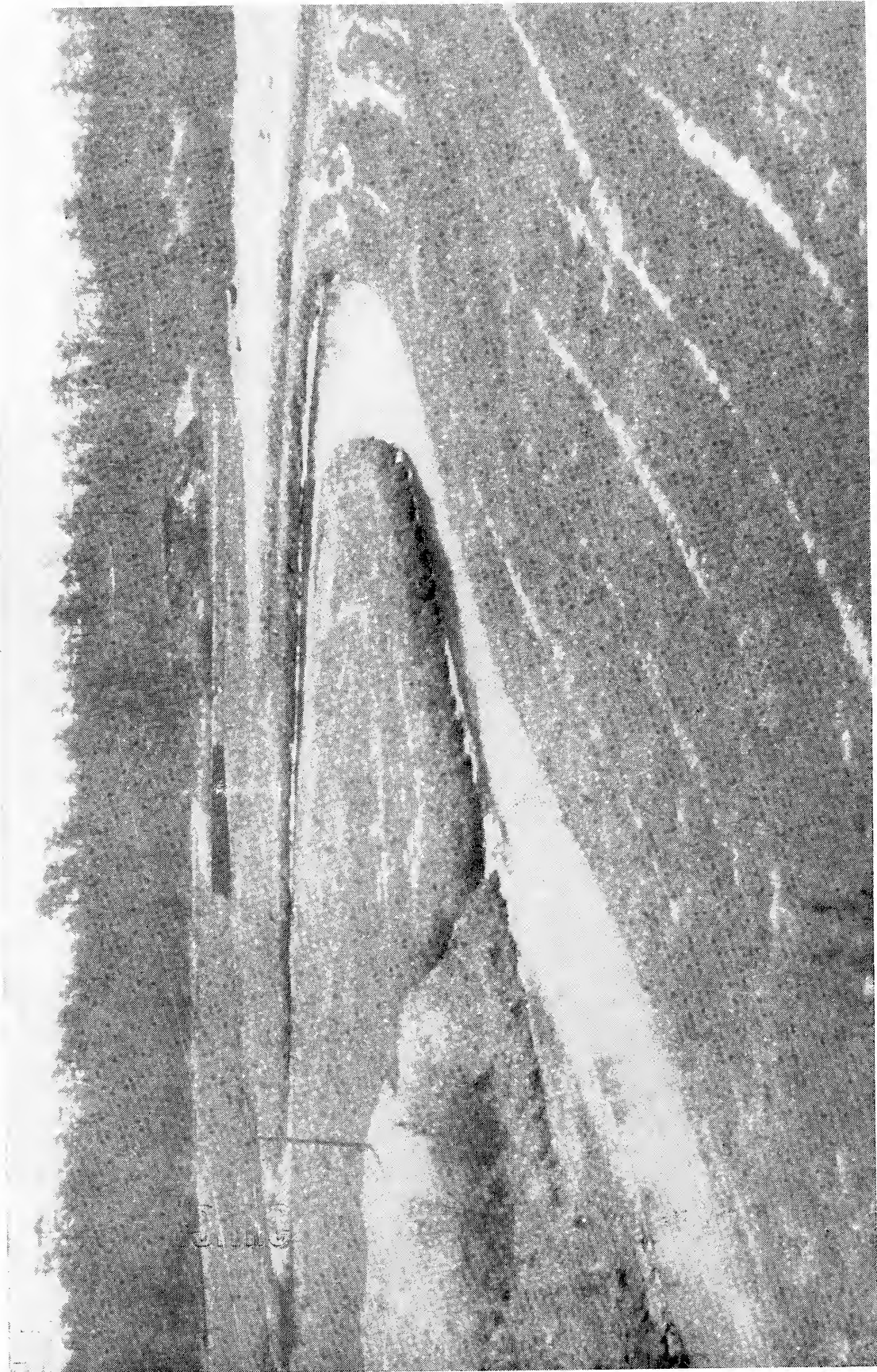
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The Collins Bate's Bog, Seen from Route 151 Makes an Attractive Picture.

(CRANBERRIES Photo)

and it is well known that many a Cape Cod sea captain returned to go into cranberry growing.

On Buzz's maternal side of the family, his mother, who was Marion Harlow, there were also about 14 acres of bog, ownership beginning with T. C. Harlow. T. C. Harlow was known also as a "housewright," or house builder and built a number of homes on the Cape and in Boston. He came to build cranberry bogs in Barnstable, Sandwich and Mashpee. The maternal grandfather of "Buzz" was W. F. Harlow, who lived to be nearly 101. When he resided at Cotuit some years back W. F. was honored and given a plaque by Ocean Spray at Edaville as the oldest known cranberry grower.

He, Carleton says, carried on cranberry growing until he was 93, when he suffered an accident, fracturing his hip and forcing him to retire. Prior to that he was doing hard bog work and driving to and from his bog, his vehicle being drawn by a horse which was blind in one eye, and sometimes stumbled, occasionally throwing Harlow out of the wagon, but he refused to quit his bog work. "Wallie" Harlow for many years was a venerated figure and cranberry grower on the Upper Cape.

His grandfather, "Buzz" says, was reputed to have built good bogs, but he usually sold them off and kept the poorer ones himself.

Live In Florida

Following his recovery for a time "Buzz" lived in Florida to get the sunshine and other therapy for his badly injured leg and hip. While there he engaged in the real estate business, attended a realtors' school and obtained a Florida real estate license. This was in the Miami area. However, he was not particularly impressed with Florida life. He didn't like the only slightly changing seasons, or, he says, even the real estate business as it was practiced there.

"I didn't especially like some of the people. So many people in Florida buy real estate primarily with speculation in mind. They

are extremely conscious of the market value of property and its rise possibilities. On the Cape people buy and build to get a home to live in. In Florida they buy and build with resale always in mind, at a higher price, of course. I would not exactly commit suicide if I had to return to Florida, but I had much rather continue to live on Cape Cod."

But, it was in Florida that he met his wife, who was Miss Mary Katharine Evans of San Antonio, Texas. She was a teacher at the University of Miami, having obtained a master degree in guidance. She had taught trade school before that, and is today a teacher in an elementary school in Falmouth.

The Collins family, as are so many of the older Cape families, "related to everybody else on the Cape," and many of these are in, or have been involved in the

cranberry business. "So, I have been 'exposed' to cranberry growing all my life," says "Buzz." It was altogether natural that he went into cranberries with his father.

He does not hesitate to admit that none of his bogs are in top production and only about two-thirds are in reasonably good bearing condition. Among those in the latter category are a three-acre bog at Waquoit, a six-acre piece, known as the "Bates' Bog," which is split in two by a comparatively new Cape cross highway, route 151; five acres in Mashpee next to the Otis Air Force Base, three acres called the "Town Bog," in Mashpee, but all of which are dry bogs with only winter flowage. There is also an 8-acre piece called "Simeon's Bog" on Quaker Run in Mashpee in relatively good shape.



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Many Cape Bogs Run Down

"You know," Buzz" says reflectively, "that many of the Cape bogs have unfortunately been allowed to deteriorate badly — there has been and still is, an alarming indifference to cranberry growing on the Cape by a great many growers. I, myself had a big renovation job on my hands, and still have — so many bogs have been allowed to go to pot."

"But, I decided to give my bogs all the attention they needed and that I could possibly afford. They needed sand, they needed heavier vine growth, they needed many things done to them. They need work done on them."

He added that means manual labor as well as complete mechanization as can be obtained. "It is all but impossible to obtain bog labor," "Buzz" says. "Since that is mainly so, it means more mechanization, and that is the program I have decided on." He tries to keep one man busy on bog work, but he says this bog labor can be obtained only at

\$1.75 an hour.

"So it comes down to one man, myself and machinery."

In 1962 he had Oiva Hannula of Carver build him a sand-spreader. "It was the shortest rig he ever built and it has worked out just fine. I take the sander off and put on a flat bed for hauling off and other work. It is designed to carry 48 boxes, but I have carried off as many as 80." He also bought a John Deere front-end loader or small tractor crawler. This he uses to pull out trees and bushes on the uplands; to regrade, eliminating all manual labor. He also bought a Farmall A tractor, and got a rectary for it.

He operates this equipment himself.

He hires the services of Ray Morse and son, Paul, of West Wareham to do insect control, they being agents for Wiggins Airways helicopters in air applications of pesticides. Collins, in weed control last year applied simazine to 6 acres, Chloro IPC to ten; used 1,000 gallons of

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water-white kerosene on other acreage and last fall applied Casoron to 2 acres.

"Hog Wild" on Sprinklers

He believes in the use of sprinklers and at Simeon's Bog has had installed three acres of sprinklers with 7 heads. These are of the high-gallonage type, powered by Chrysler engine. At the time he put in the installation, low gallonage had not come in. "I'm going hog wild on sprinklers as fast as I can afford them," he asserts. "I think sprinklers are vital in cranberry growing."

"Buzz" admits he has a very considerable problem on frost nights — "I run around like mad."

His bog at Waquoit has a 16-inch pump on the Moonakis river. There, he says, as this runs into Waquoit Bay, the salt water sometimes backs up and when he floods from this source he tests the water, by taste, to see if it is brackish. This is one place in particular he intends to put under sprinklers, as soon as possible.

On some of his bogs he likes to hold late for spring frost and for quality, but some of his bogs, like many others in Massachusetts, are flowed from streams from which other growers also take water, and this involves working out an arrangement "with the fellow above."

On one bog, which is spring-fed he has to "guess" the day before, if a frost is impending and start getting the water on. A drainage program was put into effect at the Otis Air Base bog and since, at times, surface water from the base flows onto his Ashumet bog. As a result, he picks what he can there, when he can.

For harvest he has two Darlings and one Western picker, both of which he likes for different harvest conditions. He finds the Darlington tends to bruise more, but the Western requires greater skill on the part of the operator.

His varieties are 80 percent early blacks and the remainder Howes, McFarlins and mixed

lates. He markets through Ocean Spray.

Elected To Office

"Buzz" has just been elected to his second term as vice president of the Cape Cod Cranberry Club and he is also a member of the Cape Cod Cranberry Growers' Association.

He has served on the Falmouth finance board and is on the Falmouth planning board, both of which he found to be satisfying effort but hard work. These are important boards in Massachusetts town government and he thought he should make this civic contribution. He is a 32nd Degree Mason; a member of the Falmouth Rod and Gun Club. He is a member of the Waquoit Yacht Club and has been Commodore, as his father before him. He sails a Cape Cod knockabout. He is a member of and has been a deacon of the Waquoit Congregational Church. For a long time, Mrs. Collins was superintendent of the Sunday School.

Like To Ski

"Now, however," he says, "I do not find too much time for such activities, as I put in most of my time working on the bogs. But both my wife and I greatly enjoy skiing and every winter we spend as many week ends as we can at it, going mostly to Tamsworth, N. H. As a Texan, skiing was new to Mrs. Collins, although I had done some when I was a student at Tilton."

Oddly enough he says his once-fractured leg does not interfere at all with his skiing and he is not afraid of that common ailment among devotees of the sport — broken legs.

The Collins live on a piece of land about two acres at Waquoit Bay. Their home is a sort of combination Cape Cod and ranch house. He worked on the construction himself with two carpenters and did most of the interior finish personally, as he found time.

"Buzz" is rather out-spoken on the marketing situation of the cranberry industry. He says he

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has not seen the depressed condition as a surplus problem. "I see it as one of underselling. There should be, now, more knocking on doors; our handlers have got to get out and sell."

He, being a native Cape Codder is much opposed to what he considers foolish, unthinking accent on progress on the Cape. He considers many of the "welfare" and unemployment thinking of the "liberals" bad, and he also does not like the hasty "get-rich-quick" developments of some on the Cape, which are so changing the face of Cape Cod.

Yet, he is progressive in his thinking, as shown by his determination to mechanize all his bog operations as rapidly as financially possible. If the Cape proper does stage a come-back to its former place in cranberry growing, young Mr. Collins will likely be one of those to bring it about. He repeats, "I believe a grower has to have about 50 acres and in good condition and that is what I am determined to work towards."

PRESSURE AT THE SPRINKLER

Charles W. Harris

When dollars and sense are considered, is a Cranberry Grower justified in purchasing anything less than the best? Should he purchase a piece of equipment that requires considerable labor either to assemble or to install? Should he purchase only equipment that has a good resale value if his property should be liquidated? Should he purchase power to do the work that saves initial investment? These are argumentative questions when one considers the installation of a sprinkler system for either frost control or irrigation. Each question has its good points and each has its doubtful points. However, the point we wish to present is one of power or pressure in the operation of a sprinkler system. I believe that the costs of a sprinkler system can be reduced by increasing the pressure at the

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sprinkler to 55-60 pounds, setting the laterals at widths from 80' to 110', and spacing sprinklers in the lateral line to give accepted overlap and an application rate of .12 to .16 inches per hour. Investment in power plant and pump does not increase in direct ratio to the size of the sprinkler system nor in ratio to the acreage of the bog. Quotations given for an electric power and pump for a two acre bog are \$415 and for a 10 acre bog are \$1200 and for gasoline engine and pump are \$700 and \$2300 respectively. The practical cost of electric power equipment would be the same whether the sprinkler pressure was 40 or 55 pounds.

In frost control a grower with a sprinkler system is using the stored heat of water to counteract the cold heat of the atmosphere. The heat in the water is best released by breaking the water into fine particles. Pressure applied by power to water in the sprinkling system will create fine

particles for fast heat release. Some interesting observations have been noted by growers with medium pressure systems. In frost control they are actually raising bog temperatures which create ice. Are these phenomena freaks of nature, or are we having presented to us a better method of frost control? We believe there is much advantage to be gained in frost control by increasing the pressure at the sprinkler.

NEW SPRINKLER HEAD

A new agricultural sprinkler designed for wider spacings and lower precipitation rates has been developed and is being marketed by Buckner Industries, Fresno, California.

Designated Model No. 870, the heavy duty, long-range sprinkler is the result of intensive research in nozzles, and a new exclusive stream straightening sleeve.



Need in the agricultural field for wider spacings and low precipitation rates motivated the design of the sprinkler, Buckner engineers say.

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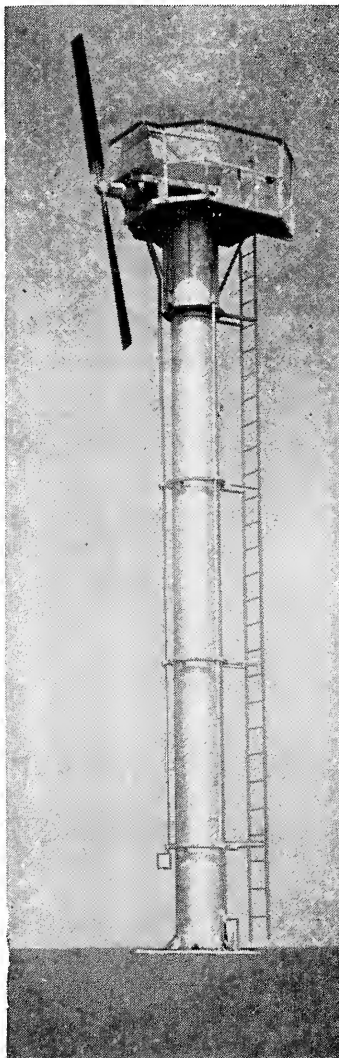
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In addition, an authoritative report recently released indicates that Wind Machines substantially reduced the number of floods. This brought improved quality and yield over marshes where Wind Machines were not used.

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Additional information and name of nearest dealer is available from Buckner Industries, Inc., Box 232, Fresno, California, 93708.



Maine is test market for new Ocean Spray Cranberry Juice Cocktail Concentrate.

Lingonberries Grow In Wisconsin

Lingonberries in Wisconsin! That is the current aim of Vernon Goldsworthy of Eagle River, Wisconsin. Although even "Goldy" is doubtful if any commercial use will result as he says they would be hard to harvest and the yield would not approach cranberries.

Two years ago he received some Lingonberries from Professor Malcolm of the University of Wisconsin and planted them at his Thunder Lake marsh. They were in flower pots and had been grown in a greenhouse.

One batch he planted where they would be flooded in the winter, similar to cranberries. These died out. The other vines he planted on the higher ground and did not flood, but the vines were covered with snow during the winter. These came through in excellent shape. He says it looks like they will have a few berries this fall, unless frost gets them.

U. S. ARMY BID FOR CRANBERRY SAUCE

The U. S. Army in late May sent out bids for 90,000 cases of canned cranberry sauce. It appears the Army likes cranberry sauce as it uses a lot of it.



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Pesticide Board Mass. Regulations

The Pesticide Board, acting under the authority of Section 21c of Chapter 94B of the General Laws as established by Section 7 of Chapter 521 of the Acts of 1962, sets forth the following rules and regulations relating to the application and use of pesticides and to the licensing of certain persons who apply pesticides. These rules and regulations shall remain in force until further order, except that from time to time may be amended or added to by the Pesticide Board as provided for in said Section 21c of Chapter 94B of the General Laws.

1.0 Definitions:

The following words as used in these rules and regulations, unless the context otherwise requires shall have the following meanings:

"Board"—The Pesticide Board as established by Section 1 of Chapter 521 of the Acts of 1962 which amends Chapter 17 of the

General Laws by insertion.

"Disposal"—Discarding, open burning or incineration of excess or unusable pesticides materials and the discarding of pesticide containers or the sale or transfer of ownership of pesticide containers for use other than in connection with pesticides.

"Land of another"—All land not owned or controlled by the individual or corporate entity making or supervising any pesticide application to said land including land of the Commonwealth and its political subdivisions in such cases as persons in public employ use and apply pesticides in performance of their duties for the Commonwealth or political subdivisions thereof, except that land of the Commonwealth set aside for experimental purposes shall not be considered in this category.

"Operational License"—License issued to persons who actively use and or apply pesticides by hand or mechanical methods, or who are present and in direct

command of such persons.

"Pesticide"—(1) Any substance intended for preventing, destroying, repelling or mitigating any insects, rodents, nematodes, fungi, weeds or other forms of plant or animal life or virus, except a virus on or in living man or other animals which the Commissioner of Public Health shall declare to be a pest, and (2) any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant. (Section 11, Chapter 94B of the General Laws.)

"Supervisory License"—License issued to persons who are responsible for deciding whether or not pesticides are to be employed, how they are to be mixed, where they are to be employed, what pesticides are to be used, the dosages and timing involved in such pesticide use, and the methods of application and precautions to be taken in the use of such pesticides.

"Surface waters or their tributaries used for public water sup-

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Harry T. Fisher, Jr., Purchase Street, P. O. Box 243, Middleboro, Massachusetts, Tel. 947-2133, will forward requests for prompt helicopter service to Fred "Slim" Soule. Eastern States is your best source of cranberry pesticide control materials . . . order now. Eastern States is close to you and your needs—there is an outlet near you.



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Tel. Osterville GA 8-4393

LAWRENCE H. WARD Plymouth
Tel. Pilgrim 6-0970

E. S. SERVICE CENTER Brockton
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Tel. Wyman 6-5202

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*Malathion kills major cranberry insects
without hazard to you or your workers;
without drift problems in populated areas;
without leaving harmful crop residues.*



PROVEN INSECT CONTROL

Years of experience in bogs across the country have demonstrated malathion's superior control of fireworms, leafhoppers, fruit worms and other destructive cranberry insects.

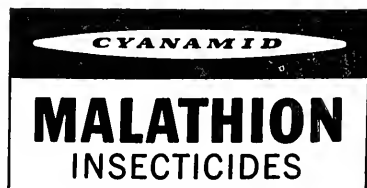
SAFETY IN USE

Malathion is one of the safest insecticides to handle. Its wide safety margin makes it ideal for air applications...even around populated areas.

NO RESIDUE HAZARDS

Malathion's fast disappearing residues allow application on cranberries up to 72 hours before harvest. No hazards for harvesting crews...or consumers.

AMERICAN CYANAMID COMPANY
PRINCETON, NEW JERSEY



ply"—Those ponds, lakes and streams or other open waters as designated and delimited by the Division of Sanitary Engineering, Department of Public Health, which are used as sources of Public Water Supply.

"Watershed of Public Water Supply"—That area which contributes surface water runoff either directly to a surface source of public water supply or to any reservoir, lake, pond, stream, ditch, water course or other open waters, the water of which flows directly or ultimately into said source of public water supply.

2.0 General Rules and Regulations:

2.1 All pesticides or formulations thereof used or applied in Massachusetts except as provided for in Section 2.3 below must be registered with the Division of Food and Drugs, Massachusetts Department of Public Health as provided for in Sections 11 through 21 of Chapter 94B of the General Laws.

2.2 Registered pesticides shall not be employed for other than registered uses, or applied at greater than registered dosages, or applied at more frequent than registered intervals except for experimental work conducted with the prior Approval of the Board.

2.3 The use of unregistered pesticides for experimental purposes in Massachusetts must be in conformity with Section 16 (3) of Chapter 94B of the General Laws.

2.0 Restrictions on the Application of Pesticides:

1 No pesticide application shall be made intentionally to any surface waters or their tributaries used for public water supply except by legally established water supply agencies as authorized by the Department of Public Health.

2 No pesticide application shall be made within 400 feet of gravel packed wells used for public water supply or within 250 feet of tubular wells so used, unless the materials and

methods to be employed have been approved by the Board upon the recommendation of the Department of Public Health.

3.3 No pesticide application shall be made on the watershed of a public water supply unless such applications have been approved by the Board upon the recommendation of the Department of Public Health. Where such approval has been granted, all necessary precautions shall be exercised to prevent hazardous concentrations of the pesticide in surface waters or their tributaries used for public water supply.

3.4 Pesticide applications made to areas adjacent to crops or pasture land shall be so made that direct application to crops or pasturage does not occur.

3.5 Direct application for non-agriculture purposes to pasture and forage crops shall be made with such materials and in accordance with such methods as may be approved by the Board.

3.6 Pesticide applications made for agricultural purposes shall be conducted in such a manner that hazardous concentrations on adjacent lands and in adjacent waters is avoided.

Disposal of Pesticides and Pesticide Containers:

4.1 No pesticide shall be disposed of in any other place other than a refuse disposal area assigned (by the local board of health) and operated in accordance with Section 150-A of Chapter 111 of the General Laws, in a municipal incinerator, or in such other device as may be approved by the Department of Public Health.

4.2 Any person disposing of pesticides shall do so in such a manner and at such a location within the disposal area that contamination of ground or surface water is minimized and that the material will not be uncovered or otherwise disturbed during subsequent operations in the area. If a pesticide is disposed of by burial in accordance with this section or 4.1 above it

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shall be covered with at least eighteen (18) inches of compacted cover material.

- 4.3 Lots of five gallons or less of dilute solutions of pesticides in combustible carriers, other than organophosphate and hormone-type, (2,4D; 2, 4,5T etc.) pesticide may be disposed of by burning in the open as provided below. Any residue from such open burning shall be disposed of in accordance with 4.2 above. Such open burning shall be conducted in such a manner as to prevent any hazard to the health of the general public and of those conducting the burning and to prevent the creation of nuisance conditions. Except as may otherwise be required by competent authority, no more than one (1) gallon of such material shall be disposed of by open burning at any one time, and such burning shall be done in a shallow pan having adequate depth to prevent spillage. Such burning shall be restricted to week days between 10:00 A. M. and 4:00 P. M. and to conditions of good atmospheric dilution

(periods of fog, mist, drizzle, low wind speed, haze or atmospheric stagnation are excluded.) The local fire department shall be contacted and compliance with the provisions of Section 13 of Chapter 48 of the General Laws or of Chapter 355 of the Acts of 1943, and with the appropriate regulations of local boards of health or the Metropolitan Air Pollution Control District shall be ensured.

- 4.4 Dilute solutions of pesticides in a combustible carrier not disposed of as in 4.3 shall be disposed of by burial in accordance with 4.1 and 4.2.
- 4.5 Dilute solutions, emulsions, suspensions or other dilute spray material in a non-combustible carrier shall be disposed of by burial in accordance with 4.1 and 4.2.
- 4.6 Concentrated pesticides in a liquid formulation and liquid technical grade pesticides shall be disposed of by burial in accordance with 4.1 and 4.2.
- 4.7 Dusts, water dispersible powders, granules, or solid technical grade pesticides shall be disposed of by burial, in accordance with 4.1 and 4.2.

- 4.8 Disposal of pesticides containers shall be in conformity with rules and regulations established by the Department of Public Health as provided for in Section 8A, Chapter 111 of the General Laws as amended by Chapter 759 of the Acts of 1960.

Re-use of Pesticide Containers:

- 5.1 No pesticide container shall be used for the storage of human or animal food or water nor shall such containers be used for the storage of cooking utensils, dishes or clothing.
- 5.2 No pesticide containers shall be used for purposes other than those noted in 5.1 unless such containers have been treated in conformity with rules and regulations established by the Department of Public Health as provided for in Section 8A, Chapter 111 of the General Laws as amended by Chapter 759 of the Acts of 1960.

Protection of Persons Applying or Otherwise Handling Pesticides:

- 6.1 It shall be the responsibility of any person licensed by the Board to apply pesticides to acquaint those working under him with the hazards involved in the handling of the pesticides to be employed as set forth in the pesticide label and to instruct the employee as to the proper steps to be taken to avoid such hazards. Individual users of pesticides must become familiar with these hazards and precautions before using pesticides.
- 6.2 It shall be the responsibility of the employer to provide for the protection of the employees the necessary safety equipment as set forth on the label of the pesticide to be used. Individual users must take this responsibility.

Licensing of Persons Applying Pesticides to Land of Another:

- 7.1 There shall be present a person licensed by the Board to apply pesticides whenever and wherever such applications are made to land or another.

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**FASTEST GROWING
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OF CRANBERRIES**

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7.2 Such licenses shall be granted by the Board to those who achieve a satisfactory mark on an examination conducted under the direction of the Board and without examination to non-residents who are licensed in another state under a law which provides substantially similar qualifications for licensure and which grants similar privileges of licensure without examination to residents of this state licensed under these rules and regulations.

7.3 Such licenses shall remain in force for a period of two years except in such cases as the Board shall deem it in the public interest to issue a temporary license of limited duration.

7.4 There shall be two classes of licenses for those who apply pesticides by means of aircraft: Supervisory and Operational.

7.5 At least one principal officer or the proprietor of each business entity engaged in the application of pesticides by application of pesticides by means of aircraft shall hold a supervisory license.

7.6 Each aircraft pilot shall hold an operational license except in such cases as he shall hold a supervisory license in conformity with 7.5 above.

7.7 There shall be two classes to licenses for those who apply pesticides to the land of another by means other than aircraft: Supervisory and Operational.

7.8 Supervisory licenses shall be required under 7.7 of at least one employee of any department, state or local; or of any division, section, Board, or commission of the Commonwealth or of any political subdivisions thereof which shall apply pesticides to the land of another by other than aerial means or shall provide supervision to licensed persons making such application.

7.9 Supervisory licenses shall also be required of one or more

employees of each business entity which shall apply pesticides to land of another by other than aerial means.

7.10 Operational licenses shall be required to be held by sufficient personnel working under those holding supervisory licenses under 7.8 and 7.9 above to insure that there will be a licensed person present whenever and wherever pesticide applications are

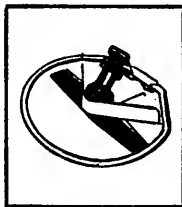
made.

7.11 The Board may suspend or revoke any license granted under 7.4 to 7.10 above following a hearing held by the Board if the information produced at such a hearing demonstrates that the licensed has failed to observe any provisions of the rules and regulations promulgated by the Board or any laws relating to pesticides.

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7.12 There may be a license fee of five dollars (\$5.00) in the case of supervisory licenses, and of three dollars (\$3.00), in the case of operational licenses made payable to the Commonwealth of Massachusetts in the form of a check or money order at the time of application and payable at each renewal thereafter.

7.13 All persons subject to licensing under these rules and regulations shall be licensed on or before February 1, 1965.

Reporting and Recording of Pesticide Use:

8.1 All aerial applications of pesticides shall be reported within seven (7) days to the Board in the form and manner prescribed by the Board by a person holding a supervisory license and who is responsible for the conduct of such application.

8.2 All application of pesticides made by licensed persons to the land of another by means other than aircraft shall be recorded by a person holding a supervisory license and who is responsible for such applications. Such records shall be kept in such detail that the following information is available to the Board on request:

- (1) Area treated
- (2) Pesticide and formulation employed
- (3) Dosage applied
- (4) Method of application
- (5) Date or dates of application
- (6) Target organisms
- (7) The persons licensed by the Board who participated in the planning and execution of the application
- (8) Difficulties encountered which might have produced hazards (equipment troubles, nozzle drips, spillage, unpredictable weather conditions, accidents, etc.)

Such information shall be kept on record for a period of at least five years.

8.3 The Board shall be notified of all experimental applications of pesticides made to land of another. Such notifi-

cations shall contain the following information:

- (1) Area treated
- (2) Pesticide and formulation to be employed
- (3) Dosage to be applied
- (4) Method of application to be employed
- (5) Date or dates on which application is anticipated
- (6) Person or persons who will supervise such applications
- (7) Target organisms

The Board shall issue a permit for such application and may include in this permit restrictions deemed necessary by the Board to protect the public interests in the soils, waters, forests, wet lands, wildlife, agriculture, and other natural resources of the Commonwealth. In case of an emergency the Chairman may waive the above provisions.

Penalties:

The penalty for violation of the foregoing rules and regulations shall be a fine of not more than one hundred dollars (\$100) for the first offense and not more than five hundred dollars (\$500) for the second or subsequent offenses.

Severance Clause:

If any article, regulation, paragraph, sentence, clause, phrase or words of these rules and regulations shall be declared invalid for any reason whatsoever, that decision shall not affect any other portion of these rules and regulations, which shall remain in full force and effect; and to this end the provisions of these rules and regulations are hereby declared severable.

Adoption:

The foregoing rules and regulations were adopted by the Board on March 13, 1964.

CUTTING BACK ON RESEARCH MEANS LOSS OF EFFICIENCY

"When we start cutting back on our research, we will also start losing an agricultural efficiency that has helped us to become the leading nation on

earth," says Dr. Richard A. Damon, Jr., associate director of the Experiment Station in the College of Agriculture at the University of Massachusetts.

Stressing the importance of continued basic research, Damon explained that it is also necessary because "we are in the midst of a population explosion in this country such that it is predicted by the year 2010 there will be 425 million people in the United States."

He said that he feels it is the task of the Experiment Station to solve many problems which have arisen. He emphasized that this can only be done through continued basic research.

"Because the needs of the country have changed," said Dr. Damon, "our research programs must also change."

Writing in a recent issue of TURF BULLETIN, publication of the Massachusetts Turf and Lawn Grass Council, Inc., Dr. Damon touched on the difficulties experienced by Experiment Stations in meeting research needs of today.

One of the difficulties with which the Experiment Station has been faced is "the dissipation of funds by all research agencies in attempting to cover too wide an area and in many cases duplicating each other's work," Damon stated.

A team approach to research — three or four men working on one project — has recently been initiated at the Experiment Station at the University of Massachusetts to help solve this problem, he explained. In the past there was one man working on three or four projects.

"The development of regional research," noted Damon, "has enabled several Experiment Stations to develop coordinated attacks on problems of regional importance. A recent change in the method of financing regional research has made it possible to cut down on the number of projects in which a station participates, and allows more support for the fewer number of projects."



A PICTURE FULL OF PITCHERS

Cranberry spokesman at Cape Cod Day, Fenway Park, last month were two Little League pitchers from Hanson, Massachusetts, left to right, Carl Ruxton and Richard Jack. They presented an engraved silver pitcher and Cranberry Juice to fill it to their favorite pitcher Dick Radatz. 15 members of the Ocean Spray sponsored team and their managers attended the Red Sox double header against Kansas City which gave the Boston team two wins, 6-2 and 3-1. The televised presentation was made between the two games with pitcher Radatz following the advice of pitcher Jack that every pitcher should be full of Cranberry Juice.

Wisconsin Berry Marketing Order

A public hearing having been held as required by section 96.04, Wis. Stats., and evidence relating to a proposed agricultural marketing order for cranberries produced in the State of Wisconsin having been presented at such hearing, I, D. N. McDowell, as Director of the State Department of Agriculture, do hereby make the following findings of fact and issue the following decision in

said manner:

Findings of Fact

1. A petition signed by 13 cranberry producers was received by the Director of the Department, requesting that a marketing order for cranberries be established and further requesting that such order provide for a research program and a frost warning service to be financed by an assessment on cranberry producers.

2. Cranberries are grown in 17 of Wisconsin's seventy-two

counties, principally in the central, north central and north-western parts of the state.

3. The production of cranberries is an important factor in the agricultural economy of the state, representing four to five million dollars gross income to growers of this crop.

4. Wisconsin is the second largest producer of cranberries in the United States, producing in excess of 400,000 barrels annually, which represents about 33 per cent of the nation's supply.

5. Production has been increasing over the years, primarily because of added acreage.

6. The complexity of cranberry growing is increasing each year. Cultural practices are changing. Weed, insect and fungus controls are of vital importance to each and every cranberry grower.

7. Limited assistance has been given on several of these problems by the University of Wisconsin Horticulture and Plant Pathology staffs. Financial assistance by the Wisconsin cranberry industry would help to add continuity to present programs as well as expand research in these fields.

8. Increased investigations by the Federal Food and Drug Administration on use of chemicals on agricultural crops necessitates greater vigilance on the part of the cranberry grower. Additional financial support could provide more information to prevent catastrophes which could occur through improper use of pesticidal chemicals.

9. Success or failure of an entire cranberry crop might well rest on receiving latest weather forecasts. Below freezing temperatures without proper protection of the cranberry bogs could ruin an entire crop. Timely frost warning permits the grower to take the necessary action to prevent this disaster.

10. A frost warning service has been in operation for the past number of years. The program has been supported through voluntary contributions from growers.

Continued on Page 24



POLICE CHIEF JOHN O. SOARES OF SOMERSET GETS TICKET. It was all in the spirit of fun during a visit to Cranberry Museum and Cranberry House on Cranberry Highway, Wareham. Presenting ticket is Edward Gelsthorpe, left, Executive Vice President of cranberry cooperative, acting as host to over 100 members of the Southeastern Massachusetts Police Chiefs Association in Wareham, Wednesday, May 13, to attend meeting arranged by town officials. Chief Soares is president of the Association.

Cranberry Museum and Theater Open at Route 28

Just an easy 20-minute drive from Pilgrim Plymouth is the world center of the 30-million dollar cranberry industry, the Cape Cod Canal Town of Wareham and its picturesque inland neighbor, Carver.

This is the heart of Cranberryland, focus of almost 12,500 acres of bogs on the Cape and in Plym-

outh County. Here travelers along Cranberry Highway, Routes 6 and 28, get an exciting panoramic view of the cranberry industry a few minutes of driving. First stop for thousands every year is the Cranberry Museum in Cranberry House, Onset. Admission is free.

The museum was established by cranberry growers through their cooperative, Ocean Spray, to preserve equipment used in the early days of cranberry farm-

ing. Collectors' items on view include antique scoops, handmade stencils for cranberry barrels, screening tables and other rare objects. School groups and bus tourists are among the numerous visitors to this historic and educational exhibit.

Part of the museum is a Cranberry Theater, also free, where the fascinating story of "Cranberryin'" from Pilgrim Days to automated harvesting and processing is told in a 25-minute color film, "Heritage of Flavor."

The museum and theater are open daily 9:00 to 5:00 and Friday, Saturday and Sunday, 9:00 to 9:00, through Labor Day. Cranberry House includes a gift shop and restaurant where a variety of cranberry specialties, gifts and souvenirs are featured.

ARTHUR GODFREY IS BUYING INTO THE BERRY "BIZ"

One piece is the Russell A. Trufant Bog at North Carver.

It now appears that Arthur Godfrey, the radio and TV personality will be in the cranberry business. This rumor has been confirmed by Gilbert (Gibby) Beaton of Ocean Spray Cranberries, Inc.

"Gibby" said that the "Old Red-head," is purchasing the bog of Russell A. Trufant of North Carver and other property. The sums of \$75,000 for the Trufant property and also one million dollars have been mentioned in the deal.

Mr. Trufant confirms that binder has been paid. Fine papers have not been passed however, as this issue goes to press, but no "snags" were anticipated.

With Godfrey definitely in the cranberry business this should give an additional boost to the industry. Since Godfrey and "others" are willing to invest in cranberry bogs it would seem the future of the industry is brighter than it has been for some years.

INDUSTRY VOTES IN ORDER FOR TWO YEARS MORE

Handlers also vote in Marketing Agreements, both by large Majorities.

The United States Department of Agriculture announced June 9 that a majority of growers had voted in favor of continuing the Federal Cranberry Marketing Order for another two years.

More than 85 percent of the growers voted in favor, and 84 percent of production in favor of continuing the Marketing Agreements.

The total number of growers

voting in favor was 697 and 82, in the negative against the continuation.

This favorable ballot was again opposed by some of the independent agencies and growers as in the case of the marketing order amendments. These included Decas Brothers of Wareham, Mass. John C. Decas having issued a negative statement to local press.

Rolland G. Potter

The Wisconsin cranberry industry was saddened by the death last month of Rolland G. Potter of Tomah. He entered the hospital at Madison, and underwent surgery for a kidney ailment. He was 51.

He was the son of Guy N. Potter. He was a member of the board of directors of Wood County National Bank, Wisconsin Rapids and manager of the Cutler Cranberry Company in Juneau County. He was also a member of the board of Thiele-Kaolin Co., a clay plant in Sandersville. He was previously a director of Ocean Spray, and was president in 1955 of the Wisconsin Cranberry Growers' Association.

He was born in Cranmoore June 26, 1912. After high school he took flying lessons and had a private pilot's license and at the outbreak of World War 2 he joined the Air Force.

On November 26, 1931 he was married to Bernadine Pietz at Tomah. His wife, a son Bruce, and four grandchildren and his father and stepmother survive.

He was a member of the Masonic Lodge of Tomah, the

Consistory of Eau Clair, Zor Shrine of Madison and the Tomah Rotary Club.

WISCONSIN WEATHER NOTES


Wisconsin had some very cold nights in late May, but it is doubted if there has been much damage, if any from frost, but all the water used for flooding did not help the crop any. There were several nights when the temperature went down to 20 degrees, and for a week or ten days the temp. was down to 25 or colder.

The vines at the end of May were a week or ten days late as the cold weather naturally slowed things down.

Growers at June first were dusting for fireworm, although this pest has not been too much of a problem in Wisconsin in late years, but a few years back it was very serious.

(Editor's Note: the above information was sent in by Vernon Goldsworthy.)

READ CRANBERRIES



"Gibby" Beaton said the company will probably be known as the Godfrey Cranberry Company, Inc. The Trufant bog is one of about 25 acres.

The rumor of the sale was carried over Mass. radio stations and in the press, but was later denied.

But now comes Beaton's confirmation.

Godfrey Cocktail Juice Program Is Continued

Ocean Spray has extended national radio advertising of Cranberry Juice Cocktail on the Arthur Godfrey Hour through September 24, 1964. The Godfrey promotion of the popular family drink is broadcast weekly over the CBS network.

Cranberry Juice Cocktail, a traditional New England drink since Pilgrim times, has been spiraling into national favor since last year when Ocean Spray made it available in the 50 States. To meet the increasing demand, Ocean Spray is now processing Cranberry Juice Cocktail in three locations, Hanson, Massachusetts North Chicago, Illinois, and Arkham, Washington. Cranberry Juice Cocktail is packed in pints, quarts and gallons and a new 8-ounce size is currently in New England markets to test consumer reactions.

This program is in danger of being abandoned because of rising costs and the lack of financial support from a minority of growers.

11. Reliance upon a voluntary grower contribution program does not give sufficient assurance of financial support to meet budgetary needs for the long-range projects essential to the industry.

12. The proposed assessment of two cents per barrel of cranberries produced is very modest, amounting to only approximately two-tenths of one per cent on the gross dollar return. The method of collection, based on annual production, is fair and equitable to all growers and would provide adequate funds for projects presently contemplated.

13. The proposed marketing order is reasonably calculated to attain the objectives of such order and the declared purposes and policies of the Wisconsin Agricultural Marketing Act, and would be in the interest of the producers, processors and consumers of cranberries.

Decision

The proposed marketing order would tend to provide adequate financing for a much needed long-range research program applied to the production, processing and distribution of cranberries. The proposed order would also provide funds for an educational program on climatic conditions as they affect cranberry production, and specifically to provide a special service forecasting temperature, weather and other pertinent climatic conditions, and disseminating such information to cranberry growers.

Voluntary programs in the past have failed to get universal participation on the part of producers, with the result that the financing of such programs was often inadequate and insecure. This has prevented the development of long-range research and educational programs. The proposed marketing order would eliminate this problem and would permit the development of a program to fill a definite need in the cranberry industry.

It is my decision that the proposed marketing order, a copy of which is attached hereto and made a part hereof, should be submitted to the cranberry producers of this state to determine by referendum whether they assent thereto. Such referendum shall be conducted by mail ballot within 45 days of the date hereof.

A call is hereby made for nominations for membership on the 5-member advisory board to be elected at large at the time of the referendum. Such nominations, subscribed by five persons eligible to vote, shall be open until June 15, 1964.
June 1, 1964.

D. N. McDOWELL Director,
State Department of Agriculture

WHY ALL THE SHOOTING ?

Because, less than five percent of the acreage of the continental 48 U. S. states have insecticides applied to them in an average year. That only 41-hundredths of one percent of the total area generally considered favorable to wildlife, such as forests, grasslands, pastures, wildlands, etc, have insecticides applied in an average year; that 85 percent of the average acreage planted by U. S. farmers and ranches to crops each year is not treated with insecticides. (Figures Bulletin of the Entomologist Society of America)

A FEW PESTICIDE SAFETY DON'T'S

- Don't save or re-use empty pesticide containers.
- Don't leave mothballs where children can find them.
- Don't use a pesticide in the home if a gas mask is required when using it.
- Don't use your mouth to blow out clogged sprayer lines or nozzle tips, or siphon a pesticide from a container.
- Don't smoke while handling pesticides.
- Don't spray or dust outdoors when the wind is high.
- Don't apply pesticides near wells where they might contaminate the drinking water.

THE LINGONBERRY AGAIN

Interest in this country, at least in New England seems to be developing in the European Lingonberry, or native cranberry. At least two N. E. women have sent letters to the NEW ENGLAND HOMESTEAD, as to where some of these vines or bushes may be obtainable.

WISCONSIN WEATHER WARNINGS

S. J. Rigney, meteorologist in charge of the Airport Station Madison, Wisconsin has provided Prof. George C. Klingbeil extension specialist, U. of Wisc. with the schedule of radio and TV stations that carry weather forecasts of interest to cranberry growers. Dr. Klingbeil has compiled a list of 19 stations and this has been sent to the growers.

Klingbeil notes there have been some problems with revised weekend forecasts. Warren Wallin in charge of the Wisconsin Frost Warning Service, informs that in case of doubt or question on the forecast, growers can call him. The data is usually prepared by 11 a.m. daily and during critical periods he will be in his office from 8 to 10 p.m.

Dr. Klingbeil believes that system could be worked out where growers in one area could notify another of critical changes once such information had been obtained.

Cape Cod Co-op Elects Officers

Unit Pays Members \$11.14 Per Barrel

At the Annual Meeting of the Cape Cod Cranberry Cooperative Inc., held in Duxbury, Massachusetts the following Directors were elected: R. Bruce Arthur Plymouth; Harold A. C. Bumpus Plymouth; Orrin G. Colley, Duxbury; Charles E. Pratt, Carver.

Officers elected were: R. Bruce Arthur, President; Harold A. Bumpus, Vice-President; Orrin G. Colley, Treasurer and Clerk.

A report was made on the marketing of the 1963 Crop at an announcement that the 19

Season Pool earned \$11.144 per barrel. Final payments have been made to members less assessments to the Cranberry Institute of 3½ cents per barrel and to the Cranberry Marketing Committee of 2 cents per barrel.

SPRINKLER ITEM

Decas Brothers of Wareham, largest independent growers, this year have added about 30 acres under sprinklers, solid set. Their cranberry holdings comprise about 340 acres of bog.

Says "Bill" Decas, senior partner of the Decas Bros. unit, "We will continue to add sprinkler systems until every acre possible is under sprinkler protection. These systems not only provide frost protection, but irrigation when needed and I find are useful in reducing bog temperature on summer 'Heats.'"

FRESH FROM THE FIELDS

Continued from Page 6
The State Bog was only .66, average is 3.14.

Some Frost and Water Damage in May

On June first Dr. Cross Director of the Experiment Station said, there had been "some frost damage, but we have not yet determined how much. There was also some damage to vines from the fact so many growers held over for the four frost nights the last of the month.

"May could have been a much better month for the coming crop," he concluded.

May Good and Dry

June Starts Cold, Dry

The first two days of June were cold, raw and drizzly days, the two days racking up a minus 21. But there was still no substantial rain.

Bad Frosts

June third brought a perfect June day, but no rain. Also the night of the fourth brought another frost with temperatures down to 26. It was so cold that ice formed under the sprinklers. No rain, of course.

The night of the fifth brought a warning of 28 with bogs able to stand 29. On that same day

some 80 acres of woodland was burned over on the Cape, and weather officials said there was no substantial rain in sight for at least five days.

The night of the fifth of June brought another frost warning, "28-29, rather dangerous frost."

Rain and Drizzle Spell

June 7 and 8 were rainy and drizzly, with much fog, but it cleared during the day of the 9th. The measurement for the three days, as recorded at the State Bog, was only .43 of an inch. While this did not do much good it at least kept things from getting drier for the time being.

The first nine days ended with a minus 6 in temperature, but then came hot, humid weather.

WISCONSIN

May, Hot, Then Cold

The merry month of May brought July and December type weather. The first three weeks brought record breaking warm temperatures, excessive moisture, hail, and tornadoes. The last week brought record breaking continual frost along with no precipitation. The averages for the state for the month were six degrees above normal temperature and from two to four inches above normal precipitation. Warmest day was 93 degrees on the 20th and coldest was 17 on the 31st. Heat units are well above normal for the year and precipitation averages about 1 inch above normal. The outlook for June is for below normal temperature and precipitation.

Vines Developed Fast

Vines got off to a flying start with sand marshes which did not reflow having considerable hooking the later part of the month, with an occasional blossom. Had the cold weather not prevailed the last of May, the state would have had one of its earliest starts on record. Old time growers stated they had never seen vines develop as quickly as they did in mid May. Water temperatures had risen quickly in mid May, but cooled off the last week which should have prevented

any chance of oxygen damage when vines had to be completely flooded over.

First Brood Fireworm

With the warm weather came the first brood of fireworms and growers were more busy than usual in controlling light infestations so early in the season. Controls appeared effective and infestations light. Many drowned worms were found as a result of the deep frost flooding.

Hail Loss

Several damaging hail storms accompanied the early hot weather with the most damaging occurring on the 7th, starting in eastern Jackson county and traveling west thru parts of Wood and Juneau counties. Fortunately about three hundred acres of beds were reflowed at the time preventing serious damage. One exposed marsh in the storm reported a 90% loss. A total of 13 confirmed tornadoes were also reported during the period with one occurring in Wisconsin Rapids.

June Frosts

The extended frost period the last week of May continued into early June with some marshes reporting frost for ten straight nights. It is estimated the loss from frost was about 5% or 20,000 barrels primarily occurring the night of May 25th when north-east winds subsided after midnight and temperatures dropped rapidly. Coldest reported was 26 degrees that evening. During the cold period some vines were continually under water and numerous twenty degree readings with some in the teens occurring.

Electronic Temperature Systems

A number of Wisconsin growers are installing new electronic temperature systems which enable the grower to obtain a fast, accurate temperature reading from any part of his marsh within a minute. It is expected to be most beneficial in obtaining readings from the center of the beds where most damage occurs from either not using enough water or too much. This system represents the first important advancement in taking temperatures on cranberry marshes.

Cold and Dry

As of June 4th, Ray Bates reports the latest "news" from the Bandon area is the weather. There were many cold nights, and below average rainfall.

The sort of spring this has been has required many nights of pumping for irrigation and frost flooding for the low temperatures. Bandon area growers sprinkle for any temperature below 32 degrees.

Crop Prospects Good

However, he reports crop prospects were good as of June 4th.

Insects and Weeds

Cranberry fireworm was quite active and most growers applied insect sprays. Weed control has improved. For the past two years growers have used granular 2-

4-D and Chloro I. P. C. for some weeds.

Improvements in Sprinklers

Because of the promise of better returns for the crop this fall, a great deal of bog improvement is being done. New and improved pumping equipment for sprinkler systems is being put in.

New Cleaning Process

The latest equipment is the flotation cleaning process made by the Key Equipment Company, an Oregon firm. This process of cleaning has been used for other crops, such as peas, and is now being used on a trial basis for cranberries, and "great" things are expected of it.

Rain, June 4th

Rain on the Fourth of June

Some rain came on the 4th of June, Bates adds in closing his notes.

Driest May Ever

The past month was the driest May in the 35-year history of weather recording at the Cranberry and Blueberry Laboratory. Only 0.36 inch of rain occurred, about 3½ inches less than normal. This was considerably less than the previous records—0.74 inch in 1957 and 1.05 in 1939. It was one of the driest months of any season. Less rain occurred in June, 1949—0.14; July, 1955—0.18; September, 1941—0.21; October, 1963—0.26; and December, 1955—0.30.

Prolonged Drought

More than half of the rain (.21) fell on May 1. Thus only .15 occurred from May 2 through June 1, a period of 31 days. This is one of the longest dry spells ever recorded at this station.

17 Frost Calls

In regard to temperature, May was just about normal. The average temperature was 62.6°F., only 0.2° cooler than normal. There were some extremely cold nights. Seventeen frost calls were issued to cranberry growers, with the low being 25°. Blueberry growers escaped any ruinous frosts during May. A low of 30° was recorded in blueberries on May 30 but no serious damage resulted. The drought, however, is having a very serious effect on the blueberry crop. The lack of moisture is causing a reduction in size of early and midseason varieties and is impairing the set of the late season varieties.

Insects

Early drawn cranberry bogs, as of June 1, are showing an occasional open blossom. The tipworm infestation is extremely low but Sparganothis larvae are moderately abundant. Black-headed fireworms are staging a mild comeback in some areas after having been a negligible factor for over ten years. Very low tipworm populations in 1963 augurs well for the 1964 crop. A very high percent of uprights are bearing blossom dangles.

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INDUSTRY VOTES IN THE MARKET ORDER AGAIN

The growers have once again spoken and the cranberry industry is to have a Federal Cranberry Marketing Order for the next two years. This is what the majority of the growers want — a large majority.

We think this is just as well. While we continue to be opposed to federal control of the actions of anyone, in the case of the Marketing Order, it does seem to be working out to the advantage of the industry.

And to the consuming public in general — as it gives more “orderly marketing,” which in turn stabilizes prices, so there is no wild fluctuation and the buyer of cranberries knows where he or she is at.

“ON WISCONSIN”

It is indeed interesting to note that the growers of Wisconsin seem to be pretty generally in favor of a State Marketing Order. The assessment will probably be \$2.00 per barrel as the fairest way of making the cost even.

The fund will be used for frost warning system and for additional research. These are obviously worthy aims, and should, eventually, increase state production.

Remember the Wisconsin slogan “On Wisconsin.”

PACKAGING

This is not to be construed as adverse criticism. But do you realize the true cost of all this fancy packaging? It adds tremendously to the cost of a product, say processed cranberries, especially in glass.

This is money which might go to the grower. However, we believe in this modern day and age that the housewife demands it. She likes an attractive package. Many products such as cheese, for instance, result in a useful tumbler which she can keep and use for second best.”

This packaging is an “evil” which we must live with.

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WOODS FIRES

As forecast it looks like this is turning out to be a bad year for woods fires, in the Cape area. Such carelessness seems inexcusable on the part of whoever causes these fires. It seems a little precaution could be taken so easily. Such fires not only damage or endanger bogs, but destroy beautiful and valuable woods.

WIND AND DROUGHT

Most cranberry areas reported that much of May and June so far has been a month of drought and of high winds which have aggravated the dry situation. Yet, most areas also report good crop prospects as of June 10th.

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Late, Cold Spring

This was one of the coldest, latest springs for some years past. Only from May 20 for a week was there any warm, spring-like weather.

Precipitation Was Down

The precipitation for May to the 27th was only 2.07 inches of measurable rainfall, but most days were overcast and windy. The mean maximum temperature (through the 16th) was 56.75 degrees, and the mean minimum was 41.73 degrees, with an average temperature of 49.25 degrees.

Season Two or Three Weeks Late

The Extension Agent for Pacific County estimates the season to be two or three weeks later than last year. In spite of this, however, the bud growth looked good in most areas. The bogs that were under irrigation for some time were ahead of those bogs that were not irrigated.

Chemical Applications

The week of May 20 was excellent for applying fertilizers, fungicides and other sprays and treatments. The growers had been urged to check for fungus, fireworm and the strawberry root weevil, which can do serious damage to the root system.

So Work Goes on Apace

The above paragraph shows that work is going on apace, even though the weather was not ideal.

Experiment Station Sprinkled

Sprinklers were on at the Long Beach Station for frost for 8 nights during May for a total of 28 hours. The reason for this was that the bog temperatures are usually much lower than the official minimum temperatures. State bog minimums were 31 and 32 degrees; and on two occasions 28 degrees, on four occasions 30 degrees. Obviously the colder spring meant cooler bogs.

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Cranberries Take Part In Foreign Product Sales

Experts note: The following was distributed by Lloyd Williams, with the USDA, whom many remember as the editor of the "Cranberry World.")

Cranberry Growers Participating

The nation's cranberry growers, processors, along with 43 agriculture industry groups, cooperating with the U. S. Department of Agriculture in a program that is getting results from farmers and the entire country in the form of increased agricultural exports.

The market development program was begun in 1955 when exports of U. S. agricultural commodities were only about \$3.5 million. The exports have climbed

steadily since that time and are now running at the rate of about \$6 billion a year. More than 15 percent of the annual production of U. S. farmers is now being sold overseas.

The market promotional mechanism which helped bring this about is a cooperative effort of private industry and government with each contributing a share of the costs. The Government's financial contribution comes primarily from foreign currencies derived from the sale of surplus farm products under the Food for Peace program. The Department of Agriculture works out cooperative agreements with the Cranberry Institute and other commodity associations for market development activities in foreign countries. The associations plan and direct the project activities under the general super-

vision of the Department.

The cooperators pay all supervisory costs plus an agreed percentage of other expenses. They bring into the program the technical knowledge and personnel of the U. S. industry as well as foreign importers, distributors and processors.

The commodity groups, in addition to cranberries, include cotton, soybeans and soybean products, feed grains, wheat, tobacco, rice, dairy products, livestock and meat products, poultry, citrus fruits, red cherries, prunes, raisins, seeds, and dry beans. Practically all of the U. S. agricultural products with a major stake in foreign trade are represented in the program.

The market development activities vary according to the needs and resources of the various commodity groups. Considerable emphasis is placed on servicing and informing the foreign buyers of U. S. agricultural products. Technicians are sent overseas to show the buyers how to use the products, and teams of foreign industry leaders are brought to the U. S. to learn how the American products are marketed, processed, inspected, and prepared for shipment overseas.

Special promotions are conducted in the important foreign markets, like Western Europe and Japan, making use of such techniques as fair trade exhibits, trade seminars, cooking schools, recipe contests, retail displays, publicity, and paid advertising in trade and consumer publications. Trade associations overseas cooperate in these promotional programs and assist in extending the benefits of the market development program.

The cranberry industry is represented in the program by the Cranberry Institute. The cranberry foreign market development program began in late 1961 and is now actively underway in the United Kingdom and several Western European countries. Foreign sales have increased as a result of the promotional activities of the Institute and further

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Mass. Cranberry Station and Field Notes

by CHESTER E. CROSS

Director

The weather of June was more important as a continuation of the dry and sunny trend of May than for its own averages. In spite of abnormal amounts of sunshine it was about 1° a day cooler than normal. A very local shower (0.90 in.) at East Wareham on June 24 brought almost half the month's rain (2.15 in.), and most of the cranberry-growing area had scarcely an inch for the month. This was doubly serious because only 0.66 in. was measured in the thirty-seven days preceding June 1st. This very serious drought was temporarily ended during July 2-4 by widespread and recurrent thunder-showers, which brought a total of 1 to 1½ inches of rain to all cranberry bogs.

Water Damage

Though there is rather little

dry weather damage as such to cranberry vines and their blossoms, the dry spell brought real damage of another and curiously opposite sort—"water damage." This first appeared after three consecutive frost nights, May 28-30, and was increased after the twin frost nights of June 4 and 5. Because of very short water supplies, many growers "held-over" the frost floods of the first night to protect their bogs from frost on subsequent nights. Abnormal numbers of sunny days in late April and May caused a more rapid development of buds and new growth than the temperatures indicated. This new growth had a greater need for oxygen than could be supplied from the flood waters which warmed considerably in the bright days between frost nights. Most late

spring frosts of recent years have been one-night affairs, so there has been little of this "water damage" for many years. It is still too early to appraise the extent of damage, but the figure of 10% should cover both frost and water damage. It bears repeating that growers need more modern and more rapid and more complete control of water in present day cranberry culture.

Quality May Be Sound

The June keeping quality forecast was issued with a recommendation for using fungicides to improve the general quality of the crop. Considerable and late frost flooding tends to weaken the basic quality of the crop. A period of 3-4 days of thunder-showers and high humidity with warm temperatures has just come in early July during the peak of early-water bloom. This, and the fact that the crop generally appears heavy and a week ahead of normal, suggests the quality forecast may be sound this year.

Gypsy Moths

Large areas of forest in the upper Cape have been completely defoliated by our old enemy, the gypsy moth caterpillars. It seems such a pity to find this pest spreading devastation over Cape Cod again, destroying our green forest, and destroying the home of our wild life. Because a few misguided people complain of using D.D.T. in small areas, a few years will now suffice to make it necessary to treat very large areas with the same chemical.

The large attendance at the bog management clinics held June 30 and July 1 at the Cranberry Station and at North Harwich was gratifying to the staff who gave talks on insect problems and controls, weed control, irrigation and quality control. It also indicated the invigoration that is coming to the industry from a return to a profit-making status. Crop prospects, despite frost and water damage, continue to be very good, bee activity is heavy indicating

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healthy flowers, and the early-water set appears excellent.

Plans are well ahead for the annual meeting of the Cape Cod Cranberry Growers Association on August 18. Note the time, you will want to be on hand.

Expect Average Blueberry Crop In New Jersey

Reports from blueberry growers to the New Jersey Crop Reporting Service this June indicate

the 1964 blueberry crop is expected to total 1,680,000 trays of 12 pints each. If realized, this will be an increase of 18 percent over the 1963 crop of 1,424,000 trays but 2 percent smaller than the 1962 total of 1,716,000 trays.

The upward trend in acreage continues with a record high 8,400 acres expected to be harvested in 1964—an increase of 9 percent over the 7,700 acres harvested in 1963. Prospective yield this season is 200 trays per acre, 15 trays more than the unusually poor yield realized last year but well below the State's potential. The highest yield per acre was 350 trays in 1960 while the 5 year average (1957-1961) is 267 trays per acre.

Blueberry bushes were in a somewhat "run-down" condition at the beginning of the 1964 growing season reflecting the cumulative effects of the severe winter of 1962-63 and the very dry summer of 1963. Unusually warm weather last October caused buds to soften and be more susceptible to further winter damage. Very dry weather this May and early June reduced nectar flow and discouraged bee activity during bloom and caused a portion of the berries that set to wither or drop. Sizing has also been hampered.

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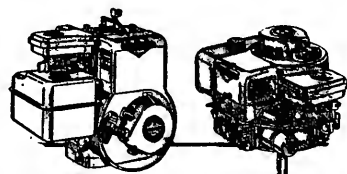
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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of July 1964 — Vol. 29 No. 3

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Some Very Hot Days in Early June

A heat wave struck on the 11th and 12th of June, with temperatures well into the nineties. But still no rain. The weather continued with summer heat, and although there were a few showers there was no rain of real consequence, although the 13th brought a soft rain which continued most of the day.

Rainfall Slightly Down

Up to and including the 15th of June the rainfall had been 1.04 inches as recorded at the Cranberry Station. This is somewhat below normal for the period and took in a sharp heavy thunder-lightning storm on the night of the 15th.

Temps Down —

Could Aid Quality Fruit

The temperature for the first fifteen days was also decidedly below normal, the minus degrees for the period being 53 (Boston). This cool dry weather could, if it continued throughout the month give several additional points in favor of keeping quality, which in the preliminary report issued by

the Cranberry Station was anything but favorable.

June 16th Frost Warning

There was a late frost warning put out on the night of the 16th for frost, 28 degrees. However, the wind blew most of the night and the temperature reached only into the low 30's. Warning was sent out as a precaution in case the wind should have dropped.

Hot and Humid

In the fourth week of June the weather turned much hotter and humid. The 21st of June was a terrifically hot day. (Editor's Note: A thermometer placed in his yard on that day hit 122 in hot sun and this was an accurate thermometer.)

Helpful Rain 24th

The 24th brought intermittent rain and fog which culminated in a hard sharp thunderstorm in the

evening. The total precipitation as recorded at the State Bog was 9/10 of an inch, a help, but the Cape area was getting less rain than other areas, this storm leaving two inches around Boston.

June Cooler Month

The month of June ended with a 27 minus in temperature which is on the beneficial side for keeping quality, Dr. Cross of the Experiment Station stated on July 1.

Rainfall Deficient

But rainfall was deficient with reading at the State Bog being only 2.15 for the 30 days with the average June rainfall being 3.21 inches. It was reported as being even less on the Cape than in Plymouth County. There brown bog sides were common.

As July came in the critical stage of the drought was being reached.

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Mass. bogs had a heavy bloom and on July 1 were about a full week ahead of normal, according to Dr. Cross. The bloom was not only good, but the set was proceeding fine. There was plenty of bee activity, both honey bee and bumble. But the critical need was more moisture and that was the main concern as July came in. Sprinklers have been used, flash flooding, etc., but real heavy soaking rain was the demand by all growers.

July Starts Hot — Wet

July first was a real scorcher with temperatures up to 95 degrees and more. In the late afternoon and early evening thunderstorms moved in and there was considerable rain. Boston got more than 2 inches, and the violent storm did a lot of damage to buildings and two deaths were attributed to the storm.

Rainfall at one Rochester bog was more than an inch, more than an inch at Falmouth on the Cape, but at State Bog .89 of an inch was recorded. This, in the opinion of Dr. Cross, did a lot of good at a critical time, but it did not really end the long drought situation.

The long fourth of July period was marked by rain and fog, the amount of rain which had been recorded at Mass. State Bog of the 6th was 1.38 inches. The temperatures for the period were several degrees above normal.

Flash

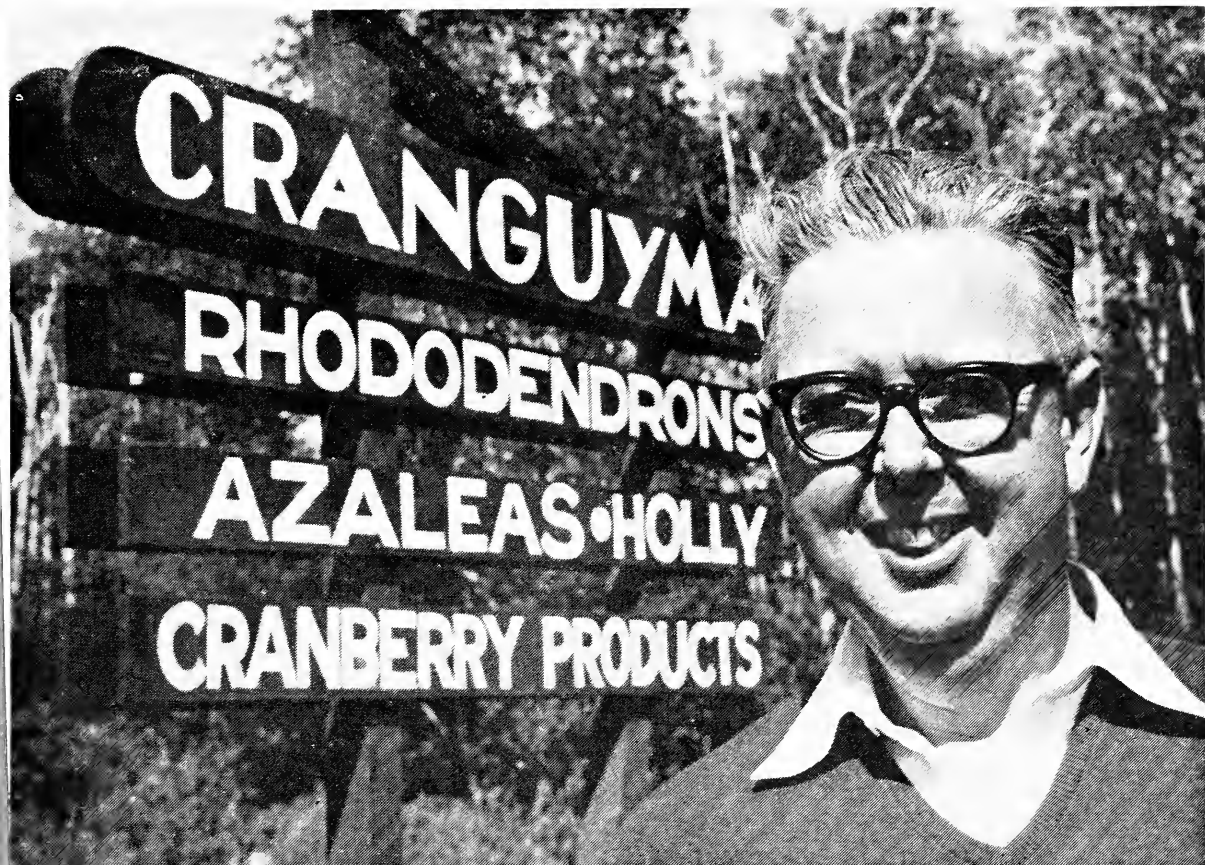
The Mass. drought was pretty well broken by the end of the second week in July, the weather being rainy, drizzly, foggy. Precipitation by the 13th totalled 3.0 inches as measured at the State Bog.

WISCONSIN

Temps Up — Rain Down

Overall June was a good month for cranberry growing in the state, although locally there were some damaging effects. Temperatures averaged almost four degrees above the normal, while rainfall was below normal by

Continued on Page 23



Glenn by the entrance sign to Cranguyma Farms.

(Photo Ackeroyd Photography, Inc., Portland, Oregon)

CRANGUUMA IN WASHINGTON STATE IS FABULOUS CRANBERRY PLACE

Frank O. Glenn, owner and operator is also a Fabulous Person — Is a member of the Cranberry Marketing Order Committee and Active in the Industry in Other Ways as Well

by Clarence J. Hall

Much has been written about Cranguyma Farms at Long Beach, Washington, by far the largest cranberry property west of the Rockies, not only in Cranberries Magazine, as for instance in October, 1944 issue, the July, 1956 among others, and also in other publications, but not too much about its present operator Frank Oliver Glenn, Jr. The operation of about 115 acres of cranberry bog, at Cranguyma proper, plus that of about 60 acres of the property of the late Rolla Parrish, now being restored, plus all the other enterprises of Cranguyma is a mean job. Total acreage of Cranguyma is about 1300.

Cranguyma produces about half of the entire Long Beach cranberry district — production in 1961 was 17,000 barrels when 100 acres were harvested. Production on the same acres in 1963 was 15,500 bbls., and some sections of this vast bog have averaged more than 250 to the acre.

Cranguyma More Than Cranberries

But Cranguyma is much more than cranberries, it is an experimental farm — certainly no other cranberry property that we know

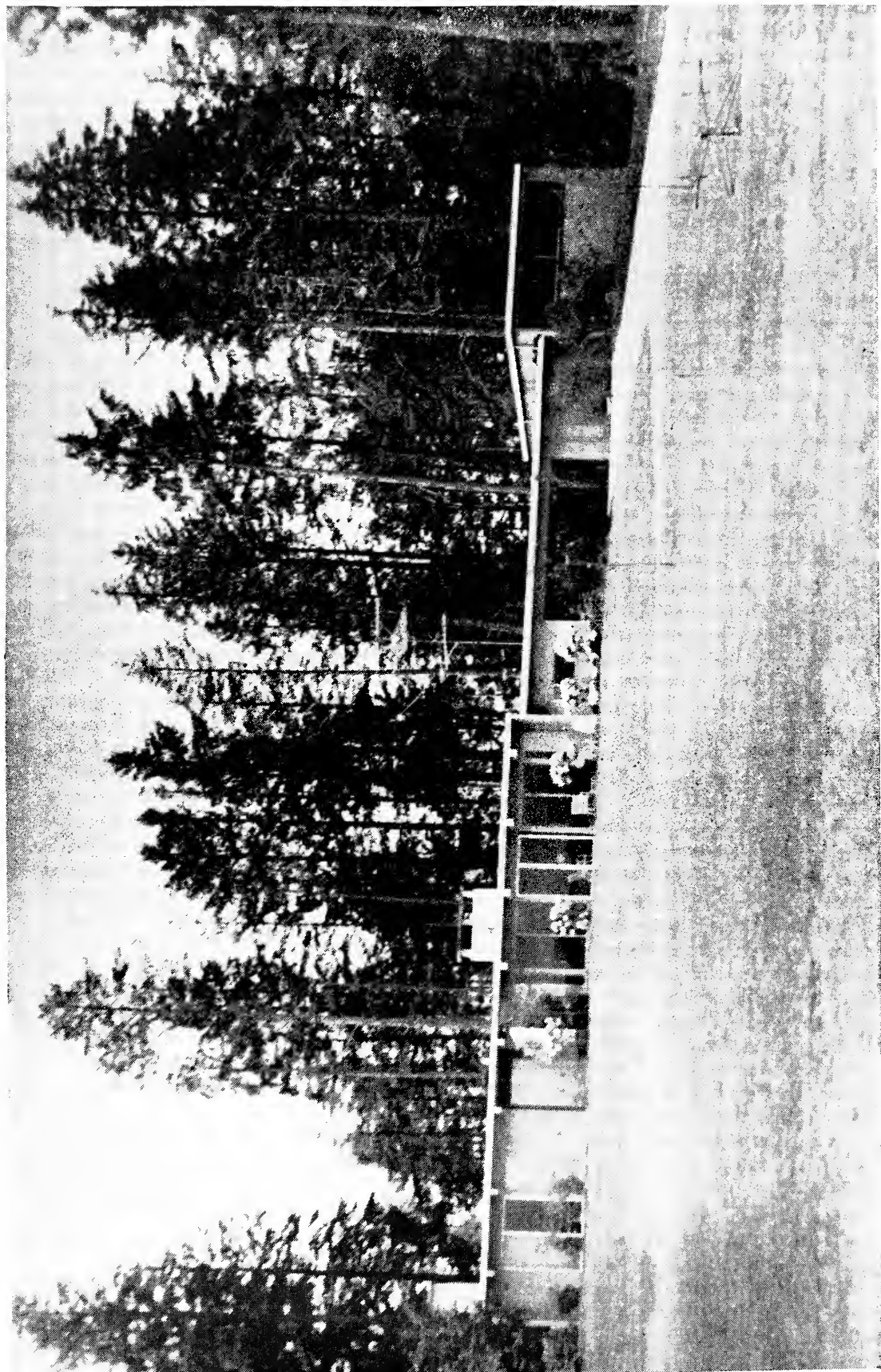
of, are there hundreds of peacocks, strutting, screaming and dragging their long and brilliant tails over the bog shores, as they roam at will. At one time there were many other exotic, imported

birds, such as White Swan, Black Swan, Chinese geese, Guinea hens, Wood East Indian, Pintail, and many other kinds of ducks. These were all obtained from a Connecticut breeder. Only Peafowl are left and they have grown to their present numbers from six that were purchased in 1946.

Since Cranguyma has become a game refuge with no hunting allowed the ducks purchased in the east have been replaced with hundreds of wild mallard coming into the lake in front of the house in the early fall and later in the fall thousands of Canadian honkers are seen in the middle of the farm, particularly in the blueberry patch.

Noted For Its Nurseries

Cranguyma is noted for its nurseries and other plantings of rhododendrons, with varieties from many countries including



This is a view of the extremely modern house of the Frank Glenss at
Bogside. (CRANBERRIES Photo)

some from Europe and Asia. There are plantings of azaleas, holly and various nursery items. There are several large lakes on the property, about five miles of standard-gauge railroad track over the bogs, the largest sprinkler system in the cranberry industry. There are no less than 1100 sprinkler heads on the home property with more added as new land was put into production.

There are cultivated blueberry plantings about 10 acres, ConCORDS, Stanlys, Rubels, Rancocas —Pemberton, Jersey —

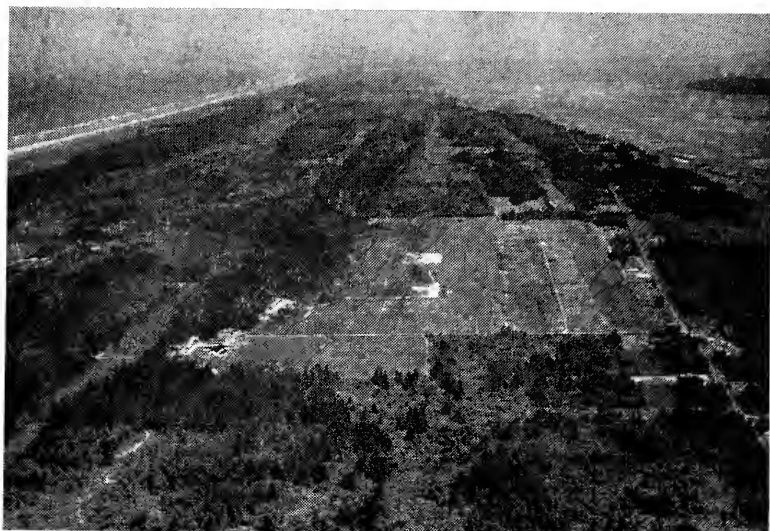
Frank O. Glenn

Mr. Glenn is the son-in-law of the late Guy C. Myers who started to build the Long Beach property in 1940. Mr. Myers was a noted financier who lived in Seattle and had his office at 35 Wall Street, New York City. His picture was once on the cover of TIME magazine. Glenn is a large man, stocky in build, graying, with a ready laugh and a mind filled with much information concerning Cranguyma, the cranberry industry and other matters. (He is sometimes known as "Butch," a nickname —received in college in Virginia.)

He was chosen as a principal on the Cranberry Marketing Order Committee of 7, and serves in that capacity. He is a member of the West Coast Advisory Committee for Ocean Spray and is also Secretary of the Long Beach Cranberry club.

Glenn a New Yorker

He was born in Brooklyn, New York October 21, 1917 and called this home for 25 years. His father Frank O. Glenn — was in the wholesale dry goods business — in New York. He had his own Corporation which sold the output of some of the Fall River and Providence R. I. textile mills — He was graduated from Polytechnic Preparatory Country Day school in Brooklyn and then received a bachelor of science degree in banking and finance at Washington and Lee University in Virginia, being graduated in



Cranguyma is about in the Geographic Center of the Long Beach Peninsula. View is looking north, the Pacific on the left and Willapa Bay on the right.

(Photo Ackeroyd Photography, Inc., Portland, Oregon)



Glenn at peaceful Deer Lake at Cranguyma, with wild life floating on the surface. (Photo Ackeroyd Photography, Inc., Portland, Oregon)

1939.

At college he met his future wife, then Miss Marguerite Myers, who graduated from Sweet Brier College in Virginia with an A. B. degree in 1939. Prior to Sweet Brier Mrs. Glenn attended Mills College in San Francisco.

After graduation he went to work for an Investment Banking and Stock Brokerage member firm of the New York Stock Exchange

and attended the New York Stock Exchange Institute.

His War Service

His business career was then interrupted by the Second World War. He claims the only contest he ever won was the draft. He served in the U. S. Army in the Signal Corp., beginning in June 1941. He then applied for and was accepted on the Officers' Training School at Fort Mon-

mouth, N. J., receiving a 2nd Lt. commission June 3, 1942. The next day he was married at St. Bartholomews' Church in New York and then left for Cambridge, Massachusetts where the Army sent him to take a course in electronics and radar at Harvard University.

Next he was sent to Wright Field at Dayton, Ohio. After the Army he took four years of additional education at Oregon State College. He received a B. S. degree in horticulture and did all of the graduate work and thesis for a Masters degree in this subject.

His first visit to Cranguyma was on leave in 1943. After discharge from the Army in October 1945 he settled in Long Beach and went to work at Cranguyma. In November of 1955 he purchased Cranguyma Farms.

The Name "Cranguyma"

The name "Cranguyma" by the way, is not Indian as it might sound and are many of the Western place names, but is a coined word by Mr. Myers. The first syllable is from cranberries, the second is Mr. Myers first name and the third Mrs. Myers first name "Amy" spelled backwards. The location was selected, for one thing, because of the

temperateness of the Long Beach climate, neither very hot in the summer nor very cold in the winter. Its building, under the direction of the then foreman Joe Alexson, an experienced cranberry grower, involved the use of much heavy equipment. Our first visit there was in 1944, our second in 1949 when Dr. Harold Clarke was superintendent, Dr. Clarke now a recognized authority on rhododendrons. There are more than 300 species at Cranguyma. The rhododendron and the blueberry, by the way, belong to the same botanical family.

It has been one of the aims of the late Mr. Myers to develop new and different uses for cranberries. He had donated funds to the Food Technology Department of Oregon State College and later built a cannery at Cranguyma. Up to last year, Cranguyma has put out Cranberry specialty products that were developed at Oregon State College and also at the Farm. A partial list includes such things as Cranberry jelly, (as compared to jelled sauce), cranberry concentrates (up to 4-fold concentrate made with a vacuum pan and used by the Food industry for colorings, flavor, etc.) cranberry sherbet

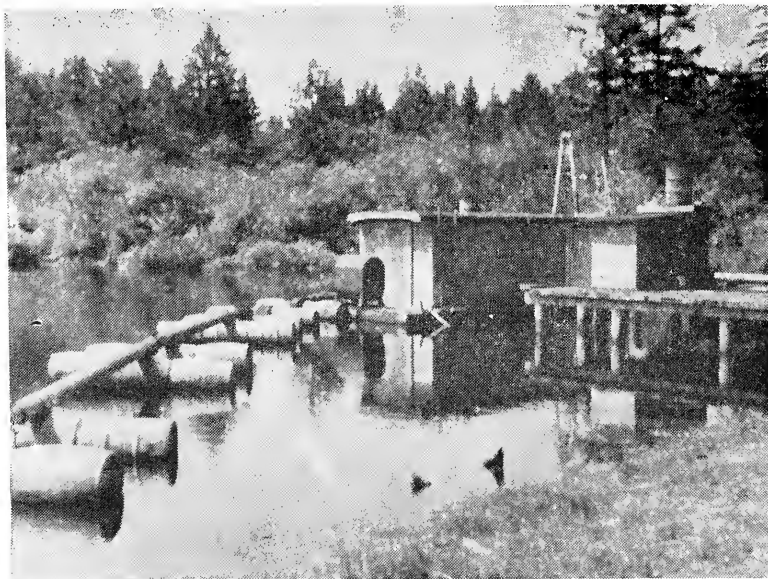
base and cranberry ribbon ice cream (which were sold to ice cream manufacturers particularly in Southern California); steamed cranberry pudding; cranberry-raspberry jam, cranberry strawberry preserves and cranberry blueberry preserves.

In addition a very high quality whole cranberry sauce (the Greenbrier at White Sulphur Springs has made the statement that it is the best food product they have ever served there) jellied sauce, sweetened cranberry juice and cranberry juice cocktail. Gift boxes of cranberry product were put up.

Well-Engineered Water

There is an amazing well engineered water system at Cranguyma, there would have to be with 1100 sprinklers. There are two five-stage Peerless turbine pumps, each one being driven by a 671 GMC government surplus Diesel engine of approximately 200 horsepower; the water goes through transite pipe 18 inches in diameter at first, then down to six inches. The laterals are galvanized pipe ranging from inches down to $\frac{3}{4}$ inch. The sprinklers are used for frost control, for irrigation to lower high temperatures and for distribution of chemicals. Fertilizers, insecticides and even Fungicides have been put through it.

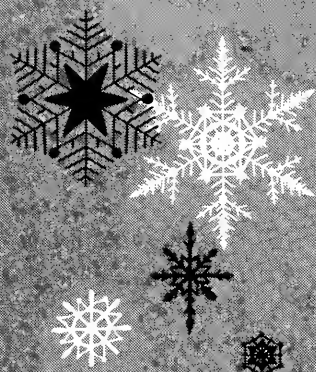
Mr. Glenn seemed, on this third visit of your editors to Cranguyma last year to understand most thoroughly the operations of this system. We arrived at the pump house, it so happened after a "hat-lifting" if not hair-raising ride in a Volkswagen driven by Mr. Glenn. In taking us ("Jim D. Crowley and myself") on a quick tour of parts of huge Cranguyma one night where we were staying or less ignored roads. He sometimes merely took the shortest route between two points, across fields and up and down hill at a dale, regardless of bumps. Mr. Glenn, at times, at least seems like rugged conveyances. I rattled up to the Crowley house at Cranguyma it seems Mr. Glenn made in an old truck.



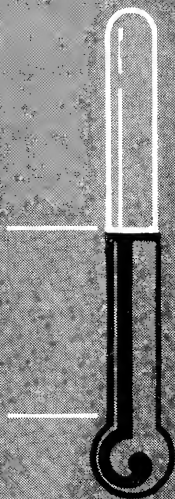
Sanding scow on sump, showing sanding pipe line to a bog.

(CRANBERRIES Photo)

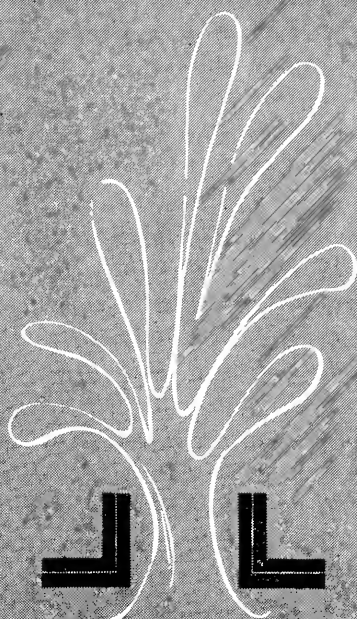
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Showing the Weather Station at Cranguyma.

(Photo Ackeroyd Photography, Inc., Portland, Oregon)

Cranguyma Is Big

Cranguyma is big, the bog is largely in one piece. The property is mostly of peat, heavy from two to 6-7 feet deep. Variety planted is entirely McFarlin. Instead of building roadway all around it was considered more economical to put in the standard-gauge track. Over this operate sprayers and other equipment. The "trains" are pulled by "Speeders," engines which were originally built for use in logging.

Water comes from the lakes on

Cranguyma, the largest of which is Gile Lake. Sand is supplied by a sand dredge operation, although the bog has never been resanded. Through the use of the dredge large areas in the lake have been deepened to 15 feet to increase the capacity.

The ground equipment sprayers consist of 2 Hardeies, a Buffalo turbine and smaller equipment. Two parathion sprays have been put on by helicopter over the past several years. The tall, tall evergreens of the Pacific Coast make the use of the straight-winged planes difficult, but Glenn has been trying to develop a method for using the straight-winged craft.

During the winter months of January and February when the vines are most dormant pruning is done by using pruning rakes and an attachment to a Gravelly tractor. Much less pruning is done than on most bogs.

Spring finds weed control measures put into operation. Chemicals, paint thinner and hand weeding are all used and still weeds are the biggest problem. Of the chemicals used some excellent results have been obtained from Sazine on young plants and Casoran used experi-

mentally last year showed great promise on such things as horsetail, loosestrife, "cotton top" and some other weeds.

Also in the spring any new acreage is leveled, sanded and planted using a homemade large disc made out of an old flat pulley on the front end of the Gravelly tractor.

Harvesting

Harvest starts usually around October first. Cranguyma several years ago did away with field boxes and went to tote bins holding approximately 10 barrels each. Areas of the bog are flooded and the water reel method is used. The berries are gathered at the railroad track and a portable bucket elevator is used to load them into the tote bins on a railroad flat car. This is unloaded at the plant and the berries are fed onto a cleaning belt and then through the sorting mills and onto the sorting tables in the usual manner.

Two picking machines, one from Wisconsin and one from Grayland Washington are also in use.

Most of the harvest labor are former gillnet and troll fishermen from Ilwaco. For the most part their parents came to this country from Finland and settled Ilwaco where fishing and cranberries seemed to go together.

Cranguyma has a machine shop complete with a lathe, drill press, bandsaw, electric welder, acetylene welder and other tools. In this shop various cleaning and screening equipment as well as water reel machines and other Cranberry equipment is turned out. It is also the maintenance center of the farm.

Last winter after the disastrous Columbus Day storm when the wind was full gale at better than 100 M.P.H. — was spent in logging the fallen timber. The big machine in Raymond, Washington issued the farm a branding iron, a fall was hired, a log truck was hired. A donkey which was last used in 1946 in clearing the bog was pulled out of the brush started



Bog Spraying at Cranguyma.

(Photo Ackeroyd Photography, Inc., Portland, Oregon)

up and used for a loader. Then a "cat" was use for logging and the operation began. Approximately 100,000 board feet of timber was delivered to the log raft and a lot more was left "cold decked" to work on this winter. There are still some areas not cleaned up from the blow down but it is hoped to do more this winter slack season.

The farm is operated by a rather small year round crew. Mr. Edward Bostrom is the foreman in charge and also runs the machine shop. He is assisted in the field by Mr. Edward Nort.

The Glenn Family

Mr and Mrs. Glenn have four sons, Frank O. 3rd, 20; Guy M., 18; Richard Ross, 14 and Jonathan 8.

Frank is a Junior at the University of Washington. He is a member of Phi Kappa Sigma. He graduated from Ilwaco High School where he was an all county Football player. Prior to Washington he went to Washington and Lee in Virginia where he played football. Guy is a Freshman at Washington and Lee and also a member of Phi Kappa Sigma. He graduated from Ballard High School in Seattle an honor student. Dick is a Feshman at Ilwaco High School and President of his class.

A Most Modern Home

It has often been said to make comparisons is odious, but, it cannot helped be remarked that the Bog-side home of the Glenns is perhaps the most elaborate and certainly the most modern home by a bog in the industry. This is a single-story building, consisting of about 3000 square feet of floorspace, utilizing glass.

The house faces east and overlooks Gile Lake, cranberry bogs and in the distance the Willapa Hills and Bay.

One feature of the house are heat pumps which furnish both the heat and the air conditioning. These work similar to a refrigerator. There are two air to air units one for the bedroom wing and one for the main part of the house. The unit consists of a fan with an air compressor. When

the air is compressed the heat in the air is also compressed and this heat is picked up by a tube of freon which goes through a radiator under the house. This radiator has a fan behind it and is connected to the ductwork so it is a hot air system in the house. There is no fuel as such used, the only electricity used to power the two electric motors on each unit — equivalent to 5HP on the larger and 3 HP on the smaller. The system reverses instantly for air conditioning so that the whole house is kept at the same temperature plus or minus two degrees night and day 365 days a year.

Other activities are being a member of the Bishop's Committee of St. Peters' Episcopal Church and a Commissioner of the Port of Ilwaco. He is a member of the Rainier Club and also the Washington Athletic Club in Seattle.

Last year a new venture was started when a new charter fishing boat "the Tondeleyo" was put into service operating out of the mouth of the Columbia River. It has a licensed skipper and takes sport fishermen out in the ocean fishing for Silvers and Chinook Salmon.

At the present time a new project is being started, the development of an experimental jet water pump ski boat. This boat will be approximately 17 feet long and powered by an Interceptor gas engine. It should be capable of speeds up to 60 mph. It is being built by the Starfire Boat Co. of Seattle whose boats have pulled skiers to 6 international ski records here and abroad.

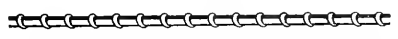
Glenn Bullish On Cranberries

Glenn says "I believe in the future of the cranberry industry very definitely. I am very much in favor of the cranberry marketing order as I am convinced that, when necessary, this is a very useful tool in orderly marketing of our crop. When chaotic marketing conditions develop as they have in the past some of the small handlers are able to get in and out of the market fast and

not get hurt but this isn't much help to practically all the growers in the country who will suffer from such conditions. Last years crop was approximately 1,000,000 bbls. Next years could be 1,500,000 or even more at the rate Massachusetts barrels per acre are increasing. The trade certainly knows what is going on in our industry and if there is a surplus they are hesitant to buy as they feel they might stock up and then the price would break. Everytime a housewife goes to a store and does not see cranberry sauce, or asks for it and does not get it we are probably losing these sales forever. However, when in some years we growers produce more cranberries than can be sold then if we growers withhold the surplus production and use it for research and development of other markets such as overseas then in my opinion we have really helped ourselves in two ways."

Both Mr. Myers originally and Mr. Glenn have been satisfied with Ocean Spray being their selling agent. Mr. Glenn states the most important thing to him as far as marketing is concerned is how much is he going to get per barrel for his cranberries over the long pull. So far he believes Ocean Spray will return the most. He feels Ocean Spray growers are fortunate that they have not lost control of management the way some of the growers in other farm coops apparently have. If management does not produce enough for the growers then management can be replaced.

Two criticisms that he has are that he finds people frequently let personalities interfere with good judgment and attaching undue importance at times to some relatively unimportant matters. The most important questions to both small and large growers is "Is what we are getting for our crop sufficient to satisfy the effort we put into it?"



READ CRANBERRIES



What Public Law 480 Has Accomplished In Ten Years

The U. S. Has Moved Millions of Dollars Worth of Food, Built New Export Markets and Helped the World's Needy Nations

(Editor's Note: A similar goal is what the Cranberry Institute is working towards)
by **ORVILLE L. FREEMAN**
Secretary of Agriculture

Ten years ago this month, the 83d Congress enacted Public Law 480—the Agricultural Trade Development and Assistance Act of 1954.

Rarely has any governmental policy or program contributed so much to so many people and to so many diverse interests as this law, on which we have based our Food for Peace program.

It has enabled this nation to advance the interests of its own citizens as they have sought to meet their responsibilities to less favored people.

It has contributed to well-being for both our agriculture and commerce as it helped relieve hunger and suffering among men, women and children in underdeveloped parts of the world.

It has helped these emerging nations to an accelerated take-off in economic growth that will speed the day when they will become partners with us in world trade.

And by promoting higher standards of living for people going through the revolution of rising expectations, it has promoted free institutions among these people, thus contributing materially to American hopes for security and peace.

Meets Needs Of Our Age

Under Public Law 480, we have developed programs particularly appropriate to meeting needs that arise out of the revolutionary changes that characterize this period in which we are now living.

One of these changes, brought about by the scientific and technological revolution, is such a

vastly increased potential for production of material goods that we can foresee an age of abundance in which we would produce enough food, clothing, and shelter for all. Nowhere is this productive abundance demonstrated more dramatically than in American agriculture.

Our farms are the most productive in the world, and their productivity continues to increase. In the past 10 years, we have reduced our cropland by more than 50 million acres, but we still produce more than our commercial markets can absorb.

During this same period, P. L. 480 has enabled us to augment our commercial sales by moving 120 million tons of American farm products to foreign consumers. This has included 3 billion bushels of wheat—which is more than two of our bumper crops. It has included 10 million bales of cotton—about two-thirds of a year's production—as well as 100 million bags of rice, 6 billion pounds of vegetable oil, and substantial amounts of feed grains, tobacco, and dairy products.

Another change that is characteristic of the age in which we live is the emergence—from colonialism and from relatively primitive economic development—of scores of new nations, whose people are reaching desperately for the advantages and higher levels of living that accompany modern economic progress. Hunger and malnutrition abound among the people of most of these emerging nations—yet too often they have not reached the stage where they can either produce or purchase enough food to meet their requirements.

WHY SELL IDENTICAL FRUIT UNDER DIFFERENT LABELS ?

Some farmers asked George Mingin, marketing manager for Eastern States Farmers' Exchange West Springfield, Mass. His explanation; because you can sell to different stores and chains in the same neighborhood.

(from the FARM JOURNAL)

"Don" Kent To Be A Featured Speaker At August Meeting Of CCCGA

The annual meeting of Cape Cod Cranberry Growers' Association is scheduled for the State Bog, Tuesday August 18. This is the "big" meeting of the growers to consider cranberry growing and to some extent marketing problems. As speakers two "top-liners," have so far expressed their intention to attend. One is the noted weather forecaster of TV Station number 4 in Boston, "Don" Kent, and the other is Dr. Oscar Tennenvaum, chief of the U. S. Boston Weather Bureau. There may be a third noted speaker on the same subject of weather as affecting cranberries.

Meeting will get under way at 10 A. M. and conclude about four in the afternoon with a catered lunch served at noon. This meeting also is the election of officers of the Association.

"Don" Kent in a lecture on TV this fall will feature cranberries in relation to weather.

This promises to be a big day for the growers this year and it is expected all "cranberry roads," will lead to the State Bog.

Mass. Cranberry Field Meeting

A field meeting was held at the Mass. State Bog June 30 at 3 P. M. with a very large attendance of growers present. This was primarily a meeting to discuss pesticides and Plymouth County Agricultural Agent "Dom" Marini, presided. About 106 growers gathered for the session held under shade trees as it was an excessively hot day.

In opening, Dr. C. E. Cross gave a few of the highlights of his recent Sabbatical to the United Kingdom. He said that in England every bit of land possible is under intensive crop cultivation. England now, he said, is producing 52 percent of its food and fibre wants, the rest being imported.

Dr. Cross spoke very highly of the weedicide Casoron, now released for fall and spring use by cranberry growers. He said it should provide a very effective control, and the material does a particularly good job on asters in the bog.

He also said that Alanap 3 has been released for use by cranberry growers next spring. This is also a comparatively new material.

Prof. "Bill" Tomlinson, entomologist, spoke on several insect pests. He said there was, as of that time "plenty of fruitworm around," and he told growers how to make an egg count. He also spoke of girdler and said Dieldrin is one control, another being sanding and still another flooding in September. He said there was plenty of false army worm around and also some spagnosis. He said gypsy moth is plentiful especially on the upper Cape.

Sr. F. B. Chandler spoke a little on fertilization and had an Irrrometer with him to demonstrate the use of this moisture-recording machine.

Prof. John "Stan" Norton spoke on irrigation, especially sprinkler, saying many new installations are being put in and growers in Massachusetts have plans for more acreage coverage.

Dr. B. M. Zuckerman gave timely notes on the use of fungicides for quality fruit production.

Lightning Bolt Kills Youth On Wisconsin Marsh

The son of a Wisconsin cranberry grower, 17 year-old Donald G. Brockman was killed by a bolt of lightning on the Brockman marsh at Vesper, June 30. He was the son of Mr. and Mrs. Gerald Brockman.

Felled by the same lightning bolt was Donald's brother, Craig, 11. However, he quickly recovered consciousness and suffered only minor burns and flesh bruises which temporarily affected his vision.

The two boys and their father

had been installing an irrigation system on the family cranberry marsh.

Mr. Brockman told Wood county authorities that the boys went to get a pickup truck which was parked on a dike nearby. Donald stopped to take a drink of water from a container before entering the truck, and it was then that the single flash of lightning struck.

Brockman ran to aid his son and found Craig slumped over

Donald's body. Unable to revive Donald by mouth-to-mouth resuscitation, the father put the son's body in the truck and drove to Riverview Hospital. The youth was pronounced dead on arrival.

A graduate of Assumption High School this year, Donald was chairman of the Young Democrats of South Wood County. He had planned to enroll at Wisconsin State University at Stevens Point this fall.

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FOR A DEMONSTRATION CALL US TODAY

Nominees Being Chosen For Market Committee

The election of a principal and an alternate as independent members of the Cranberry Marketing Order Committee for Massachusetts was held in the hearing room at Wareham Memorial Town Hall on the afternoon of June 17th. The meeting began at 1:38 and the balloting was over before 2:45.

The result was that John Charles Decas of Decas Brothers, Wareham was chosen principal and his cousin John N. Decas, also of Decas Brothers was chosen alternate. John C. Decas has been secretary of the committee.

Meeting and election was conducted by George Dever of the United States Department of Agriculture, while John C. Decas actually handled the voting. Anthony R. Briggs, secretary of the Committee was in attendance and explained some of the aspects of the nomination and election as did Mr. Dever. Mr. Briggs said he was personally, as he had been from the start "right in the middle" and was neutral as far as the Big Coop, Ocean Spray was concerned and the nidependents, trying to serve both equally. There was some objection, rather to the proceeding, from several including George Papageorge, an independent.

Nomination was from the floor and nominated were John C. Decas, Peter A. LeSage of the independent agency bearing his name. Mr. LeSage declined to serve if elected.

John C. Decas was elected in a written ballot, receiving 17 votes with LeSage getting 4.

In the nomination also from the floor for alternate, the nominees were Mr. LeSage, John N. Decas, Robert Hiller, associated with the LeSage agency, and Herbert Dustin an independent grower selling through Decas Brothers.

In the balloting John N. Decas received 10 votes, Mr. LeSage 6 and Mr Dustin 3. Mr. Decas was

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Cranberry Highway
West Wareham, Massachusetts

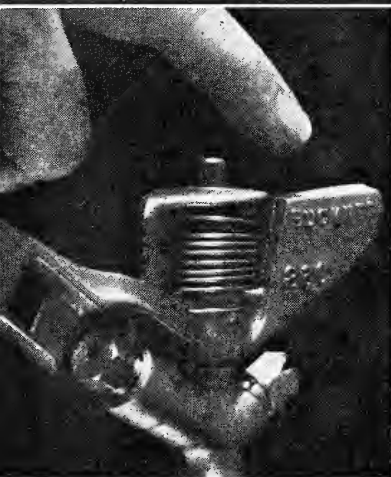
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Cranberry Products, Inc.
Eagle River, Wisconsin

Indian Trail
Wisconsin Rapids, Wisconsin

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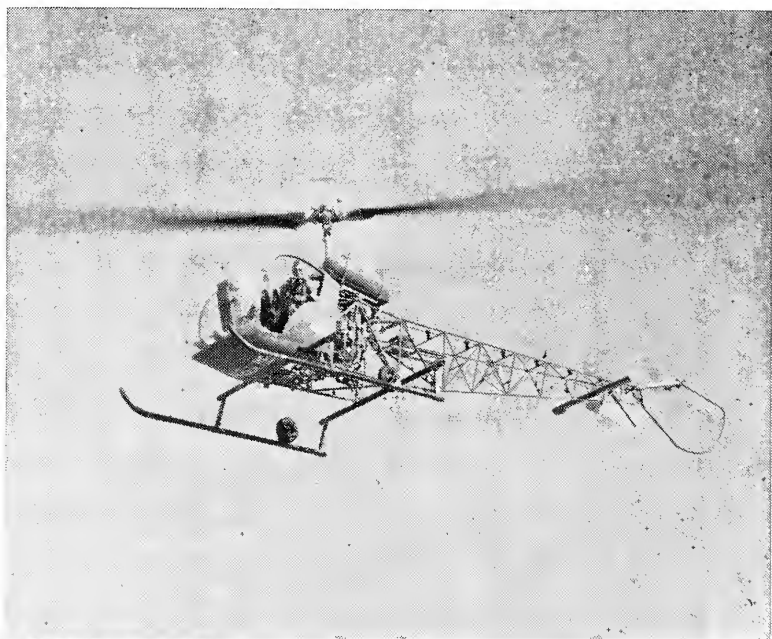
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on the committee for the first two years of the marketing order being in effect. Both Mr. Decases were elected for terms of two years.

John C Decas presided in the absence of George C. P. Olsson, who is chairman but is also president of Ocean Spray. Mr. Dever explained to objections that the Wareham hearing was useless for protests at the procedure of the elections that if any grower objected an amendment could be offered at any future meeting of the Committee. He said the Cranberry Marketing Order is a "growers' program for the growers."

Jersey Elects Fort-Brick

New Jersey Independents re-elected Walter Z. Fort, Cranberry Company, Inc. of Pemberton as principal to the Cranberry Order Committee and re-elected J. Rogers Brick of Medford as alternate to the committee.

Wisconsin Chooses Pannkuk-Barber

Wisconsin independents chose Ben G. Pannkuk, president of Indian Trail as principal to the Marketing Order Committee and Fred Barber, alternate. This was the same selection as last year.

As this goes to press Ocean Spray had not announced its nominees.

WSCGA Meeting August 14th At Three Lakes

**Affair will be at the Drever
Cranberry Company Property**

The summer meeting of the Wisconsin State Cranberry Growers' Association will be held Friday, August 14th at the Drever Cranberry Company, Three Lakes, Wisconsin. President Bruce Potter announces. Growers are urged to spend the weekend in the region, if possible.

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Ocean Spray Appoints Manager Of Production

Earl S. Rose has been appointed Manager of Production Planning for Ocean Spray Cranberries, Inc., according to an announcement from Robert C.

Lucas, Director of Operations. His headquarters are at Hanson, Massachusetts.

A graduate of Massachusetts Institute of Technology, he has been Food Processing Engineer for Acme Markets, Inc., Philadelphia, Pennsylvania. He is a professional member of the Institute of Food Technologists and holds the rank of First Lieutenant (Inactive), U. S. Army Reserve. Quartermaster Corps.

An organist and pianist by avocation, Mr. Rose has been choir director and organist at St. Andrews Church, Warminster, Pennsylvania.

Mr. and Mrs. Rose and their children are making their home in Plymouth, Massachusetts, on Brook Road.

Prof. John S. Bailey Retires

**Formerly Stationed at
East Wareham**

Professor John S. Bailey, Associate Professor of Research,

Department of Horticultural Science, retired on June 30, after 41 years of service to the University and the fruit growers.

Born in East Aurora, New York, he was raised in Lakewood, Ohio. He received his B. S. in 1922 from Michigan State College and an M. S. from Iowa State College in 1923. Prof. Bailey did further graduate study at Cornell University from 1926-1927.

Prof. Bailey joined the staff of the Massachusetts Agricultural College at Amherst in 1923 as an Investigator in Pomology. He was advanced to Assistant Professor in 1926 and to Associate Professor in 1952.

Between the years of 1952 and 1958, he was headquartered at the Cranberry Field Station at Wareham, Massachusetts, where he conducted research on strawberries, blueberries and beach plums. During the summer of 1957 he took a 6 months' sabbatical and made a special study of small fruit growing on the west coast.

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His intensive study of the inheritance of certain fruit and foliage characters in peach trees from 1924 to 1949 led to the start of a chromosome map for peaches. Later he became well known for his research with small fruit. He has published research on the propagation, nutrition and pruning of cultivated blueberries, and winter hardiness of raspberries. His research results were instrumental in obtaining grower acceptance of virus-free strawberry plants, soil fumigation for strawberries and chemical weed control in small fruits. Prof. Bailey has published over 50 papers in technical journals and Extension Service Publications.

He holds membership in the American Society for Horticultural Science, Alpha Zeta and Sigma Xi.

HOLMES BUILDING 100 ACRE BOG AT VANCOUVER, B. C.

He will use the Wisconsin Method Throughout His Operations and Plant Largely to McFarlins

Norman V. Holmes, formerly of Carver, Mass. and now of New Westminster (Vancouver) British Columbia, Canada, has severed all connection with the Big Red Cranberry Company of Vancouver and formed a new company of his own.

This spring the new company has been clearing land at the rate of about 3 acres a day, ready for planting 50 acres this coming fall, and he hopes to have about 100 acres and to have it all vined over in the next two years.

The land is just west of Jack Bell's bog and was part of the Lulu Island Peat Company land. The whole area is perfectly level and there is very little growth on it or stumps to take out.

Holmes intends to build the whole area according to the Wisconsin style, that is long narrow beds, and will use Wisconsin methods pretty much right

through, including water picking (water harvesting machines).

He says he has to make a more thorough study of the variety problem, but will plant a lot of McFarlins, as these are the only vines available, he says, in the quantities he will need.

Holmes despite leaving the Big Red Cranberry Company, continues on good terms, he says, with Fritz Shaw and Jimmy Holmes of Big Red and sees them almost every day.

The name of the new Holmes company is Columbis Cranberry Company, Ltd.

OCEAN SPRAY JUICE IN FAMILY DECANTER

Ocean Spray is now packing Cranberry Juice Cocktail in a 48-ounce family size decanter type bottle, and it is currently available in New England and the Middle Atlantic States. The West Coast will have it by mid-July.

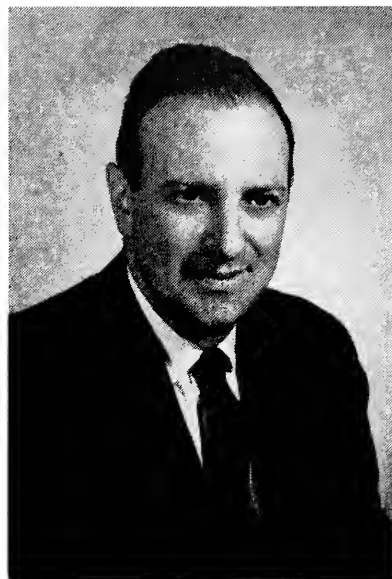
This convenient and economical size is packed 6 to the case and will have instore point of sale material to attract consumer attention.

Cranberry Juice Cocktail, both regular and low calorie, are currently being promoted nationally on both network television and radio. Arthur Godfrey Time on CBS will carry commercials throughout the summer on radio, and NBC has TV commercials on "Word for Word," "Truth or Consequences," "You Don't Say" and "Let's Make a Deal." ABC carries it on "General Hospital." Advertising is backed by a strong publicity program suggesting creative ways to serve Cranberry Juice Cocktail for summertime enjoyment.

WHEN TO BUY EQUIPMENT

A machine is a good investment, if it costs no more than five times the labor it saves in one year, say Penn State University researchers. If a machine saves an hour a day, it'll save \$365 a year, and the farmer can afford to pay up to \$1,825. This allows 10 percent depreciation, 5 percent for interest and five percent of the original cost for all other costs.

(from the FARM JOURNAL)



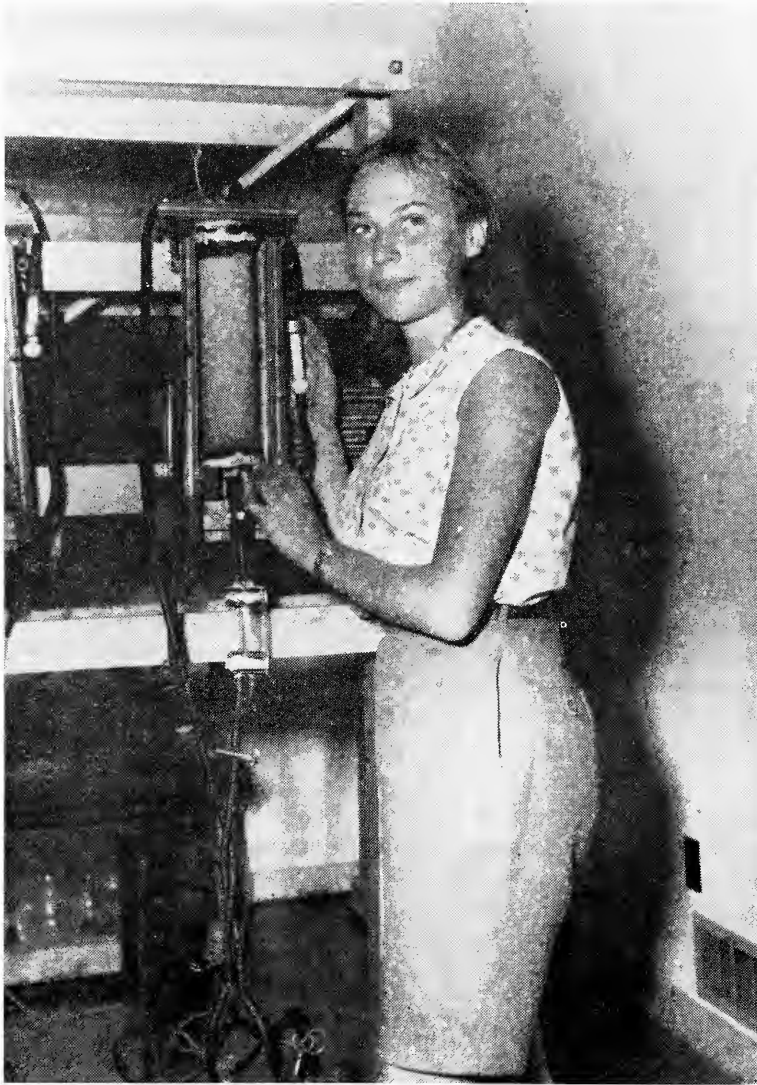
Ocean Spray Names Staff Engineer

Oscar R. Millman of 49 Morningside Park, Springfield, Massachusetts, has been appointed Staff Engineer for Ocean Spray Cranberries, Inc., according to an announcement from Robert C. Lucas, Director of Operations. Mr. Millman is headquartered at the executive offices in Hanson, Massachusetts.

He served as Staff Mechanical Engineer (operations), Directorate of Engineering at Hq. 8 AF (SAC). Previously he was Plant Engineer, company wide for Plastic Coating Corporation. He was also Senior Design Engineer in Operations and Training of Portable Nuclear Power Plants (PM-1 and PM-3) now operating at McMurdo Sound, Antarctica, for the Martin Company, Baltimore, Maryland, and prior to that was Chief Engineer, Power and Steam Generation, at Bigelow-Sanford Carpet Company, Inc.

A graduate of Northeastern University, he received his B. S. degree in Mechanical Engineering in 1942 and a Master's degree in Business Administration at Western New England College, Springfield, Massachusetts, this June. He is a Massachusetts Registered Professional Engineer and holds

Continued on Page 22



Interesting Experiment in Nematode Control at Mass. Cranberry Station

Dr. Bert M. Zuckerman has new assistant, Miss "Sally" Stanton, who is working on On Biological Theory

A most interesting experiment is being carried on at Massachusetts Cranberry Experiment Station this summer under the direction of Dr. Bert M. Zuckerman, assisted by Miss Sarah "Sally" F. Stanton of South Dartmouth.

This is to see if nematodes which prey on other nematodes can be produced in large quantities in the laboratory. Some nematodes, a microscopic organism, feed on plants, some on other nematodes. The experiment is designed to produce these nematodes under absolutely sterile conditions.

Nematodes, harmful to cranberries and many other crops, are very prevalent in the cranberry bogs of Massachusetts. If these nematodes can be controlled by this biological method rather than the application of chemicals it is hoped a big forward step will be made in the field of nematology.

Miss Stanton, who is 18, is a graduate of Friends' Academy in Dartmouth, Concord Academy, Concord, Mass. and is a student at Bradford Junior College, Bradford, Mass.

She became interested in science and contacted Dr. Zuckerman for a summer job at the Cranberry Station. She plans to return to Bradford in the fall. Her summer job is volunteer work and will take her full time until fall.

"I am tremendously interested in science and I intend to pursue scientific work after I graduate," Miss Stanton says.

STAFF ENGINEER

Continued from Page 21

a Massachusetts First Class Engineer's License. He is Past President and member of the National Association of Power Engineers, a member of the Western Massachusetts Engineering Society and American Society of Military Engineers. He is a Shriner (Melha Temple), a Mason and a member of the Beth-El Men's Club. He has been active in various community fund-raising projects, youth activities and the PTA in Springfield.

Mr. and Mrs. Millman have one daughter, Linda, who is a sophomore at Vassar College, Poughkeepsie, New York.

YOU'LL BE BLASTED LESS ABOUT USING CHEMICALS

Now that the House agricultural appropriations subcommittee has rapped the knuckles of the USDA and Health, Education and Welfare. The committee said, in effect, "Look, quit putting out stories and talking about pesticides that you've approved unless you're convinced that the continued use of the chemical will injure public health. Needless talk hurts business and farmers." The committee gave the two agencies \$250,000 to look into any new rules necessary to protect the public and farmers. The USDA is choosing farm areas to see if they can find any hazards from farm use of pesticides.

(from Washington Notes, Farm Journal, issue of July)

Hired Men Who Take An Interest

(Editor's Note: This might well apply to cranberry growing)

Here are three incentive ideas; pay extra cash for extra production; let the man have some livestock (out for cranberries); share the profit.

Keep any agreement between you and him simple. Remember incentives can't substitute for good wages and pleasant relations.
(from the FARM JOURNAL)

VIOLENT HAIL STORM INJURES WISC. MARSHES

A pounding hailstorm riddled field crops and cranberry vines in the southern and western fringes of Wood County, Wisconsin June 20, according to the Wisconsin Rapids Daily Tribune. Cranberry marshes in the City Point area were battered by the wind and hail. Buildings were also hit in the New Home area of Adams County and west into Juneau County.

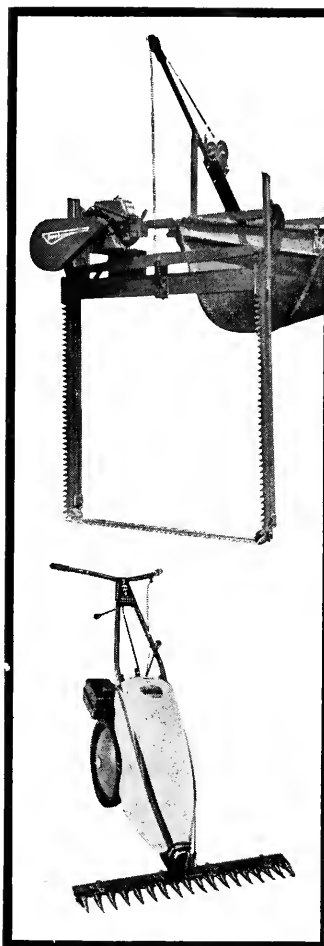
Loss appeared to have been extensive to the cranberry crop. There was heavy damage to the Fritz Panter marsh at City Point, said the Tribune and the 1964 crop might be a total loss. Mr. Panter reported his entire 53 acres under vines were twisted by the wind and slashed by the hail. The roof of a machine shed was torn off by the storm. A crop of 4,000 barrels had been anticipated on the Panter marsh.

Also reported hit was the James Schnabel marsh five miles south of City Point. Several other marshes in the area were hit by the storm.

More than an inch of rain fell in the city of Wisconsin Rapids in the wild storm, but there was little hail and no wind damage.

FRESH FROM THE FIELDS

Continued from Page 6
about one and a half inches. Precipitation came early in the month and again at the very



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Pesky weeds have marred the beauty of lakeshore homes and spoiled the swimming and boating. With the new Underwater Mower, Jari can beat the weeds wherever they are. This Underwater model mows 'em from the surface to a depth of 42". Now, any beach can be fun. And on land, the heavy duty Monarch Sickle Bar Mower knocks weeds down even on rough, rocky ground or steep slopes.

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last, in substantial amounts with intermediate showers and hail on the 20th and 22nd. Coldest weather was early in the period and very cold on the night of the 15th, when temperatures dipped as low as 20 degrees. The last five days of the month brought consecutive above ninety degree daytime temperatures. Highest was 96 on the 25th. Total above ninety days were nine which was well above the normal of five. Precipitation was noticeably lacking by the end of the month. The outlook for July calls for normal temperatures and above normal precipitation.

Bloom Pushed

The ninety degree days early in June brought considerable bloom. On new plantings blossoms were noted in late May. By month's end many of the sand marshes were in full bloom and peat marshes were expected to be in full bloom before the 4th of

July or a week or ten days early. Early set looked good, which is usually the case. Rain was needed to help the set and early sizing.

Frost Damage — Hail Loss

There were two very damaging effects on the Wisconsin crop the week of the 14th. First and most serious was the damaging frost on the night of the 15th when an estimated 50,000 barrels were lost in the state. Most of the damage occurred in the central area of Wood, Monroe and Jackson counties, which produces about two thirds of the state crop. Most serious hit were the peat marshes which had not been sanded recently, when temperatures dropped as much as 20 degrees in an hour after sundown. Although the water temperature was in the sixties, the air was very dry as with no frost flooding so the beds little fog was produced. The previous week had been very dry themselves were also very dry.

When the sudden drop in temperature came, those growers who had waited to flood were hopelessly lost in being able to get water over the surface in time to prevent damage. Only the fact that considerable acreage had been sanded last winter kept the loss figure from reaching an all-time figure. The second loss although not as great or as extensive was the damaging hail the night of the 20th, which struck eastern Jackson county and western Wood County. The storm originated in Western Wisconsin and travelled almost two hundred miles from west to east south east and varied in size from five to twenty miles. Altogether there were ten marshes damaged by the hail with the most serious in the vicinity of City Point where one property was almost 100% Total loss was estimated at about 10,000 bbls. These two losses so early in the season definitely rule out any bumper crop in the state which for the past two years had dropped below average due to cold and dry weather.

Ocean Spray Flotation Grader

Ocean Spray Cranberries is setting up a Key Flotation Grader near its office in Wisconsin Rapids and plans to run considerable tonnage thru the unit. Berries will be trucked in as far as forty miles away.

The summer meeting of the Wisconsin State Cranberry Growers Association is to be held at the Drever Cranberry Co., Three Lakes, Wisconsin on Friday August 14.

WASHINGTON

Cooler Than Normal

In the Long Beach area there is cooler than normal weather for this time of year, July 6th, though there is some improvement over last month. The mean maximum temperature for the month of June was 60.96° and the mean minimum was 48.36°. The total rainfall for the month was 3.4 inches. On three nights the bc

Continued on Page 26

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AIR CONDITIONING YOUR CROPS THROUGH IRRIGATION

The lead article in the American Fruit Grower for June tells of the "air conditioning of crops through sprinkler irrigation." Article says in part:

"In the United States more water is being utilized in air conditioning man's indoor environment than in irrigating out-door crops. Air conditioning the environment for both man and crop reduces the ambient air temperatures and by convection that of the surrounding radiating surfaces, i.e., walls and other objects for men and soil and surrounding plants for crops."

Cranberry growers do use overhead sprinklers for reducing "heats" on bogs and have done so for years. This is only one of the advantages of sprinkler systems, which growers in all areas are installing as rapidly as possible.

To return to the article in the Fruit Grower, it says this method of irrigation should prove profitable in terms of increased crop value per acre, and if timed properly could very well reduce the water consumption per pound of high-quality produce (in our case cranberries) harvested.

We truly have come a long way in crop control since the earlier hit-or-miss methods.

NOT LONG NOW — THE HARVEST

It doesn't seem possible but we will be into the harvest of 1964 in a matter of a few weeks. This is the climax of the year towards which has gone all the striving of the whole year preceding.

What will the size of the crop be, and what will be the price per barrel the growers can call their own? As of mid-July it looks as if the crop will be a sizeable one. We would say the crop will be a big one except for one thing. And that is the drought in Massachusetts particularly, and also in New Jersey. Then there has been some hail loss in Wisconsin at or near the heart of the industry. As to the returns, we would almost predict for sure they will be better than in the past few years. The

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market will be strong, we are convinced. All the promotion by Ocean Spray and a few independents we are certain will pay off. A lot of money has been spent in advertising by Ocean Spray in particular.

If there is a short crop, demand should be more intense, and hence better prices to the grower eventually. But we do not like the drought picture as it applies to Massachusetts and its crop limiting capacity. We understand a drought is being predicted for August and that would not be good.

But, we shall see what we shall see.

SERVING THE WISCONSIN GROWERS

Continued from Page 24
temperature was in the 30's, June 2nd—38°, June 21st—36° and on June 27th—32°. On this last date the sprinklers ran for an hour, 1:15 A.M. to 2:15 A.M. This one occasion is the only time it was necessary to sprinkle for frost in June.

Spraying For Fireworm

Work continues on the bogs, mainly in spraying for fireworm which seems to be the most active pest at the present time. About the 20th of the month we sprayed for rosebloom and have sprayed with manzate and malathion for the various pests that bother cranberries. This past month there has also been quite a bit of activity in clipping weeds which were not killed by earlier herbicide applications.

NEW JERSEY

Continued Dry

The dry spell of May continued until mid-June, with only .4 of an inch of precipitation through the 15th. The amount of rainfall for the month totalled 2.70 inches, 1.15 below normal. The total rainfall for the two months of May and June was only 3.06 inches, compared to the normal of 7.62 inches. Thus there has been a keen deficiency of 4.56

inches for these two important growing months.

Temperatures Down

June averaged 83.5°, just 1° be-

The maximum temperatures for low normal. The minimum average, however was 56.3°, 2.4° below normal. The mean temperature was 69.9° or 1.3° below normal. There were some very hot days in June (8 days of 90° or over, the last day of June hitting 98°), and some very cool nights (9 nights in the 40s in the uplands, with 6 frost alerts to cranberry growers).

Crop Prospects Quite Good

As of the 1st of July prospects for the cranberry crop in New Jersey look quite good. There has been a minimum of frost damage and bloom is heavier than normal. Previous to July 1st there was a disturbing lack of activity of honey bees on cranberry bogs but since then they have become considerably busier. The population of bumble bees is quite a bit higher on cranberries than for the past several years. On a couple of properties they actually outnumber honey bees. There is some evidence of drought damage on a few properties and if the drought conditions are not alleviated soon a

high percentage of the blooms are expected to blast.

Correction

Precipitation during the month of April was **6.21 inches** (2.80 inches above normal) **as compared with .67 inches last year.**

Total rainfall through April was not 15.34 inches **above the average**—the total through April was 15.34 inches, **2.17 inches above the average**, as compared with the total through April last year of only 9.55 inches.

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PUBLISHED MONTHLY

LOW CALORIE COCKTAIL GOES NATIONAL NEW PRODUCTS' SCHEDULE MOVES AHEAD

Ocean Spray Cranberry Juice Cocktail is now national in distribution. A new, improved formula gives calorie and diet watchers a full, rich flavor taste-matched to regular Cranberry Juice Cocktail. The low calorie product is available in pints, quarts and gallons. National distribution for cocktail is backed by national advertising on Arthur Godfrey Time over 236 CBS radio network stations and on NBC television network shows, "Word for Word," "Truth or Consequences," "You Don't Say," "Let's Make a Deal," and on the ABC network TV show, "General Hospital."

NEW PRODUCTS IN WEST-EAST TESTS

Old Fashioned Cranberry-Orange Relish is now in test market distribution in South Dakota, Nebraska and Iowa. Personal calls were made in Omaha recently on topnotch food editors and home economists to bring them samples of the relish, information kits on the new product, releases and recipes. Trade and consumer response is enthusiastic.

Ocean Spray's new tart-sweet blend of cranberry and apple juice has a strong appeal for children and adults. This fruit drink with the great new taste is being well received during tests in Eastern Pennsylvania, Baltimore, Maryland, Washington, D. C., markets. Local station TV advertising in the test areas is giving strong introductory support.

NEW SIZES MEET CONSUMER DEMAND

A new 12-ounce size of Low Calorie Whole Berry Cranberry Sauce with an improved formula is in consumer test. The improved sauce is the result of 12 months' testing by the Ocean Spray Research and Development Department to get tops in flavor, a high content of juicy whole berries and a low calorie count.

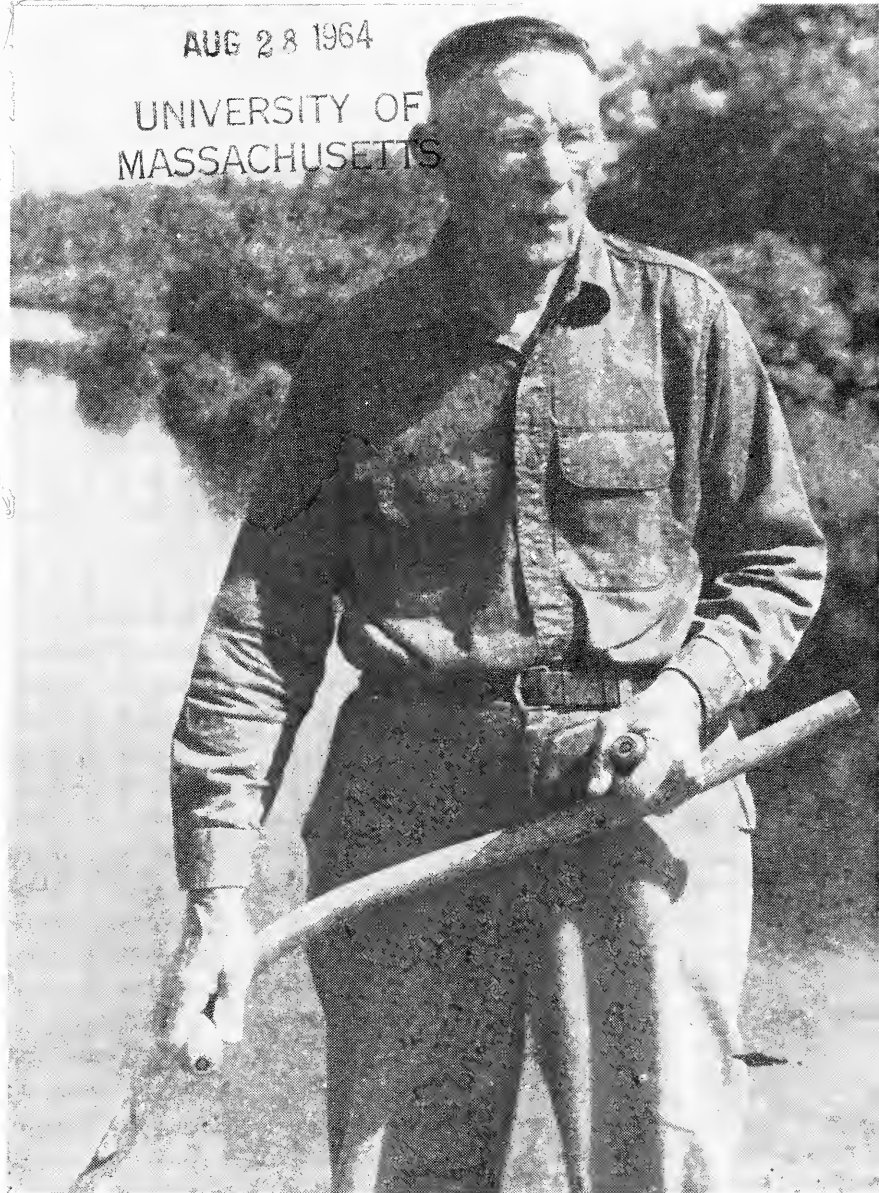
A 48-ounce Cranberry Juice Cocktail has been added to the pints, quarts and gallons in answer to consumer demands for a convenient family size. The new size is available in New England, Middle Atlantic States, and, after mid-July, on the West Coast. Initial response is highly favorable.

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FRANK LAINE, at 78 Still Going Strong on his small Bog.

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Fruit Tarrif

(Editor's Note: Prepared for Cranberries Magazine by the Cranberry Institute from an article written by Henry Schacht for the San Francisco Chronicle.)

Representatives of the Nation's Canned, Dried, Frozen and Fresh Fruit industry met recently in California. The occasion was the twelfth annual meeting of U. S. National Fruit Export Council of which Cranberry Institute is a member.

The men and the organizations represented move some very big chips in the game of international trade. Wherever United States fruit sells in the world, they are concerned and usually in some way active. Naturally, they were especially interested in exploring the future of the GATT meetings (General Agreement on Tariffs and Trade) which are now recessed and will pick up again in the fall.

How do nations around the free world approach the bargaining table? "Bill" Stewart, Director of the Fruit and Vegetable Division of the Foreign Agricultural Service reported that it breaks down generally this way:

Of 122 free world nations, 73 belong to the GATT under whose auspices the "Kennedy Round" of tariff negotiations in Geneva are being carried on. Of these, 69 are actually taking part in the round.

Out of the 69, 44 are less developed countries who, at their own recent conference in Geneva, demanded the "have" nations give them very considerable trade concessions in return for which they offered nothing at all.

Of the remaining 25, ten want to bargain only on carefully selected commodities. Of the remaining 15, six belong to the European Common Market, which is having great difficulty is getting its agricultural policy in good enough shape to allow serious bargaining on farm commodities. They have already said they would like to exempt meat, dairy products and cereal grains

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so that world marketing agreements could be developed on these products. On other products they have suggested that their own system of variable levies be used to regulate trade, not the system of fixed duties that we wish to negotiate.

That leaves nine, of which seven belong to the British-dominated European Free Trade Association. (Some of these have previously wanted to get into the Common Market.) And then there are Japan and your Uncle Sam.

You now know the names and numbers of the players, but what signals will be flashed from the respective benches is hard to say.

One heartening thing is that our Government continues to insist that when bargaining starts agriculture as well as industrial commodities must be considered. Even in our own country there is pressure against that principle but so far it is sticking. Organized agriculture considers this indispensable to its trade interests.

New Indian Trail Labels

Indian Trail, Inc. of Wisconsin Rapids has a new Indian Trail Jellied Cranberry Sauce label in a number of colors which are most attractive. There is also a new label coming up for whole sauce.

(Editor's Note: New attractive labels for any product, we believe, are an addition as they should help sell more cranberries, which is the general aim of the entire industry.)

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Mass. Cranberry Station and Field Notes

by CHESTER E. CROSS

Director

Very high temperatures the first two days of July, coming after a long and dry May and June, scorched some flowers especially on inland cranberry bogs. On the morning of July 4th, hail fell on about 100 acres of cranberry bog in the Duxbury-Kingston area, damaging about half the crops. Despite numerous fogs and some scattered showers, the month averaged cool and dry, and on the last day several bogs had temperatures in the low 30's.

As of this date (Aug. 7), bogs are generally dry, irrigation is being applied wherever possible, and growers are turning to crop estimation. Surely the crop is potty. The areas damaged by held-over frost floods in late May and early June now show conspicuously few berries. Many bogs

have heaviest crops on their high low centers. This too is largely a matter of water damage in the spring, or possibly from oxygen lack last winter.

As the work on production of the 1964 crop tapers off and the berries get too large for extensive work on the bog, growers should take some time out to ponder the lessons of this year and lay plans for the more important tasks immediately ahead.

Harvest

Months of hard work, anxiety and struggle have been expended to raise the berries. Much depends on the attitude, vigor, care and preliminary planning on how well the harvest comes in and the condition of the berries as they are delivered to the shipper. Let us deliberate, not over-hasty this

time. The crop is likely to ripen early giving us a relatively long time to get it in. The need generally is for red-ripe berries—let us wait until there is a lot of outdoor coloring before starting. Ripe berries stand a lot of frost and berries covered by a good vine growth (which we have) stand a lot of frost. By waiting a bit, berries get larger and they become easier to pick, and your picker maintenance will be easier. Make sure **now** your machines are in top running order. Set them to pick no deeper in the vines than is necessary to get most of the berries—this will avoid bruising—and run the machines at a modest pace—racing them scatters berries, skips areas and roughs the vines, hurting next year's prospect. Never pick until the vines and fruit are dry. If you do you hurt your bog, your machine, your berries, your shipper and finally your pocketbook.

Finally, make some maps and surveys now of where ditches need cleaning, where and what weed-killers should be used this fall, what area needs sanding most, and is it possible to prepare a few rods for a nursery for a new variety or two. You may want to plant some in the next few years and planting stock is skimpy.

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Cranberry Institute Pioneering Helps

It appears that many others in the field of agriculture may reap some benefits as a result of the pioneering which Cranberry Institute and Industry members did in connection with the cranberry incident.

The following statements appear in the report of the Committee on Appropriations accompanying the 1964 Appropriation Bill for the Department of Agriculture.

1. "In recent weeks, however, after materials have been approved and put into use, new means of detection of minute amounts of residue have resulted in news releases, press accounts, and headlines which needlessly frighten the consumer, do financial damage to the manufacturer and the farmer, and lessen the supply of food for the consuming public, though there is no claim that the public health is endangered. Neither the Department of Health, Education and Welfare, nor the Department of Agriculture would want to needlessly destroy any American business or agricultural

enterprise. Yet that is what present policies are doing in cases where there is no evidence of danger to the public health.

The members of the Committee recall the cranberry incident in 1959, when a whole industry was practically destroyed by reckless statements and charges. It took \$10,000,000 recommended by President Eisenhower to compensate for the damage and bring back public acceptance of this commodity.

2. "In an effort to prevent further financial damage to American producers and loss of food for consumers as a result of reckless handling of this problem, the Committee has set up \$250,000 for the use of the Secretary of Agriculture to collaborate with the Department of Health, Education and Welfare in working out rules and regulations **including the recommendation of such changes in the law as may be necessary** to protect our high standard of living with the most plentiful, cheapest and finest food and fiber any Nation ever had —

while at the same time protecting the public health.
3."It is the firm belief of this Committee that news released or other public statements regarding any pesticide or other material which such departments have authorized for use should not be made unless at least one of such departments states that there is evidence that the continued use of such material would injure the public health.

"Further, some provision should be made for payment of financial losses to any producer, processor, or manufacturer resulting from statements or actions concerning the use of approved pesticides, insecticides, chemicals or other materials where there is no evidence that their use endangers the public health. The payment for such damages should be made by the department issuing or negligently permitting the issuance of such statement or action."

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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of August, 1964 — Vol. 29, No. 4

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Mid-July Hot and Humid

Following the rainy, foggy weather of early mid-July the weather turned fair and sunny on the 16th, giving the bogs some needed sunshine. It was hot for the next few days and temperatures reached into the 90's, but the humidity was extreme. The 18th was an especially hot and uncomfortable day. This same kind of weather continued through the 26th — wet, miserable, not good for cranberries or for the cranberry-vacation land.

July Cooler than Average

July ended with a minus 68 despite the many torrid days. Since January 1 the temperature (Boston) was also cooler with minus 37.

July About Average in Rainfall

July rainfall as measured at the Massachusetts Cranberry Experiment Station measured 4.17 inches with the July average being 4.74 inches. The rainy weather was not good for the pollination of the coming crop.

August Came in Very Cool

August started off as a very

cool month. The weather was more like late September or early October than August. The cool weather was giving cranberries a little color, but it was coming too early in the year.

NEW JERSEY

July Cool

The maximum temperatures for July averaged 84.9 degrees, 2.4 degrees below normal; the minimum average was 63.5 degrees, 6 degrees below normal; the mean temperature 74.2 degrees, 1.4 degrees below normal. There were 7 days during July of 90 degrees or over, compared with 13 in July of 1963. However, the high humidity during this past month made many days in the high 80s extremely uncomfortable. Some nights were very cool, 6 of

them being in the 50s of which 3 were in the 50 to 52 degree range.

Rainfall

The total rainfall during July was 4.04 inches, only .29 below the normal for this month. The total for the three growing months of May, June and July, however, was only 7.1 inches, compared with the normal of 11.95 inches, a deficiency of 4.85 inches.

Crop Looks Good

At present the New Jersey cranberry crop looks quite good. As of August 5 there was some concern over the lack of rain. If berries do not suffer too much from the moisture deficiency the New Jersey crop should run over 100,000 barrels.

Annual Meeting

The 95th Annual Summer Meeting of the American Cran-

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**Serving the People of New England
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berry Growers' Association will be held on August 27 at the Sweetwater Casino at Batsto.

WISCONSIN

July Hot and Humid

July was hot and humid, which for the most part was ideal for berry growth in all areas. Rainfall was slightly above normal in the south and about two inches above normal in the north. Temperatures averaged about six degrees above normal. The warmest period was the week of the 19th when the western counties had 103 degrees on two days, five of the seven days were over 100 degrees and the weekly average was 101 degrees. Light frost was reported on the 4th and 30th in the far north. Over 7 inches of rain fell in the southeast on the 24th. There was some light hail in scattered areas on the 11, 18 and 27th, with small losses. The extended forecast for August calls for temperatures to be well above normal and precipitation to be below normal.

Frost Losses 75,000

With further frost damage being reported from the night of June 15th, losses are now estimated at about 75,000 barrels and this loss coupled with hail losses on the 20th of June will easily reduce Wisconsin crop to less than 400,000 barrels.

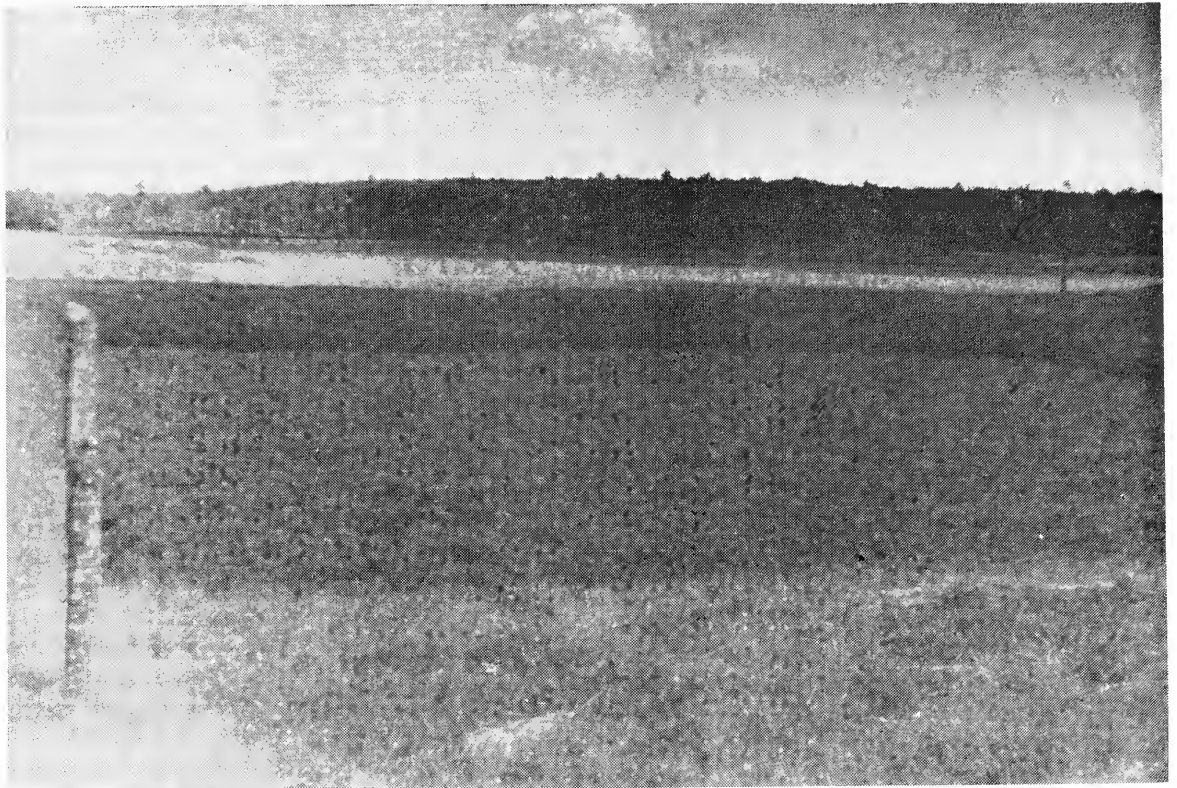
Some areas in the west central part of the state are experiencing severe surface water depletion, especially where seepage water is the main source of supply. If this condition prevails there may be a shortage of water for harvesting. To date most properties have had enough water for necessary irrigation. Water was being held high in the ditches.

Weeds and Grass

Weeds and grass were growing in leaps and bounds with the hot humid weather and considerable

Continued on Page 24

READ CRANBERRIES



The Laine Bog looking from Great Neck Road. The light band in the Center which looks like water is really a streak of sunlight.

(CRANBERRIES Photo)

FRANK LAINE, 78, OF CARVER, MASSACHUSETTS IS STILL GOING STRONG ON HIS 4½ ACRE BOG ON GREAT NECK ROAD, NECK ROAD, EAST WAREHAM

Born in Finland, Mr. Laine Has Made a Success Of His Life In This Country

by Clarence J. Hall

A small but veteran Massachusetts grower is Frank Laine of Carver who was born in Finland July 21, 1886, which now makes him 78. He is still going strong, working on his bog on Great Neck Road, East Wareham, a good part of the year. In the heat of summer he may be seen mowing his dikes and weed tops on his bog. He does his own ditching and in the fall he sands with a wheelbarrow. Usually he is a solitary worker, and many cars stop on well-travelled Great Neck Road to watch him at work, especially in the summer heat, marveling at his endurance and his perseverance in growing cranberries.

He has been in cranberries ever since 1929 when he "grubbed" out his bog which was part hard bottom and part maple swamp. In 1930 he set two acres and gradually built his bog up to its present 4½ acres.

Born in Finland

Born in Kustavi, a country section in the middle or more southerly portion of Finland he came to this country on June 17, 1905. He at first worked for the Boston Ice Company delivering

ice in the summer with a horse and wagon. He had gone to sea when he was almost 17, making a voyage in a three-masted bark to Newfoundland, a voyage of five months. From that Canadian province he went to Boston. His

wife Elizabeth (Kaski), whom he married at Worcester, had relatives in Carver.

The couple came to Carver and they picked by hand on cranberry bogs in the fall. Laine's present home is at Church Street, South Carver. His daughter and family make their home with him. There he has a vegetable garden, but this is a valley and Carver can be very hot in the summer. So every day when it gets too hot to work in the morning at his vegetables he rides the ten miles to East Wareham and spends most of the day at work on his cranberry bog.

He had known cranberries, that is the wild European berry in Finland.

While he was building his bog he earned some money as a carpenter, until his arthritis became so bad he could no longer climb. He and his growing family sold

vegetables. He was self-sustaining . . . by hard work.

Not Old-Fashioned

But because he does hard physical labor it would not be thought he is old-fashioned in his thinking about cranberries. His bog is sprayed or dusted by helicopter, he using the Wiggins Airways service, operating through R. F. Morse & Son, Inc., that is Morse makes the arrangements.

Only this past year he had put on 2600 gallons of kerosene or Stoddards to help his weed problem. He admits "I've got all kinds of weeds, I don't know which gives me the most trouble." He has the most insect trouble with black-head fireworm.

Yet on this 4½ acre bog he has produced 500 barrels in its top year with 65-70 barrels to the acre his average. He says that, contrary to general opinion, his best producing parts of the bog are the parts built on hardpan.

In the fall he gets in a harvesting crew operated by Carl Johnson of South Carver, who is also a grower. He has tried the Western Picker, but now prefers the Darlingsons. Once his bog is picked, his berries are taken to the Ocean Spray plant at Onset, and he says "good bye to them and then I wait for my money, that is all of it. Sometimes it is a year in coming but I always get it."

Loyal Ocean Spray Member

Incidentally he is a loyal member of Ocean Spray Cranberries, Inc. and has always sold through them with one or two early exceptions. He says he tried independents, but found out from one that it took four field boxes to make a barrel whereas at Ocean Spray it only takes three. He is a satisfied member of the "big co-op."

Mr. Laine does not belong to any other cranberry organization than Ocean Spray . . . not even the Cape Cod Cranberry Growers' Association, nor to any of the clubs. He is a self-reliant person.

Owens 42½ Acres In All

His property in all on Great Neck Road and Stillman Memorial



A Close-Up of Mr. Laine.

(CRANBERRIES Photo)

Drive and Minot Avenue is assessed at 42 and ½ acres but he says he does not know just where all this land is.

It is pleasant country where he has his bog and the bog is just across the road from Broad Marsh. Twice he has been damaged by hurricanes. One time his bog was six feet underwater, but he says the water drained off quickly and he does not see as the salt did him any permanent damage.

Large Family

Mr. Laine since coming to this country has raised a large family. He has three sons and five daughters, 14 grandchildren and "about 40 great grandchildren," with he says more on the way every year. "This country is growing like muskrats."

Mr. Laine has never been back to Finland since he sailed away from his native shores when he was barely 17. Possibly because of his wife's death in 1957. He has made a success of life in America.

Finnish Contribute Much

There can be no question but

that the Finnish people have contributed much to the cranberry industry in Massachusetts and other areas, especially in Grayland, Washington clear across the country where individual experiences have been much like that of Mr. Laine—hard work and perseverance in cranberrying.

It might be confessed in closing that perhaps the writer and Mrs. Hall have more than personal interest in Mr. Laine and his bog. It is not two minutes walk from their home, also on Great Neck Road. It was Mr. Laine who sold them a part of the property on which they built their home. Laine's son-in-law, Lewis Bartlett and wife, Bertha, is an adjoining neighbor of the Halls in one respect. That is he has a plot which he calls his "Dream Acres," where he is starting to grow trees for the Christmas market.

Does Own Frost Flooding

Incidentally Frank Laine still does his own frost flowing, putting the water on by gravity and taking it off, from an excellent water supply in two reservoirs.



Showing the Laine Bog with its Even Ditches looking towards Great Neek Road.
(CRANBERRIES Photo)



Indian Trail Cranberries Is Packaging Frozen Fresh Whole Cranberries In Two Sizes

Indian Trail Cranberries is putting out a fresh frozen whole cranberries pack. The packaging comes in two sizes, one pound and two pounds.

The package has a great deal of eye-appeal as shown by the accompanying photo. The back panel is of clear material so that Mrs. Homemaker can see the quality of the merchandise she is buying. The back panels also have illustrated some tempting recipes.

Indian Trail, "Ben" G. Pannkuk says is very selective on the size and quality of the fruit being packed. The color must be 100 percent, size uniform, "and above all 'no' and we mean 'no' bruised or partially decayed fruit."

He says the one-pound pack is

the one which moves most at retail level. The two-pound packs move mostly at the institutional level.

Test markets on the one-pound packages have been Minneapolis, Indianapolis and Topeka. Heavy movement begins in February.

Wisc. State Market Order Loses Out

Balloting Resulted in Only 47 Percent Affirmative While 51 was Required — Fund to Have Been used for Additional Research and Frost Warning Service

The Wisconsin cranberry growers who were hoping for a State Marketing Order to provide for additional research and to add

to the frost warning revenue have lost out, it has now been decided by the State Department of Agriculture. The balloting resulted in obtaining 47 percent of the total votes cast while 51 was required.

THREE MASS. BOGS CHANGE HANDS

Chester W. Robbins of Onset, Mass., treasurer of Ocean Spray Cranberries, Inc., has purchased the Bradford Thomas bog on Crooked River, Great Neck, Wareham. This is a property of about 7 acres. The new purchase gives Mr. Robbins a total of about 30 acres.

The Harvey Burgess bog in Duxbury has been sold to Lawrence Pink of North Carver. This is reputed to be one of the best bogs in Massachusetts and is one of 15 acres with beautiful uplands. The reputed price of sale is \$42,000.

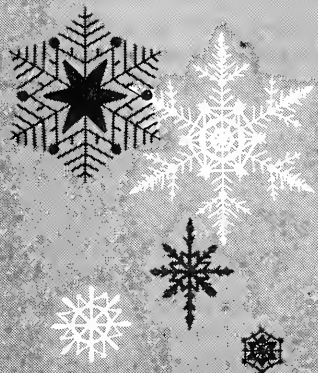
Mr. and Mrs. Isaac Isaacson of the Rocky Meadow section of Middleboro near Carver, has been sold to Harry T. Fisher, Jr. who is a pilot for the spraying service of Agway, formerly Eastern States Farmers' Cooperative. This sale included two dwellings with Mr. and Mrs. Isaacson being given life-tenancy to one. Reputed sale price is \$80,000. The bog of Mr. and Mrs. Isaacson is one of the most carefully kept and best bogs in the Bay State.

Cranberry Products "Looking Up"

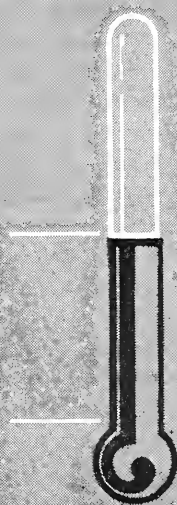
President Vernon Goldsworthy of Cranberry Products, Inc., Eagle River is looking forward to no sales problem this coming season or for he next few years. The company has received another U. S. Army order for 30,000 cases of cranberry sauce. The State of New York has asked for bids on 100,000 gallons dietetic cranberry juice.

"Things look good for the grower this year," Goldsworthy added.

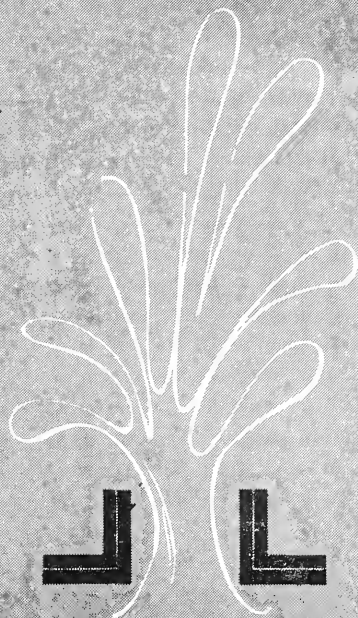
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CASORON AND WEED CONTROL IN CRANBERRIES

by

I. E. Demoranville and C. E. Cross¹

Cranberry Experiment Station,

Massachusetts Agricultural Experiment Station

University of Massachusetts, East Wareham, Massachusetts

ever, very difficult to achieve an even distribution of the granules. In using mechanical ground equipment, use strings stretched between stakes to mark exactly the width treated by each pass and as an exact guide for making the next pass. Flagmen should always be used when making aircraft applications. Overlapping causes over-dosing, which injures the cranberry vines and their crop. Every caution to avoid this

mended at the rate of 100 pounds per acre of the 4% granular formulation for the following:

WEED SPECIES CONTROLLED BY CASORON

<i>Spring or Fall</i>	<i>Spring Only</i> <i>Fall Unknown</i>	<i>Spring Control</i>
Loosestrife	Haircap moss	Sensitive fern
Aster	Bracken fern	Royal fern
Mud rush	Fireweed	Wild bean
Blue joint	Pitchfork	Manna grass
Needle grass	Horsetail	Crab grass
Summer grass	Spike rush	Corn grass
Cut grass	Dodder	Warty panic grass
Nut grass	Sorrel	Ditch weeds
Cotton grass	Plantain	
Marsh St.Johns-wort	Hawkweed	
Ragweed	Wool grass	
	Wild Strawberry	
	Shore grasses	

Casoron, like all granular herbicides, requires moisture to be effective, and is readily activated when moisture is supplied. While casoron is not sensitive to light, it will volatilize under high temperature conditions. This results in a partial loss of the chemical from the soil surface when moisture is not present. It is suggested that some form of irrigation be used to activate the chemical if rain does not occur within a few days of application. Because of the importance of high moisture and low temperature, it is best to make applications early in the spring and rather late in the fall. Further, since cranberry vines are slightly more tolerant of casoron in the fall than in the spring, the fall treatment is preferred if the grower's weeds are such that they can be controlled by fall treatment.

Casoron, evenly applied, has has never resulted in serious vine injury at rates up to 150 pounds per acre during the dormant season in spring or fall. It is, how-

injury should be taken, for vines so injured recover very slowly, and while recovering, seeds of cutgrass, nutgrass and others are quick to germinate and reinfest the bog, making retreatment necessary. The skipping of areas or strips is almost as bad as overlapping for it leaves streaks of uninjured weeds which are difficult to treat on a spot basis, and if uncontrolled produce seed and underground stems which soon reinfest the treated bog.

Visual symptoms of injury from spring applications have shown up as retardation in the start of new growth, shorter length of uprights, later blossoming, reddish tints to leaves and blossoms, later ripening of berries (primarily the top berries), and in some cases smaller berry size. In all instances observed the vines usually recover and show normal appearance by harvest time. Crops have been reduced slightly in some plots, but this has not been common. Vines have yielded at a normal rate in all cases the following season. Fall

Preliminary tests with casoron were initiated in 1961. The results were promising, and in 1962 full scale evaluation began. In April, 1963, a preliminary label was granted for experimental applications on large commercial areas, and on June 1, 1964, the United States Department of Agriculture granted full registration for use on cranberries. Registration is granted on the basis of no residue with the herbicide to be applied, in Massachusetts, at the rate of 4 pounds active ingredient per acre during the dormant season in the spring, or in the fall after harvest. Only one application of 100 pounds of 4% granules per acre is allowed in any twelve-month period; for example, areas treated with casoron in the spring must not be retreated after harvest of the same year, or areas treated after harvest must not be retreated the following spring.

Casoron is technically 2,6-dichlorobenzonitrile, with dichlorobenil the accepted common name of the Weed Society of America and the British Standards Institution. This herbicide has also been approved for use on nursery stock (ornamentals and fruit), non-bearing fruit trees, forest and shelterbelt plantings, and ornamental bermudagrass. Cranberries are the only food crop that has approval for use at this time. The 4% granular formulation will get the only type recommended for use on cranberries. Results using the 50% wettable powder have shown that crops are substantially reduced and weed control is not as good.

Casoron has been very effective on a wide range of weeds in Massachusetts and will be recom-

1. Assistant Professor and Head of Department respectively.

applications do not affect the following crop and the vines are only slightly affected. The 100 pound per acre rate rarely causes any injury at either time of application. Treatments with casoron at 100 lbs. of 4% granules per acre have been made in the spring two years in succession on the same area. Cranberry vines have tolerated this treatment without obvious injury; however, some crop reduction is possible. In the case of cutgrass and nutgrass, it has been found that although a casoron treatment gives essentially complete control for a year following, there is a marked tendency for seedlings of these two weeds (and possibly of others) to reinvade the same areas. For this reason it is likely that more than one application will be needed for lasting control. though a casoron treatment gives If the original treatment is made in spring it would be best to make a second application 18 months later in the fall. And conversely, if the first treatment is made in the fall, the second should be made 18 months later in the spring.

Casoron is absorbed primarily through the root system of plants and has an inhibitory effect on the meristematic tissue. Woody plants such as poison ivy and hardhack, when treated with casoron, do not show much injury, but will pull considerably easier and do not have as extensive an area of fine roots as untreated plants. Although the cranberry plants in treated areas do not show any visual injury, it is possible that some injury may have resulted to the fine hair roots, making the plants more susceptible to injury from dry weather. For this reason, treated bogs should be watched closely at the start of drought conditions.

Growers are urged not to skimp in the use of casoron on ditch edges and the ditches themselves. Probably more weeds grow in these areas than elsewhere on the bog surface—and it is here that helicopter applications have shown especial merit. Casoron has shown

excellent control of weeds in ditches, and by controlling these weeds and the production of seed, a primary source of weeds on the bog proper is curtailed.

When using casoron in the fall the bog should be allowed at least a week to recover from the harvesting operation before applying the chemical. Rainfall or a clean-up flood will also aid the vines to recover more rapidly from the harvest. Casoron appears to be effective during the cool temperatures of late autumn and can be applied later than other herbicides. Areas treated as late as November 20 have shown very good weed control. In addition, treatments made in early April before reflooding for late water have given excellent weed control without any detrimental effects on vines or crop.

One serious drawback in using this chemical arises from the need for uniform distribution to be effective on weeds and to avoid vine damage. While cranberry vines will tolerate 100 pounds per acre nicely, some injury is evident at 150 pounds per acre. Crop is drastically reduced and vines can be killed at rates in excess of 150 pounds per acre. If less than 100 pounds per acre is applied, weed control is spotty and of short duration. Growers should be extremely careful to distribute this material evenly, and to use the exact amounts recommended. At the present time uniform applications can be obtained by applying 50 pounds per acre on the area to be treated and then applying the other 50 pounds immediately over the same area but at right angles to the first application. From our tests it would appear that the most satisfactory types of ground equipment are the hand crank type of seeder, or a granular distributor made in Wisconsin. The helicopter also appears to have great promise on large areas and will be observed further. It must be remembered that whatever method of application is used, the distribution will only be as good as the calibration of the equip-

ment before use and the skill of the operator using it.

Weeds that casoron will not control in Massachusetts include: poverty grass, hairy panic grass, 3-square carex, wiry carex, chokeberry, poison ivy, hardhack, narrow-leaf goldenrod, goldenrod, feather fern, running bramble, blackberry, bull brier, barnyard grass, and sand spurrey.

"GOLDY" VISITS THE EAST

Vernon Goldsworthy of Eagle River, Wisconsin, was a visitor at the Charles LaRoche Bog in Drummondville, Quebec and also Wareham, Massachusetts. While at Wareham, he visited the Massachusetts Cranberry Experiment Station, Mr. and Mrs. C. J. Hall and the Decas Brothers enterprises.

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To The Cranberry Industry:

On June 1, 1964 the Pesticide Registration Section of the United States Department of Agriculture granted to Thompson-Hayward Chemical Company full clearance on CASORON® herbicide as a granular formulation for both Fall and Spring application (only Spring application in the Pacific Northwest).

The recommended rate for either Fall or Spring application is 100 pounds of 4% granular CASORON per acre.

Supplies of De-Pester Casoron G-4 are available for Fall application from:

Ocean Spray Cranberries, Inc.
321 12th Avenue South
Wisconsin Rapids, Wisconsin

Miller Products Co.
7733 N. E. Killingsworth
Portland, Oregon

R. F. Morse & Sons, Inc.
Cranberry Highway
West Wareham, Massachusetts

Parkhurst Farm & Garden Supply
301 Whitehorse Pike
Hammondton, New Jersey

Cranberry Products, Inc.
Eagle River, Wisconsin

Indian Trail
Wisconsin Rapids, Wisconsin

THOMPSON-HAYWARD CHEMICAL COMPANY

The Urgent 3 Cents

An Open Letter to
Growers Everywhere

by Perley Merry

Are you going to make any money on your 1964 crop? Don't be too sure!

August is optimism time for all cranberry growers and marketers. Think back over the last ten years; have you not been optimistic every August, except the single one following the Fleming affair, and then received a return of \$8—\$9—\$10—\$11 a barrel when it costs you about \$10 to raise them?

Profitless Prosperity

Have you attended during the last decade an annual meeting, a regional marketing meeting of growers, or a discussion with an independent selling agent or shipper, when the speakers did not exude confidence and optimism and swear allegiance to a "better return to the grower"?

Yet as I ride around the Cape and see the weeds, the grass, the neglect, forced by lack of money, it is a sad and frightening sight and I yearn for a practical, yes profitable, optimism.

Any man experienced in the selling of cranberries knows that a sincere 'better return to growers' must start timewise with the profitable selling of fresh and bulk (those sold to independent canners) berries. Indeed, whether you make any real money on your 1964 crop depends in large measure on the decisions made by the marketers of your berries, cooperative and independent, between now and Sept. 10 (opening price date) and their consistent execution of these decisions for two short months since most fresh and bulk berries are sold by about Nov. 10 for the Thanksgiving market and there is traditionally little price weakness for late variety berries for the minor Christmas market.

Be assured, the performance of these cranberry marketers—both Co-op and independent—in the sale of fresh and bulk berries can raise your return as a grower to a living wage, to an end of

profitless prosperity, to an era of practical optimism in which we need no longer neglect our bogs in order to make ends meet.

Plan a Profit

To earn a profit today a business must first plan a profit and price its products accordingly before it tries to make a sale. Equally important it must turn down certain unprofitable sales. We growers can not swap optimism for a new car or cheese at the supermarket, nor can we make a profit on our berries unless they are sold at a realistically profitable price.

A manufacturer prices his products by adding prime costs and overhead, plus selling costs, and adds a planned profit margin before he sets his price. His salesmen are paid to sell at that price, not what the buyer may offer.

Fresh and bulk cranberries have too often in the past been priced on a basis of what the marketers guessed the "traffic would bear but let us make it low enough to surely sell the entire crop" and **hope** the result would bring a return to the grower. The final return to the grower, with no planned profit originally in the selling price, has been \$8—\$9—\$10—\$11 and weeds with grass.

This year, indeed during these next few months, the marketers and sellers of cranberries have a golden opportunity, perhaps the first opportunity in many years, to swap the opium of optimism, for a truly satisfactory return to growers. For this year we have a marketing order to relieve the pressure and fear of unsold carry-over. We have the spectacular success of juice. We have the hope of foreign markets. We have, reportedly, a negligible carry-over by independent canners.

Surely under these favorable conditions, the marketers of cranberries, both independent and Co-op, should have the courage to try a simple experiment of combining both the above theories of pricing. In brief, I suggest a **floor** consisting of cost; plus a planned profit as the manufac-

turer does. This floor should be the **minimum** price at which any berries are offered before calculating what the traffic will bear.

3 Cents a Pound

Let's figure it out together just as a manufacturer would figure. It costs us about \$10 per barrel to grow berries on the Cape. Add \$5 per barrel for screening, packing, selling. Add \$3 per barrel, only three cents a pound, for planned profit some of which must go towards improving our bogs, a possible increase in real estate taxes; and the lowest profitable selling price for fresh berries is \$4.50 a case or \$18.00 a barrel, and a bulk price to independent canners of \$10 plus screening, plus three cents a pound planned profit or \$13.50 a barrel minimum.

Certainly the average Wisconsin cost to grow is lower than \$10 and many New Jersey costs may be higher and individual grower costs will vary, but these averages of \$18 and \$13.50 are correct for the majority of the crop—if you intend to plan for a profit.

To simplify this discussion, it is restricted to fresh fruit. A planned profit for processed cranberries is far more complicated. Let us remember nearly half the crop can be sold fresh. Timewise, the Co-op must make a profit on fresh and bulk sales **before** it can make a profit on canned sauce or juice from its patrons' 1964 crop.

The discovery of new products and their testing in test markets is necessarily expensive. The sale of cranberry juice is somewhat dependent on a high price of frozen orange juice caused by temporary frost damage.

It might be an intelligent guess that the development of new products and the spectacular rise in cranberry juice sales, for which the present marketers at Ocean Spray are to be so warmly congratulated by all growers, has not yet reached a level at which a truly profitable return to their patrons can be achieved unless the Co-op fresh and bulk sales

are made at a price high enough to yield a planned profit to their members on the operation of their fresh fruit division by itself. Thus it is vital to Co-op and independent growers alike that a planned profit of 3 cents a pound be returned on his 1964 crop and all sales of fresh or bulk berries for 1964.

Pitfall To Be Avoided


Now let us become practical. Believe me, if you are to actually receive these vital 3 cents a pound, many historical pitfalls must be avoided and a better spirit of cooperation exist between the Co-op and the "independent" shipper without infringing on the Robinson-Patman or Anti-trust laws. I suggest:

1. The opening price should be at least \$4.50 a case. Historically, Wisconsin members and Directors of the Co-op usually favor a lower opening price than do Directors from Mass. and N. J. I believe \$4.50 would allow the latter to end profitless prosperity and weedy bogs without making millionaires in Wisconsin, Washington, and Oregon. \$13.50 a barrel opening price for bulk berries.
2. Each 'independent' shipper reevaluate his underselling policy. Perhaps this 10-15 cents per case is partly habit. Marketing men, even Advertising men, agree that a brand is of little significance in fresh fruit or produce to the housewife. Why not try 5¢ differential and sell quality to the trade? And don't get scared or pessimistic at the first three turn-downs. If you sell a grower's berries below a profitable price to him, are you really entitled to the same commission as on a profitable sale, just to hold a particular customer? A manufacturers' salesman does not receive the same commission on a "loss leader" as on sales at regular prices.
3. Each 'independent' shipper question anew "meeting" a cooperative advertising allow-

ance of 10¢ a case every time a quotation is made to a buyer. Remember all your growers have lost this 40¢ a barrel and the Co-op patrons have spent it only in the few instances, probably under 20% of shipments, when it was actually used with proof of use. A & P, most growers and Commission Agents, do not like Cooperative Advertising allowances.

4. The Co-op set a bulk price including planned profit on these sales to its patrons and high enough so that independent Canners can not seriously undersell Ocean Spray brand canned berries, and maybe juice in 1964-5, on a basis of low cost berries. I would hope for a slightly higher bulk price on whole sauce quality berries. If any independent shipper voluntarily cuts these bulk prices deeply, how can he expect the Co-op to hold the umbrella for very long? Most assuredly the independent whether the cranberry makes canner does not give a hoot a profit, grows weeds, or goes broke.
5. The "guaranteed against decline for several weeks in the future" pricing policy on fresh fruit might well consider that in all fresh produce there exists a traditional differential for quality and rare indeed is the condition of early variety cranberry at Thanksgiving and Christmas equal to that of those harvested a month or so later. The stores may want the cheapest (and weakest) berries for loss leaders at Thanksgiving but is it really true there is no quality market for our traditional holiday worth 2 cents a pound pack at retail? Surely for the Christmas market and the festive mood, late variety are worth, and women will pay the grower 1-2 cents a lb. (25-50¢ a case) more. This erosion of price for late va-

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ries in recent years has cost the growers plenty, and is not consistent with those speeches about trying to raise the return to growers, especially in recent years when it was obvious on Nov. 15 or before, that there would be a sell-out by Dec. 25.

6. Manipulation of f.o.b. shipping points, delivered vs f.o.b. prices, consignment sales, storing in distant markets unsold berries, dumping of weak berries in one market, have in the last decade "sold" a few berries, gotten the opposition sore, fired a desire for revenge; but with 1-1.5 million barrel crop such practices seriously cut the grower's profit, indeed for ten years each has helped kill his profit and grown grass on his bog.

As growers, let us ask our marketers to do away with the follies of the past; let them forget who did what in the past. As long as the independents think the Co-op deliberately keeps down the price of fresh and bulk berries in order to drive the independents out of business, as long the independent shipper cuts market prices unreasonably to get an order and the Co-op naturally gets tired of being a sucker by holding an umbrella; just so long will you miss that vital 3 cents a pound profit.

What Can We Do About It?

We have a golden opportunity. The patrons of the Co-op raise about 80% of the crop. The other 20% — but nearly half of fresh and bulk sales — are now sold by a handful of "independent shippers." As growers we can contact our Directors of the Co-op or independent "seller" and raise our voice for a planned profit of 3 cents a pound on each and every sale; for more harmony and communication between the Co-op and independents within the law — for a day by day consciousness in Sept., Oct., Nov. and Dec. of harmful selling practices of bulk and fresh berries, of the urgency for 3 cents a pound profit

it on every fresh and bulk sale, plus all the more they can get for processed. Let us enjoy a healthy, ethical competition between Co-op and Independent shipper, as to who can return the most to the grower. Maybe they **both** might win!

Am I a voice crying in the wilderness? Do you agree or disagree? You have healthy ideas of your own. I want so much to share them. Write now to Merry, c/o Cranberries, Box 32, Wareham, Mass. Please do it now while you are in the mood.

Editor's Note: Perley Merry a grower in Massachusetts has been a member of two cranberry Co-ops and an 'independent'; a merchandiser of both manufactured goods and cranberries.

WISCONSIN FIELD MEETS

Two informal field meetings were scheduled for cranberry growers of the Northern Wisconsin region. One was at the Drever Cranberry Company, Three Lakes, July 13, the other at the marsh of Tony Jonjak, Hayward. Both sessions were scheduled for 6:30 P.M.

Specialists on cranberry insects, diseases and weed control were scheduled to be on hand, and to present recent findings in these fields.

Jonjak extended an invitation to growers to bring "the wife and kids," as he has an excellent beach.

SOME RANDOM NOTES — NEW VARIETY — CASORON, MARKET OUTLOOK

Vernon Goldsworthy of Eagle River, Wisconsin has received a letter from Andrew Kruiswyk, Jr. County Extension Agent for Pacific County, Washington, in which he states that Ralph Tidrick, a grower at Long Beach, Washington, has requested some Stevens from "Goldy" for planting, enough for about one-third of an acre. The vines will be sent for either fall or spring planting.

Mr. Kruiswyk was also enthusiastic about the results which

have been obtained from Casoron and also Chlroro IPC.

Mr. Kruiswyk is also enthusiastic about the outlook for marketing this fall, and wrote "it will be our challenge (as an industry) to have enough cranberries on the market to keep the consumer acceptance growing"

Letter to the Editor

Editor, CRANBERRIES
Wareham, Mass.

Dear Mr. Hall:

One of the best methods for promoting the sale of a product is to keep the name and information about the product before the public. Recently Mrs. Clarence C. Perry of Marion, Mass. Garden Club and bog owner, sent an article about raising cranberries to the National Gardener, the National Garden Club magazine. Circulation about 37,000 distributed in 47 of the United States. It will probably seem very elementary to veteran cranberry growers but it reads as follows:

THE CRANBERRY STORY

Cranberries will only grow on a particular type of land and in a particular climate. They grow in Massachusetts, Wisconsin, Oregon, Canada and New Jersey. This land is low land usually in or near a swamp, stream of water or pond. There are what they call dry bogs. These growers cannot depend on harvesting a crop every year as they do not have any way of flooding their bog for protection from frosts during the frost season. During the last few years however, sprinkle irrigation systems have been developed and many farmers owning dry bogs have installed these systems to protect the dry bog.

The bog land must have a peat or muck bottom. This bottom absorbs and holds moisture for cranberry vine roots to feed on. The bottom will keep the vines nourished during long droughts. The special bottomland must first be detected in the planning of building a bog. Also, the proper type of sand must be located with economical hauling distance. Land is cleared and 3 to 4 inches of

and is spread on top of the
eat bottom. Vines are either
anted by hand with a metal
ng that pushes the vine 5 or 6
ches down into the land, or by
achine. There is a machine that
ill plant them similarly. How-
ver, they can be disc harrowed
to the ground too.

These vines take 3 to 4 years to
thicken or cover the ground they
re planted on. The cranberries
ust be hand harvested until the
third or fourth year as the vines
re not thick enough or strong
ough to stand the wear and tear
f a machine picker.

The land is sectioned off by
itches for water to flow through
n irrigation system. Flumes are
stalled at vital points to control
ooding.

All kinds of grasses and weeds,
f course, try to grow on the bogs.
hese are controlled by hand
eeding, chemicals (state and na-
onal approved) and mowing.
ertilizers are used at different
ages of crop growth. Bog sand
spread on the bogs at different

times as it acts as a type of fer-
tilizer. Several kinds of insect
sprays are used at different stages
of the crop growth, too.

Many cranberry farmers are of
the opinion bees are beneficial
during blossom time. They keep
bee hives on the banks of the bogs
to pollinate the cranberry blos-
soms. The blossoms are little
pink flowers shaped something
like a lilac floret. The growing
season of the cranberry is about
five months.

Bogs that are flooded for the
winter are drained in the early
spring and tended all summer.
Harvest time starts around Labor
Day in September, lasting until
the middle or end of October.

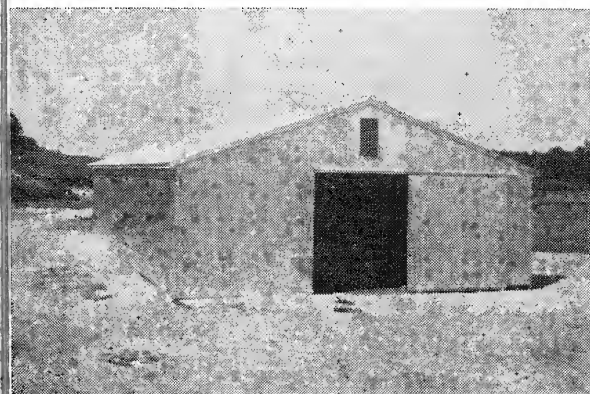
Many bog owners still harvest
their crops by hand. However,
more owners harvest by machin-
ery today. When the bog vines
become trained to the combing
pattern of the machines, the
harvesting is done more efficiently
than by hand. There are old
bogs, years old, that are stony
and too uneven to use machines

on. Of course, these would have
to be hand picked as the ma-
chine would not work efficiently
on them.

The harvest is a mad rush to
beat the freezing weather. Farmers
that have a mechanized system of
harvesting proceed methodically
on every day that weather per-
mits during harvesting season.

In the East, berries are not
harvested when they are wet. If
there is a heavy morning dew, or
berries are wet by rain, harves-
ting must be postponed until
they are dry. In the Northwest,
the cranberry farmers harvest
their cranberries under water.
They have a different type of
harvest machine construction to
harvest the crop in this manner.
They have special machines to
dry the wet berries.

Cranberries have a good keep-
ing quality compared to lots of
perishable foods. They can be
kept in cold storage, temperature
just above freezing, for months.
They can be kept frozen and
cooked when desired. Many are



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sold as fresh fruit and due to the expense of storage, the greatest part of the crop is canned in sauce and juice.

The distinct, fresh, tart taste of cranberries used in any form make them a great addition to any meal.

Mrs. Clarence C. Perry, bog owner, and member Marion Garden Club.

Marketing Committee To Meet August 26th

There is to be a meeting of the Cranberry Marketing Committee on Wednesday, August 26 at 9:30 A. M. at the O'Hare Inn, Mannheim and Higgins Roads, Des Plaines, Illinois.

Cranberry Institute Report On Progress In United Kingdom

The United Kingdom (England, Scotland and Wales) is a growing market for United States Cranberries. The preliminary work which we have done and which has been done at the U. S. Trade Centers is beginning to show results. United States sales in 1963, by value, approximated \$110,000 as against sales of \$25,000 to \$30,000 in 1962, and almost nothing in prior years. We are convinced that substantial opportunities exist for further expansion.

A British retail outlet which tested the retail sale of cranberries in 40 retail stores now indicates a willingness to stock the product in their 200 supermarkets. Their tests have indicated that British housewives can be interested in United States cranberries and they are convinced that they can be merchandised profitably and are willing to make the shelf space available. This is essential in the marketing of a specialty end product.

Cranberries have also been featured by such outstanding establishments as Fortnum and Masons, Selfridges, Harrods, and other shops with encouraging results.

Work has been done looking forward to the possibility of tie-ins with the New Zealand Lamb Board and British Turkey Federation. A large meat distributor, W. A. Norwood & Sons has indicated an interest in the development of joint merchandising through butcher shops.

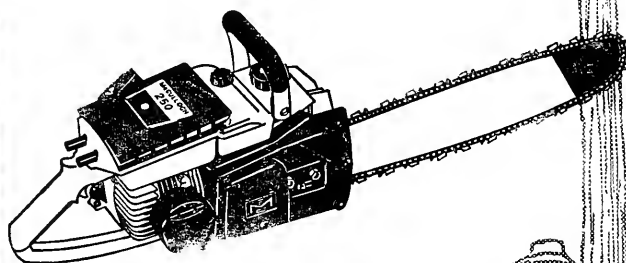
Cranberries have met with an outstanding success during the American Food Drive in Scotland, particularly at the Scottish Food Fair Exhibit in Glasgow in early April. Nearly 2000 cans were sold to the public in a four day period and immense interest was shown in the cranberry stand. This in turn has created considerable interest in the Trade and arrangements have been made for promotional features with major accounts.

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Much publicity has been given to U. S. Cranberries by the various press media. An impressive book of cranberry clippings and tear sheets is on hand at our office. Cookery editors have informed us they will be featuring cranberries in prominent magazines and books in the months to come. U. S. cranberries are proving to be popular together with ice cream, sponges, and creamed rice. We feel that we have now made the break-through and that the product will not only be linked with poultry in the future but with other meats and many other items.

We feel that a good start has been made in gaining trade and consumer acceptance of United States cranberries which were almost unknown in the United Kingdom two years ago.

Our largest United States producer of cranberry products has also made considerable investment and effort in attempting to develop other markets. It has kept product available in the market place which is essential to effective promotion of an end product. It is our judgment that we should now concentrate and step-up our efforts in the United Kingdom and capitalize upon the efforts which have already been made. The United Kingdom program, therefore, will be enlarged in scope stressing in-store promotions, demonstrations point of sales material and specialized advertising in support of the broadened distribution

Under this enlarged program we have as a goal for the program year sales of 50,000 to 60,000 cases with a United States value of \$225,000 to \$270,000. A long range potential estimate for the market is in excess of \$1,000,000 annually.

Our next report will cover market potential of certain other European Markets.

Orrin G. Colley

President Cranberry Institute

PERSONAL PUFF

We were gratified to see a cranberry photograph of ours in "Bay State Brief," published and copyrighted by Lincoln A. Dexter, author and editor of Wilbraham, Mass. We were especially pleased it depicted a cranberry harvesting scene at the Mass. State Bog, and thus gave a further publicity boost to the cranberry industry.

"Bay State Briefs," is a beautifully gotten up loose-leaf volume of 134 pages setting forth the current features of Massachusetts which sells for \$1.50 plus postage, and a little volume which is well worth saving for easy reference of facts and figures such as population by counties and by towns.

ITEM

Vernon Goldsworthy of Eagle River, Wisconsin has been visited by Oscar Austring Pitt Meadow, British Columbia, and is to furnish him some planting stock next spring. This past spring Goldy planted three acres of Pilgrims. He reports, Pilgrim being one of the hybrid varieties which looks very promising.

Home Buying

With the organized pressures to buy a home bearing down on the family, home purchasing is left as a too-often unequal match between a better-informed real estate industry and a less well-informed buyer.

Stressing the importance of spending the housing dollar wisely, Edward K. Knapp, assistant professor in the Extension Division of home economics at the University of Massachusetts spoke before the National Housing Workshop recently at the University of Nebraska Center for Continuing Education.

Knapp pointed out that due to the greatly increased mobility of our industrial society, there is the possibility that each family will employ poor house buying judgment several times during a lifetime.

"It is to increasing the abilities of home buyers that we as educators in the field of residential housing should direct our efforts," said Knapp. To do this, he explained, it is necessary to discuss individual the many aspects

Continued on Page 24

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WAKE UP NEW JERSEY ON CRANBERRIES!

We wish New Jersey would get more on the ball in growing cranberries for the expanding market which seems to be developing. The 1963 New Jersey Statistics, publication of the New Jersey Crop Reporting Service is as follows:

For the year 1962 the acres harvested were 3000, with a yield per acre of 34.2; production in barrels was 103,000 with the season average price per barrel unit \$9.90 with a total farm value of \$1,020,000 and an average per acre of \$348, while cultivated blueberries had a total of 7,300 acres harvested, and a total farm value of \$4,710,000.

That is not enough cranberries grown for the once second state in cranberries in the nation.

WE ARE FOR GOLDWATER

This magazine seldom ventures into national politics, but at the present time it would like to declare itself for Republican Nominee Barry Goldwater of Arizona, whom we think will make an excellent president if he can win in the November election. We feel he will do his best to straighten out the present farm "mess," whatever this mess may be, and which the Democrats in the years they have been in power, (with the exception of the Eisenhower administration) have created.

SALUTE TO FRANK LAINE

This month this publication salutes Frank Laine of Carver, Mass., who at 78 is still going valiantly at the job by growing cranberries on his small bog at Great Neck Road, East Wareham. Not the hottest days of the summer keep him from working on his 4½ acre piece. If there were more like Mr. Laine who keeps at the job of growing cranberries it would be an even more growing industry.

CLARENCE J. HALL
Editor and Publisher

EDITH S. HALL — Associate Editor
Wareham, Massachusetts

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CASORON!

It seems to be a fact the cranberry nation over, that the USDA release of Casoron for use appears to have given the cranberry industry a new "shot in the arm." This material is expected to accomplish much in weed control in the future.

Finally, all the cranberry bogs which are changing hands in Massachusetts seem to indicate the cranberry industry is on the move upwards.

SERVING THE WISCONSIN GROWERS

HOME BUYING

Continued from Page 21

of home purchase and then consider the situation as a whole.

Knapp explained that he had conducted a "Housing Dollar" series of six meetings throughout the Commonwealth in which the participants, primarily young married couples, studied the detailed cost of building a house.

"The result was a precise cost picture for a particular residence," he noted, "The student then had detailed material and labor costs and class notes regarding desirable qualities. This enabled him to judge the merits of both a new or older home."

Stepped-up research regarding residential housing and the assembling of this information into teaching materials are necessary to educate the public in spending

their housing dollar intelligently, he said.

"There is no shortage of audience numbers," concluded Knapp, "as we are living in one of the biggest housing booms in history."

MASS. KEEPING QUALITY

The keeping quality forecast indicates the Mass. weather to June 9th shows only 4 points of a possible 18 points in favor of the keeping quality of the 1964 crop. The month of June, which has been cold to June 9th could add another two points in favor of quality if the temperatures remain below normal. However, there has been considerable frost flooding some of the held-over sort—which tends to damage berry quality in the coming crop.

We incline to the use of fungicides this year, feeling that the

chances are good that the treatments would pay for themselves in improved quality of fruit and reduced shrinkage.

The report is signed by the county agents.

FRESH FROM THE FIELDS

Continued from Page 6
clipping was being done. Insect damage was light. Fungicides were being applied the latter part of the month. Growers with short water supplies were busy installing sprinklers on new plantings and high beds to conserve water and provide adequate moisture.

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The 3 Meteorologists, The Rev. Ralph Barker (Left) "Don" Kent, T
Station WBZ and Dr. Oscar Tenenbaum, U. S. Weather Bureau at Boston
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(CRANBERRIES Photo)

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Summer Meet of WSCGA Held at Three Lakes

The summer meeting of the Wisconsin State Cranberry Growers' Ass'n was held at the Drever Cranberry Company, Three Lakes, Wis. on Friday, Aug. 14. About 150 members and guests were present. Attendance was cut down due to the severe cold the previous night. President Bruce Potter opened the meeting with a welcome and thanks to the host, Mr. Thomas Drever. Speakers on the program included Dr. M. E. Dana, of the University of Wisconsin whose subject was "What We Know About Casoron." He explained the application of Casoron on plots at the Drever Marsh and cautioned growers not to go overboard with the material this first year. He felt tests had shown that fall applications following harvest gave the best controls with minimum crop and vine damage.

A representative of the Noble Manufacturing Company, Sac City, Iowa, Mr. Kapaska explained the calibration of the granular spreaders which most growers will use in applying the 4% Casoron granules. He urged them to be sure of the proper calibration and felt that the Chemicaster machine manufactured by the Dana Machine Company of Wis. Rapids would do a good job.

Mr. Arthur Nelson, Superintendent of the Drever Marsh, spoke on the practical use of sprinklers for frost protection on their 40 acre marsh. He urged growers planning to install the sprinklers to get good material and to handle it carefully. He stated that he felt their crop production had been doubled with the use of sprinklers and that they had been able to protect their vines under all temperature extremes during the growing season. He further stated that they had applied a wide range of pesticides successfully through the sprinklers. The rate of fall in temperature governed when they started their sprinklers.

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The cranberry meteorologist Mr. Warren Wallis was unable to attend due to the great distance involved and because of the frost the night before and the prospects for frost that night.

Various manufacturers of cranberry equipment had their displays at the meeting.

Letters

(Editor's Note: Here is a reply to the letter by Perley Merry in last month's issue. It is from Ralph Thacher of Marion, Mass. who operated the bog at Greene, R. I., the Colonial Cranberry Company. The article was in regard to higher prices for fresh fruit.)

Dear Perley:

Cranberries article: Good for you. The article except for numbered paragraphs 2 and 3 is good, sound and workable philosophy. You nor anyone else, can sell #2 and 3 to anyone fighting the fever of selling fresh fruit that must be moved. I've tried and hard.

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Mass. Cranberry Station and Field Notes

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

Personals

The Station's new biochemist, Dr. Charles Wesley Miller, began work August 3rd. He will be working in the old soils laboratory at the back of the downstairs floor. We are hopeful that this lab will be completely renovated for him soon. "Wes" will be primarily concerned with the fate of pesticides in soils and water, and will be working very closely with the other members of the Station. We at the Cranberry Experiment Station extend a cor-

dial welcome to Dr. Miller and his family and wish him every success in his work.

Prof. "Stan" Norton attended the meeting of the North Atlantic Region of the American Society of Agricultural Engineers at Rutgers University, New Brunswick, N. J., from August 23 to 26. Prof. Norton was chairman of the Power and Machinery Section.

Dr. Bert Zuckerman attended the AIBS Meeting, Society of American Nematologists, at the University of Colorado, Boulder,

Colorado, the week of August 23. Dr. Zuckerman presented a paper on reproduction of nematodes in sterile growth chambers.

Dr. Fred Chandler, Station agronomist, officially retired on August 14, 1964, and was honored at the annual meeting of the Cape Cod Cranberry Growers Association for his long and faithful service to the industry. The writer would like to take this opportunity to express his personal appreciation to Dr. Chandler for his help and advice over the past 12 years. We all wish Fred and Mrs. Chandler the very best in the years ahead.

The official crop estimate, released by Mr. Byron S. Peterson of the New England Crop Reporting Service, shows Massachusetts with a prospective 1964 crop of 690,000 barrels. This is 8 percent larger than both last year's crop and the 5-year average, and will be the third largest on record if it holds up. For the rest of the country, the Wisconsin estimate is 405,000 barrels, about the same as last year; New Jersey, 99,000 barrels, up sharply from last year; Oregon 37,700 barrels, down about 8 percent from last year; and Washington 67,000 barrels, down sharply from last year. The national crop is estimated at

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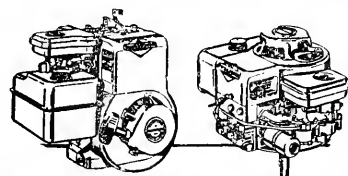
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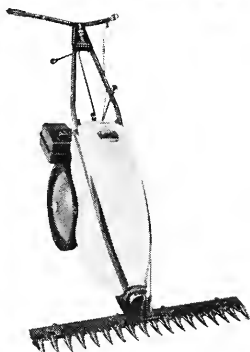
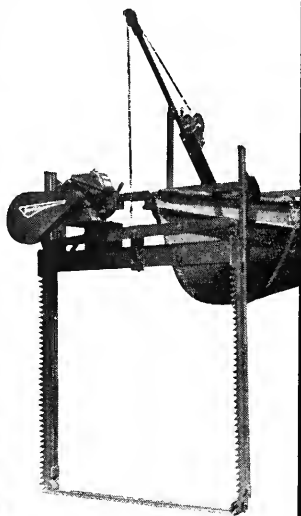
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Minneapolis 8, Minnesota

1,298,700 barrel, which is 4 percent larger than 1963.

The month of August was extremely cool and officially was the second coldest on record, with a temperature of more than 5 degrees a day below normal. In the cranberry area a few bog temperatures of 28 to 30 degrees were noted for some cold locations on the morning of August 10. The official shelter minimum for this date was 43 degrees, quite cool for summer. The total rainfall recorded at the Station for the month of August was 2.45 inches, well below the 30-year average of 4.29 inches. Actually the month had been extremely dry until a heavy downpour occurred on the afternoon of August 26 when 1.65 inches was recorded. This rain should be helpful in sizing the berries, but did little toward replenishing water supplies which are generally quite low as a result of the subnormal amounts of precipitation since late April.

The frost warning service, sponsored by the Cape Cod Cranberry Growers Association, is operating as usual this fall. The telephone answering service continues to increase in popularity and is very useful. Frost information is recorded daily, and growers interested may telephon Wareham 295-2696 in the afternoon and evening for the latest reports. If you have not contributed to this service, it is still not too late to do so. Any contributions will be gratefully accepted. Send your money to Mrs. Ruth Beaton, Treasurer, Cape Cod Cranberry Growers Association, Jefferson Shores, Buzzards Bay, Mass. The radio schedule also supplements the answering and relay services. (see page three)

Fall Management

The following suggestions on fall management are offered for consideration: 1) It is an excellent practice, where water is available, to flood bogs immediately after harvest. This gives the vines a good drink of water, and allows broken vines and other harmful trash to be col-

Continued on Page 20

Bog

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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of September, 1964 — Vol. 29, No. 5

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS NEW JERSEY

August an Unsettled Month

The weather during the middle of August was extremely unsettled with dark gloomy days, little sun and frequent rains which were not enough to be of much consequence to the cranberry crop. The rains did continue until there was quite a bit of moisture accumulated.

Minus Temp

The temperature departure from normal at the end of three weeks had been a huge minus 154 degrees. Already the summer of 1964 was being referred to as the "summerless summer" with a cooler than normal July and such a cold August.

But summer weather returned with a vengeance on the 24th of August.

Second Coolest August on Record

It turned out to be the second coolest August on record with a minus 164 degrees.

Minus Rainfall

The rainfall however turned out to only 2.45 with the average for the cranberry area 3.56.

Coldest August on Record

The past month was the coldest August on record in the 35-year history of this Station. The mean temperature was 70.1 degrees, which was 3.5 degrees below normal. The average maximum temperature for August was 82.5 degrees, 2.5 degrees below normal; the average minimum was 57.6 degrees, 4.4 degrees below normal. There were only four days of 90 degrees and over but eight nights in the 40s. On August 15th 41 degrees was recorded at this Laboratory. This tied with the lowest temperature ever recorded in August in 35 years of records here.

Four Frost Alerts

There were four frost alerts for cranberry bogs from the Weather

Bureau during August but only once did temperatures in the bogs get below 32 degrees (the morning of Saturday, August 15th, when it was 31 degrees on at least four bogs). This is believed to be one of the very earliest frosts ever recorded on cranberry bogs in New Jersey.

Second Driest August

August of 1964 was the second driest August on record here, the total precipitation for the month being less than 1 inch (.90). This compares with the normal rainfall in August of 4.68 inches, or 3.78 inches below normal. The total rainfall for the four months, May through August, totaled 8.6 inches, compared with the normal for those four months of 16.63 inches, or a deficiency of 8.63 inches.

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August a Month of Extremes

August temperatures were a month of extremes, which averaged out normal with precipitation less than average. High for the month was 99 on the 3rd and cold was 19 on the 14th. It was the highest maximum for the month since August 21, 1955, when it was 103 and the lowest minimum since August 29, 1946 when it dropped to 18 degrees. The highest temperature equaled the highest temperature of the year reached on July 19. The coldest equaled the night of June 15 when the state lost 20% of its potential crop. Rainfall for the month in central Wisconsin totaled 2.95 inches compared with a ten year average of 3.84. It brought the total for the year to 21.13 inches. At least a trace of precipitation was recorded on 11 days. The outlook for September calls for both precipitation and temperature to be above normal.

Drop in Water Levels

The main topic of conversation among all growers was the drop in water levels. Below normal rainfall in July and August, coupled with loss by evaporation and transpiration along with some frost flooding had dropped water reservoirs to all time recent lows. Growers in the affected areas were putting in sprinklers, pumps and blowing out beaver dams. Some growers were fearful that they would not have sufficient water for harvesting and of greater concern, supplies for the winter flood. Rain at month's end was beginning to alleviate the situation, but heavy rains were needed to bring water supplies back to normal.

500 Barrel Frost Loss August 14

An estimated 500 barrels were lost by frost on the 14th, but of more serious nature was the freezing of vine tips on beds which had been damaged by the frost in June and had side shooted. This was also true on some badly damaged beds from hail in mid June where side shooting had resulted.

Continued on Page 20

Annual Meeting of Cape Cod Cranberry Growers' Association Is Well Attended and the Growers Were in a Cheerful Mood



A 'copter from the Wiggins Airways was on display among the exhibits. Photo shows Paul Morse, agent for Wiggins, Mrs. Billy Anderson, wife of pilot who is on the right.
(CRANBERRIES Photo)

Three Meteorologists are the Principle Speakers — Dr. F. B. Chandler Resigns from Station Staff — New Man, a Bio-Chemist for the Station is Announced.

The annual meeting of the Cape Cod Cranberry Growers' Association was held at the State Bog August 18th and brought forth one of the largest attendances in recent years and there was a note of optimism as to the cranberry future running through it.

The featured speakers were three meteorologists, Oscar Tenenbaum, chief of the U. S. Weather Bureau at Boston, Don Kent weather forecaster for Boston television station, WBZ and the Rev. Ralph Barker, who is known as the "Old Salt." Dr. Tenenbaum spoke mostly on Long Range weather forecasting; Don Kent on short-range forecasting in New England, and the "Old Salt," on

The Development of Cranberry Frost Forecasting with the late Dr. H. J. Franklin.

This was an all-day meeting beginning at ten a.m. and it did not conclude until nearly 4 p.m.

There was an equipment display on view throughout the day. At 11 there was a tour of the state bog to which a large number availed themselves. At 12 noon there was a chicken and cranberry barbecue, with barbecued chicken, cranberry sauce and cranberry juice cocktail, plus coffee and cranberry ice cream.

At 1:30 came the business meeting of the association with the election of officers.

The meeting marked the recognition of the resignation of Dr. F. B. Chandler from the Station staff, he having been there since 1946. (A more detailed story on Dr. Chandler appears elsewhere in this issue.) He was presented

with a gift of money, and a camera, and Mrs. F. B. Chandler, who was present at the meeting received a corsage presented to her by Mrs. Joseph Kelley.

Dr. Cross announced at the meeting that the position held for so long by "Dick" Beattie, now with the University of Massachusetts at Amherst had finally been filled and the appointee was Irving DeMoranville of the Station staff, who will also continue his valuable studies of weeds. This means for one thing that the Station Notes in this magazine will henceforth be supplied by "Dee," and that he will do the grower relation job between the Station and the growers that "Dick" so ably filled for so many years.

Dr. Cross also announced that a new man had been added to the Station Staff. He is C. Wesley Miller, who is a bio-chemist and



Dr. F. B. Chandler (left) is congratulated by "Bill" Atwood, secretary of the Cape Cod Cranberry Growers' Association.

(CRANBERRIES Photo)

will act in that capacity at the Station. He said this will fill a lack and round out the Staff which now consists of about 18 paid employees, plus others who work at the Station and have "lab" and office space, as does Dr. Bergman, retired pathologist and these although working entirely on their own are doing the cranberry growers a service through their efforts in research.

A number of honored guests were recognized and these included "Lou" Webster, State director of Marketing; Philip M. Good, Secretary of the Massachusetts Farm Bureau; Oscar Johnson, Barnstable County Extension Director; "Dom" Marini, of Massachusetts Extension Service, Brockton office; Robert Ewing, Director Massachusetts Extension Service and Edward Gelsthorpe, executive vice president of Ocean Spray, the "big co-op."

The entire slate of officers and directors of the Association was re-elected. These were president

Raymond F. Morse, who presided at the meeting, first vice president Alfred L. Pappi, second vice president Robert Hiller, secretary William M. Atwood, treasurer Mrs. Ruth E. Beaton; directors,

Louis Sherman, William B. Stearns, Jr., Dr. Chester E. Cross, Paul R. Morse, Anthony R. Briggs, Oscar L. Norton, Gilbert T. Beaton, Raymond F. Morse, Alfred L. Pappi, William M. Atwood, Ruth E. Beaton, Robert Hiller, and the cranberry club presidents, Robert Meharg, William M. Atwood, Francis Kendrick; honorary directors, Dr. Herbert F. Bergman and Joseph L. Kelley.

According to the report of Secretary Mrs. Beaton the Cape Cod Cranberry Growers' Association now has a membership of 246, which is only about one third of the growers of Massachusetts. A greater membership was urged. Mrs. Beaton said the frost warning service was barely in the black with a balance of \$105.80 in the fund. George Rounsville, who prepared the Station frost forecasts received much praise from several sources for his dedication to duty.

Dr. Tenenbaum in his talk went into the past of weather forecasting. He said in the beginning Old Man Noah forecast 40 days and 40 nights of rain and he was right, according to the Bible. Then came Joseph of the many colored coats—he forecast 7 years of plenty to be followed



Photo shows "little" tractors on display with Miss Sandra Holmes, daughter of the proprietor of the Carver Main Street Garage which entered this exhibit.
(CRANBERRIES Photo)

by 7 years of famine. The ancient Greeks and Romans had their meteorologist. Cato said he did not know how so many "soothsayers" could look at each other without laughing.

"Forecasting started with instruments to measure weather, people used to climb mountains to find out what height did to barometers and later they sent up balloons. Then in the first World War airplanes went up. We began to probe with rockets, radar came next, and it was then thought we were going to have perfect weather forecasting, but we did not.

We began to get certain theories as to air masses. "I wish I could be more optimistic on long range forecasting. There are methods to make forecasts for four or five days. The day will come when long range forecasting really works."

Don Kent said it was a pleasure to meet the cranberry growers face to face. He said he agreed with Oscar Tenenbaum in everything he said. "We have problems in short range forecasting, and an awful lot of them. He told of recent forecasts in which he had been 98 percent wrong. He said forecasters all work from the same charts but they often interpret them differently.

He said this morning (the morning of the meeting) there was a ten percent chance of showers. "But Dr. Cross was able to scare them away. He said that the day before he and the Weather Bureau had agreed."

"If you can't work outside what pity you can't have lots of rain.

Imagine the Cape gift shop people love this sort of weather — people can't go to the beaches so they come to the gift shops.

I get more letters than other bureaus do, I mention little towns nearby (Boston) and I get more kidding, too, for being wrong. I'm a nut. I get involved in these things. I think we have many problems on short range as in long range forecasting."

This is a very challenging field

we work in. No one can be right all the time. I feel that you as growers should become much more interested in weather forecasting than you are.

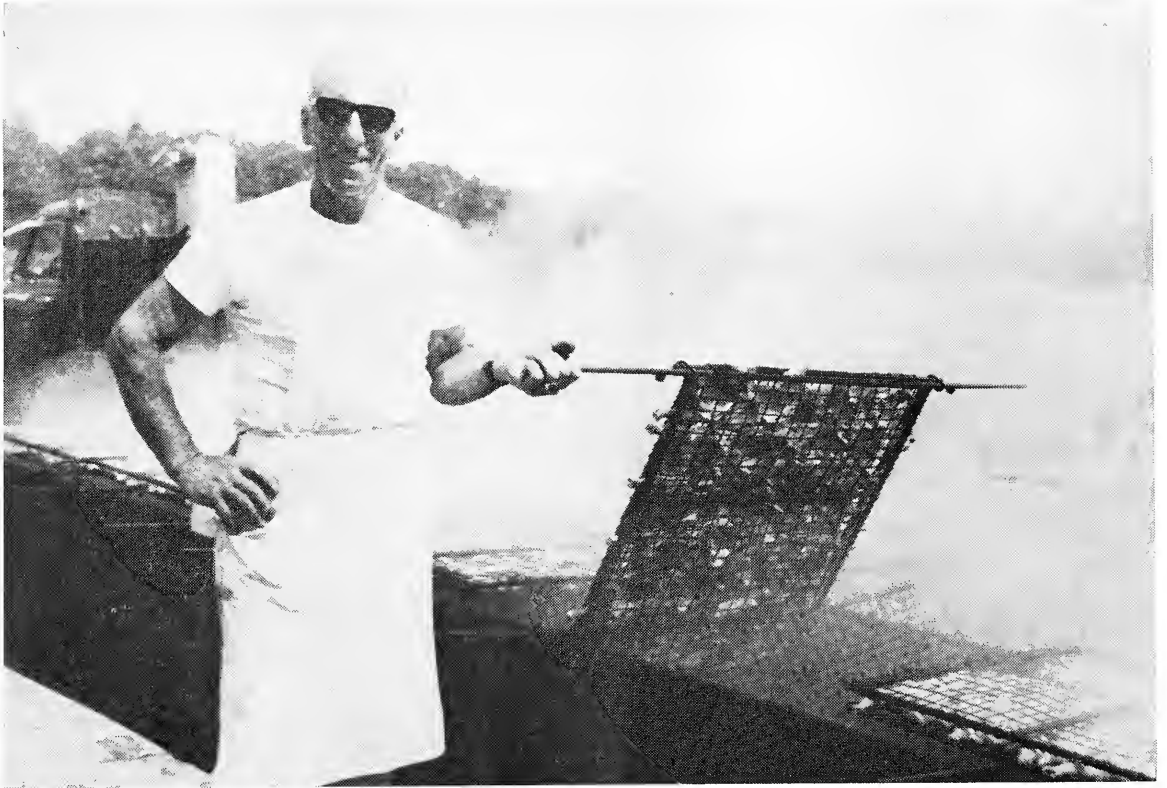
Dr. Cross then introduced the Rev. Mr. Barker, "The Old Salt." Dr. Franklin thought well of the "Old Salt," he said.

Rev. Mr. Barker said it was a sobering thought to think I am the oldest forecaster. "I do more than work at the weather. I am an ordained minister and I run an investment business and have for many years. You see they all have one thing in common, that is, projecting what is to come. I want to take a minute to recall Dr. Franklin, who if

anybody ever was, was 'Mr. Cranberry.' He devoted his whole life to this work. He did things as a scientist must do them and he was a real scientist. The basic formulae he worked out in 1930 are still pretty well used today. My station was the one formerly at East Gloucester on Cape Ann. In the early days I took observations at 9 a.m., 12 noon and 7 and 9 p.m. The most useful ones were the evening observations.

"We do have here in New England the most varied weather that we know about in a short space of time. This fact is a fascinating thing today, and it is frustrating as in the drought of this summer. We have a mari-





The Bake Master at the Chicken and Cranberry Barbecue holds up a batch of frying half chickens. (CRANBERRIES Photo)

time climate and we have Canadian weather with cold waves. We have tropical hurricanes. We can grasp some patterns sometimes. Actually we do have local conditions, we always have to estimate from numerous tiny facts.

"There is the element of human judgment regardless of instruments and computers. Are we sure all the facts put in the computers count. We have to apply teaching to local conditions as Dr. Franklin did. I am glad to see so many young men taking up weather forecasting. It speaks well for the future."

No crop report was given at this meeting as usual. But Dr. Cross said he thought Massachusetts might produce 700,000 to 750,000 barrels. The water damage from flowing last spring was far more serious than had been realized at the time. This has kept Massachusetts from producing a record crop.

Clifton A. Cook of the FAS, United States Department of

Agriculture gave a talk on foreign markets which is carried in full elsewhere in this issue.

The exhibitors included: Wiggins Airways, with pilot "Billy" Anderson, Mrs. Anderson and Paul Morse, agent for Wiggins; Roby's Propane Gas truck, Charles W. Harris, North Dighton, irrigation equipment; International Harvester, Walter Tripp, Acushnet; Oiva Hannula, Furford picking machine; Carver Main Street Garage with little tractors; R. H. Morse with Casoron spreaders; picking machines, Waltham Bag Company and Prolon Plastics Division, pro-phy-lactic Brush Company, Florence, Mass. with plastic boxes which might be used for picking boxes and some of which nestled.

Cranberry Crop A Short One

At its annual meeting in Chicago, August 26th, the Cranberry

Marketing Committee considered a possible set-aside under the Federal Marketing Order. Based on supplies which are lower than projected consumption, no set-aside was recommended.

The Secretary of Agriculture announced the following appointments to the Cranberry Marketing Committee for the two years ending July 31, 1966:

MASSACHUSETTS: Members — George C. P. Olsson, John C. Decas; Alternates — Maurice B. Makepeace, John N. Decas.

NEW JERSEY: Members — Anthony R. DeMarco, Walter Z. Fort; Alternates — Joseph H. Palmer, J. Rogers Brick.

WISCONSIN: Members — Raymond Habelman, Behrend G. Pannkuk; Alternates — Clarence A. Searles, Frederick W. Barber.

WASHINGTON: Member — Frank O. Glenn, Jr.; Alternate — Robert H. Quinby.



New Bio-Chemist at the Massachusetts State Cranberry Experiment Station is "Wes" Miller

The newest addition to the Massachusetts Cranberry Experiment Station is Charles "Wes" Miller, who goes by the nickname of "Wes". He is a bio-chemist.

He was born at Hillside, New Jersey, March 28, 1932. He obtained his title of Master of Science at the University of Minnesota. He was a research associate at Rutgers University in New Jersey in 1960. He obtained his PhD. there in 1964.

He is married to the former Shirley, Schwatz who comes from Lansing, Michigan. They have three sons, Scott 8, Curtis 5½,

and Michael 2½.

He is now making his home in Sandwich on School Street. He will be working with agricultural chemicals such as herbicides, insecticides and fungicides, all chemicals that the grower will apply to the culture of the cranberry.

"I am interested in finding out just what residues from these chemicals do, and where they go to after they are used."

"I am happy to be at the Cranberry Station and hope to do useful work, which will benefit the cranberry grower."

Letter to the Editor

Mr. C. J. Hall

The National Cranberry Magazine
P.O. Box 32, Wareham, Mass.

Dear Sir:

I have been getting your Cranberry Magazine a number of years now, and I wouldn't be without it. I find it has a great source of information on how to grow berries, also how to control weeds.

This has been a very backward spring here. Cold and rainy. I think the berries will be about two weeks late in harvesting. I went all out to kill the bugs this year, and I hope I have done a good job. There is not going to be a big crop. You know, it's not the amount of berries you have, but the cash you get out of it that counts. Here is a story I will tell you about selling berries when I first started in the business . . .

I put them up loose in 24 lb. wooden boxes. I sold them to the stores for \$3.00 a box, and it was hard to sell them. Most stores would take a few boxes for Christmas, as there wasn't a big demand for them. One day I came out of a fruit store where the manager didn't want any. I met a man with a truck loaded with vegetables. He said, "You have nice berries. I'll buy a box." I told him the sales were no good. He said the trouble with you, your not asking enough for them, and he took one of the boxes, went into the same store, and sold it for \$4.00. So, after that, I sold them for \$4.00 and had no trouble in setting them all. Two years later I put them up to \$5.00 a box.

One day a friend of mine called from New Glasgow and told me not to sell any as an embargo was put on the American berries, and there was none coming into Canada. The next day our daily papers were full of the story. There would be no cranberries for Christmas. People who never ate the berries wanted some, the store that bought one box, wanted ten. It seemed everyone wanted them all at once.

One fruit man that handles a

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lot of berries wanted to see me, so I went to his office. He wanted 100 boxes of berries. I told him there was an embargo on berries and when it would be lifted, he would not want to buy from me again. He said he would give me \$7.50 a box for all I had, and every year I had berries he would buy them, but he couldn't pay any more.. I told him it was a deal, I gave him 400 boxes. I had a big crop that year and I divided them all among my customers.

To-day is a different story. When I go to the stores to sell berries, they say "yes" we will take your berries, but you will take the American price. Last season's quotations on the American price in the Atlantic Provinces was \$3.75, \$4.00, \$4.25 and \$4.50. That is the highest they have been. I would like to know what the farmer who grows the berries gets for them when, they are sold so low.

As you know everything has sure gone up in price, and I can't see why the American growers don't put a \$1.00 or more on the box. All they need to do is say there are no berries for Christmas, and they could get almost anything for them. No one appreciates an article if it is too cheap.

My cranberries last year brought me \$5.50 and \$6.00 a box. I put them up the same as the American's, in cellophane front boxes, 1 lb. packages.

I never want to tell anyone how to run their business, but I think a raise in the American market would help a whole lot, besides it would help me.

When the sugar prices went up, there wasn't a shortage and you could buy it or leave it. Most people bought it just the same.

Now, Mr. Hall, if you think this letter is worth printing in your Magazine, you have my permission to do so.

If you ever come to Nova Scotia, give me a call.

Yours very truly,

George W. Mason



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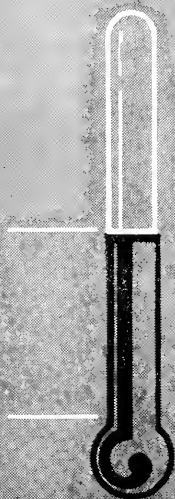
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THE 95th SUMMER MEETING OF ACGA IN NEW JERSEY

This Proved To Be A Most Interesting Event

The 95th Annual Summer Meeting of the American Cranberry Growers' Association was held on August 27th at the Sweetwater Casino, located at historic Batsto, the site of Revolutionary War skirmishes and several interesting Colonial structures.

Captain John Haines, President, presided.

W. J. Fluke, Agricultural Statistician, the new head of the New Jersey Crop Reporting Service, made his first appearance before this group. He gave cranberry crop estimates for New Jersey and the producing states in the nation (these are appearing elsewhere in this issue of CRANBERRIES). Mr. Fluke showed charts on the consumption of cranberries. His projections indicated that the present consumption of 1.2 pounds per person

could be expected to increase to 1.4 pounds, an increase of 17%. He also showed that the population trend can be expected to continue upwards. The net result of increased per capita consumption and increased numbers of consumers should result in a total consumption of cranberries of well over 1½ million barrels within a few years.

Don Dunlap, U. S. Weather Bureau, Trenton Office, gave a talk on weather conditions favoring frost on cranberry bogs (control). He described experiments being conducted by the Agricultural Meteorologist at Rutgers in which the inversions which occur on cranberry bogs on frosty nights are being studied. It is hoped to gain some fundamental knowledge to enable growers to utilize more efficiently such frost protective devices as wind machines.

A delightful surprise of the meeting was the presentation by Mr. Dunlap to Mr. Isaiah Haines of a forty-year service merit

award by the Weather Bureau. Mr. Haines is Chairman of the Cranberry Frost Committee and has been active for many years as a cooperative weather observer for the Weather Bureau. He has gained from his long experience what amounts to an amazing intuition about weather fluctuations in cranberry bogs. On frosty nights New Jersey growers are very glad to have Isaiah's counsel.

Walter Z. Fort, N. J. Independent Growers' Representative on the Cranberry Marketing Order Committee, gave a report on the Chicago meeting of the Committee held on August 26th. Mr. Fort reported that a feeling of high optimism prevailed. No action was taken on set-aside but it was felt by almost all that

Continued on Page 16

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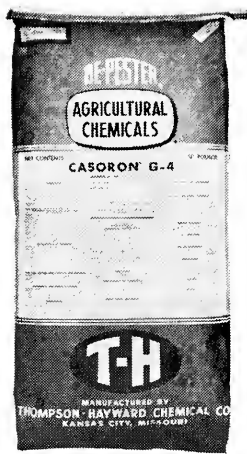
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Continued from Page 14

1964 production, plus the small carry-over, could hardly meet the needs of the market.

Professor Thomas Sweeney, of Aeronautical Engineering at Princeton University, gave a very interesting talk on the "ultra modern" Hover Craft. He illustrated his talk with a colored movie. This revolutionary craft is still in the experimental stages of development with many improvements undoubtedly still to come in the near future. However, it is not too far from being practical even now. Recent demonstrations were conducted on the application of dusts on potato and alfalfa fields.

Philip E. Marucci discussed insect control and cranberry pollination tests being conducted jointly with Professor Filmer of Rutgers. He presented data which showed a remarkable reduction of cranberry tipworm on New Jersey bogs following two years' use of parathion plus dieldrin early in the season. Populations on one heavily infested bog, for

instance, declined from 68% in 1962 to 17% in 1963 and only .05% in 1964. In terms of numbers the density of tipworm decreased from 266 in 1962 to 67 in 1963 and only about .20 in 1964. These very drastic reductions have been general throughout the state. That this has not been the result of natural fluctuations is evident in the fact that tipworm populations remain very high on unsprayed bogs, having averaged 55% in 1962, 51% in 1963 and 60% in 1964. Data from preliminary tests were presented to show that cross pollination increased the percentage set of cranberries.

Eddie Lipman described the promotional program of Ocean Spray. He stated that the advertising efforts of his organization were helping not only itself but the entire industry. Arthur Godfrey's radio program, sponsored by Ocean Spray, has proven to be very effective. The rapid rise in popularity in cranberry juice was deemed to be largely the result of these efforts.

In an afternoon session the group visited the new Cranberry and Blueberry Tract at Oswego. At this site the following demonstrations were conducted: Spraying with helicopter, Spraying with the new Agricat airplane applicator, Spraying by a new ground boom sprayer devised by Harry Moulter, and Ditching with the "clam digger."

Minot Names Sales Manager

John B. Morello, President of Minot Food Packers Incorporated announces the appointment of John O. Leutner as Sales Manager.

The new appointment marks an important step in the company's growth plan. A leader in the cranberry-product field, Minot is currently embarked on a program to introduce new products, having just completed an expansion and modernization program of the plant and technical facilities.

Mr. Leutner brings to his new

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assignment a wide background in executive sales and merchandising. Before joining Minot, he was District Sales Manager with the Old Virginia Packing Co. Front Royal, Va. Previously, he handled sales for the James A. Weaver Co., Lancaster, Pa., and was District Sales Manager for McCormick and Co., Baltimore, Md.

A native of Baltimore, Mr Leutner held a commission with the U. S. Army in the South Pacific during World II. He is married and the father of one child. Mr. Leutner lives in Bryn Mawr, Pa.

Bandon Festival Sept. 25-27

Entries are coming in for the cranberry queen title to be

awarded at the big Bandon, Oregon cranberry harvest and festival, September 25-27.

This promises to be a big event this year for Bandon and the cranberry growers of Southwestern Oregon.

AN ADDITIONAL MASS. CROP NOTE

There was a substantial rain on September 12th which should have added color and probably size to the crop. Picking up to that date had been slow as the weather had been anything satisfactory. This was probably due to side effects of Hurricane Dora which blew itself out in Florida and Georgia. But others were reported racing across the South Atlantic keeping growers in suspense.

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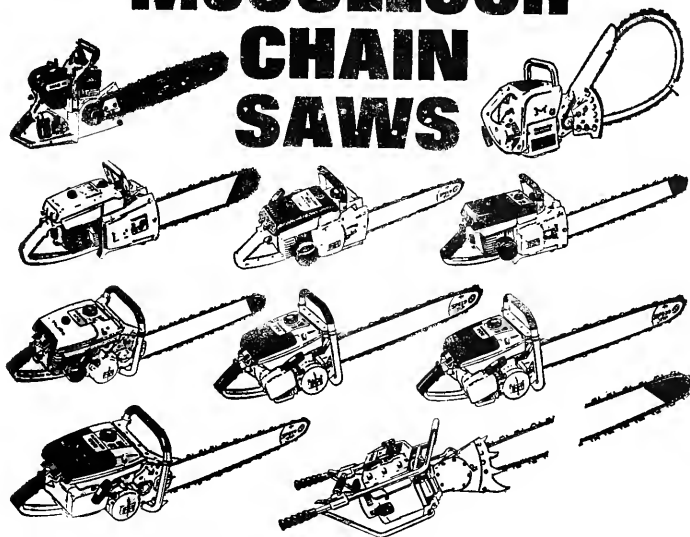
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CAPE COD MEETING

Truly, as pointed out at the annual meeting of the Cape Cod Cranberry Growers' Association, the Massachusetts Cranberry Experiment Station is devoted to the best interests of the growers. For that matter so is the Cranberry-Blueberry Experiment Station in New Jersey and the Coastal Washington Experiment Station at Long Beach, Washington.

But the Massachusetts Station has the most facilities for cranberry growing and with a staff of about 18 paid employees it is doing a marvelous job for the cranberry growers, not only in Massachusetts but in the Nation over. When any cranberry growers visit Massachusetts they usually include a stop at the Mass. Station at East Wareham.

For instance, there is an important experiment going on concerning nematodes, which are of importance in Massachusetts and New Jersey as a pest. If successful this will develop a nematode which destroys nematodes that feed on plant roots such as the cranberry vine.

MOLDED CONTAINERS

We have surely come a long way from the time cranberries were stuck in a barrel or wooden box and sold that way. Another thing shown at the Cape Cod meeting was Prolon Plastics; these were molded items, including molded bottles. These could even be harvest boxes, shipping containers, or for many other uses in the cranberry industry as they are now used in other industries. This particular product was possibly only one of many such lines. This shows how far we have come and are coming in the cranberry industry and other industries which are progressive and on the alert to new developments.

THAT MEETING AT BATSTO

As at the Cape Cod meeting, the one held by the ACGA at historical Batsto in New Jersey apparently was an unusually well-planned and most interesting one. Growers who were at both felt they were well repaid in taking the

CLARENCE J. HALL
Editor and Publisher

EDITH S. HALL — Associate Editor
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P. E. MARUCCI
New Jersey Cranberry and Blueberry Station
Pemberton, New Jersey

trouble to attend. These meetings not only afforded a well-balanced program, but gave the growers a chance to chat together and help to pull together the industry as a whole.

OCEAN SPRAY SATISFACTORY OPENING PRICE

Ocean Spray Cranberries, Inc. opened its price for Massachusetts Early Blacks on September 11 at \$4.50 a quarter, or \$18.00 a barrel. This is a satisfactory price if it is maintained and on the up side from last year. The announcement said that prices for other areas would be quoted when supplies were available.

SERVING THE WISCONSIN GROWERS

STATION NOTES

Continued from Page 4

lected and disposed of. 2) Thin or weak areas of vines on the bog, which are easily seen during the picking operation, should receive an application of fertilizer. This will strengthen the vines without promoting weed growth. The old bucket technique of walking the bogs and spreading the fertilizer by hand on areas that need it is still a good practice. 3) Casoron, or any other approved herbicides should be used to clean up weedy areas. Allow the bog a week or ten days to recover from picking before applying any herbicide. Casoron should not be used until temperatures are cooler, as it may be broken down by temperatures above 75 degrees before being

absorbed by the soil. 4) Girdler, which is becoming a more common pest, can be controlled by flooding for a 5-day period in late September, applying a coat of sand before the start of the next growing season, or by the use of aldrin or dieldrin. Root grub can also be controlled by using aldrin or dieldrin. For more specific recommendations on using these insecticides, consult your cranberry insect control chart.

FRESH FROM THE FIELDS

Continued from Page 6

Most Picking Starts Sept. 21

Some growers had started harvesting damaged beds and high ends where water supplies were short the first of September. Most of the marshes were planning to start on the 21st. Berries were

coloring the end of the month and size was above average.

WASHINGTON

August put out 3.141 inches of rain as recorded at Cranguyma arm at Long Beach, Washington. The greatest amount of rainfall for any one day came on August first when .53 inches was recorded. There was rain on 16 days of the month.

For temperatures, a high of 81 was reached on August the 24th and a low of 38 on the 31st.

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NOTES FROM CRANBERRY PRODUCTS AND "GOLDY"

There is extreme interest in Casoron in Wisconsin for one state, and Cranberry Products, Inc. of Eagle River alone is getting 2500 pounds, and yet Cranberry Products represents only a small part of the cranberry industry in Wisconsin.

Cranberry Products has put in two new coolers and expects to be in a position to handle approximately 100,000 barrels of cranberries for processing. This will include not only sauce, but cranberry cocktail as well. In addition it has a new case sealer and palletizer which increases the capacity.

Wisconsin plans to plant quite a lot of new acreage next year, and, "Goldy" is of the opinion that at least 200 acres, and possibly three may be put in. He will plant close to 75 acres himself on his various properties; most of this will be to new varieties, namely Stevens and Pilgrim.

The former Ramsdell property has been sold to a doctor, in Tomah it is reputed and the property will be known as the Dock Lake Cranberry Company.

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DR. CHANDLER'S BACKGROUND

Dr. Frederick B. Chandler, more familiarly known to cranberry growers as "Fred" and whose resignation from the Massachusetts Cranberry Experiment Station staff became effective August 15th, was most carefully selected for the job he has been filling as a research professor since 1945.

Dr. Chandler has written 4 articles for CRANBERRIES, including three bulletins on cranberries and articles for the New England Homestead.

Dr. Chandler was born in Machias, Maine, attended school there and was graduated from the University of Maine, as a horticulturalist in 1928. He then served on the University of Maine working on the study of low bush blueberries. He did graduate work at the Massachusetts State College; University of Chicago; University of Minnesota and the University of Maryland, where in 1929 he received his Ph.D.

For ten months he was also on the staff of the Massachusetts Institute of Technology, from June of 1943 until April 1944 when he entered the employ of the USD. and was assigned to New Jersey to head up the cranberry and cross-breeding program.

He came from New Jersey to Massachusetts. He has always shown a special interest in the development of new cranberry varieties and much of his work at the State Bog was carried on in this field.

After his retirement he will enlarge his greenhouse at his home in Marion, with the possibility of some commercial work.

Dr. Chandler is married and has two daughters, both of whom are married.

OCEAN SPRAY FINAL PAYMENT

Ocean Spray Cranberries, Inc. announced a final payment for the 1963 crop. The payment \$1.11 plus a 41¢ retain. Total amount cash payment for the year amounted to \$11.46 plus the 41¢ retain, highest return in the last four years.

Mass. Cranberry Station and Field Notes

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

Harvest

General harvesting in Massachusetts began on September 12, slightly later than usual due to lack of color of the fruit. In general, color was not very good the first week of harvest, but improved after some cold nights following nearly an inch of rain on the 14th. At this time (Oct. 1) about 65 percent of the crop has been harvested. Eight general frost warnings have been released from the Cranberry Experiment Station as of October 7. These include afternoon and evening warnings.

Weather

The month of September was cool, averaging about 3 degrees a day below normal. Rainfall totaled 4.25 inches at East Wareham, which is above the 30 year average of 3.84 inches. Hurricane

Gladys passed just far enough out to sea on September 22 to spare Cape Cod from winds, but close enough to give over an inch of badly needed rain. This rain along with 1.72 inches that occurred on the last two days of the month was very beneficial to the bogs and has helped to replenish the water supplies. However, many reservoirs are still quite low.

Mailing List

A new phase of the Extension Cranberry Specialist's job will be to compile a complete cranberry mailing list which will be kept at the Cranberry Station. All of the printed material concerning cranberries that the growers have received from the various county offices in the past, will, in the future, be mailed directly from the Cranberry Station. This will

include flash cards, circular letters, notices of meetings, bulletins, insect and weed charts, etc. This operation will begin as soon as all of the necessary machinery has arrived. During October, we will be sending post cards to each name on our present mailing list. If you receive a card, please check the address. If your present address is different or if you wish your name dropped from our list please contact us. If you do not receive a card by November 1 and wish to be included on our mailing list, please contact us as soon as possible.

Market Report

The first cranberry market report for fresh fruit was released September 21 from the Agricultural Marketing News Service under the direction of John O'Neil in Boston. This will be the eleventh season that these weekly reports have been prepared for growers and shippers. The reports include current information on movement of cranberries by rail and truck, price and terminal market conditions in the leading cities in the United States. Those who wish to continue to receive this report should return the necessary form to Mr. O'Neil. Anyone else interested in this report

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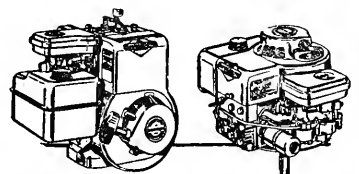
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may receive it by writing to the Agricultural Marketing News Service, 408 Atlantic Avenue, Room 705, Boston, Mass., requesting that his name be added to the cranberry mailing list.

Late Fall Management

The following suggestions on late fall management are offered

to the growers for their consideration. 1) Woody plants such as hardhack, meadow sweet and bayberry should be pulled out after harvest, this will greatly improve the picking operation next season. 2) A potato digger can be used in the shore ditches to pull out runners of small

bramble, virginia creeper or morning glory which may be crossing the ditch from shore. 3) Casoron can be applied at the rate of 100 pounds per acre for control of loosestrife, aster, mud rush, needle grass, summer grass, cut grass, nut grass, cotton grass, marsh St. Johns-wort, ragweed and wool grass. Casoron should be used in cold weather preferably just before a rain. It is less likely to harm vines that are healthy and vigorous. 4) This is an excellent time to rake and/or prune the bog, also do not forget the trash flood where water supplies are available. These are very valuable practices that will keep the bog in shape for peak production next year. 5) Any bog that has not received sand for the past five years or more, should be sanded as soon as possible, preferably this fall or winter. Sanding, pruning and raking should be postponed until next spring on those bogs that do not have water for winter protection, because the vines are more susceptible to winter injury following these operations.

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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of October, 1964 — Vol. 29, No. 6

Second Class Postage Paid at Wareham, Massachusetts Post Office
Published monthly at Wareham, Massachusetts. Subscriptions \$4.00, Foreign, \$5.00 per year.

FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Harvest in Full Swing

By the 19th of September harvest was in full swing and the berries were coming in rapidly, that is the Early Blacks. Sizeable crews were working on all large bogs and smaller ones on the smaller bogs. The weather was fairly conducive to picking, except for early morning dampness.

A Cool September

The month of September was apparently headed for a cooler than normal month. On the 21st of September the departure from normal was a minus 13.

Hurricane Gladys

Beginning the 22nd of September, cranberry growers and others got the "hurricane jitters," as Gladys hovered off the New Jersey coast not making up her mind whether she would invade New England or not. A hurricane watch was ordered as far north running above normal on the as Provincetown, Mass. Seas were 22nd. There was no picking on the 22nd, a drizzly rain persisted all day.

The 23rd was a carbon copy of the day before as Gladys decided she was not going to visit New England, but instead was

going out to sea, toward Nova Scotia. There was no picking again as the rains continued.

Gladys passed off Cape Cod during the night of the 23rd heading toward the open sea and in the direction of Nova Scotia. She dumped varying amounts of much-needed rain in the cranberry area. At the State bog it was only .99 inch, but it was more at other points and less at some others. In any event it was helpful to the crop. There was very little if any picking possible on the 24th as the bogs were wet most of the day.

During the rains of Sept 27th and Oct. 1st, 1.72 inches of rain fell, preventing picking. This was more at some points and less at others, but that is what was recorded at Mass. State Bog.

Frost Warnings

A general frost warning went

out from the State Bog on the night of October 5 for a rather dangerous frost. However this did not materialize to any extent as most of the bog reports were in the 26, 27, 28° range, with one 23 degrees reported. For growers who did not flow this would have caused no harm to berries remaining on the bog but would have added color.

Another warning went out the night of October 7th for a very dangerous frost. There was frost around, it going to 24 at the Mass. State Bog and much cooler inland. All these frost warnings have resulted in the fact that picking was practically slowed to a standstill with flooded bogs which were, of course, unpickable.

As of October 10, rain was still falling and picking was impossible, but then the weather began to clear.

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OREGON

The biggest news around Bandon as October came in was the success of the annual Cranberry Harvest and Festival. The affair extending over several days brought in big crowds from all surrounding areas.

Ray Bates, prominent grower reports from Bandon that the crop prospects seem to be the same as estimated earlier, a 35-40,000 barrel crop. Harvest was late due to cold nights during the summer. A few growers reported 31 degrees on September 27th.

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Onset Avenue
East Wareham

says, is that from 20 to 25 new acres of bogs are under construction.

NEW JERSEY

September Dry

September was extremely dry in New Jersey. For the first 27 days of the month there were just a few sprinkles, which totalled only about $\frac{1}{2}$ an inch. The last days of the month brought about $3\frac{1}{2}$ inches to the New Lisbon area and close to five inches in the important cranberry growing area around Chatsworthy. The rains have not relieved the drought conditions satisfactorily. The total rain for May-Sept has been $11\frac{1}{2}$ inches, about 9 inches deficient from normal.

A Cooler Month

The month was cooler than normal. The average temperature was 66.70 F. about one degree less than the norm for September. There were seven nights in the 40's on the uplands and on each of these days growers were alert for frost on cranberry bogs. The Sept. 26 readings on cranberry bogs were around 28 degrees F.

October Frosts

In early October there were frosts on the nights of the 5th, 6th and 7th, with temperatures

plunging to as low as 16 degrees F. A few growers reported damage as high as 30 percent in some localized areas, particularly on Howes. Some were in the predicament of not having sufficient water to flood properly.

Lack of Labor

The frequent frost reflows and a labor shortage delayed the harvest of the New Jersey cranberry crop. The lack of labor is being felt by the smaller growers only.

Running Over Estimates

The majority of the growers indicate that they are running over their estimates. Several bogs have yielded more than 100 barrels to the acre. If there is not too much frost damage, New Jersey should have more than 100,000 barrels this year.

WISCONSIN

September Average Month

The state finally enjoyed a month of average weather following a summer of growing extremes. Although there were local variations the weather started out the month warm and ended cool, with rains interspersed to give normal to above normal amounts. In the central part of the state rainfall totaled 5.25 inches and temperatures degree above normal. Total rainfall for the year now is 26.3 inches, about normal and made September the second wettest month of the year and the rainiest September since 1960. The highest temperature was 88 on the 10th, while the lowest, 14 on the 28th. There were six nights the frost forecasts were made with the first on the 13th and the remaining on the last week of the month. Records were set on the latter frosts with numerous 'tee temperatures reported. The outlook for Oct. calls for temperatures near or above normal and precipitation above normal.

More Water For Harvest

The most welcome weather news for the growers was the return of above normal amount which insured adequate water

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Continued on Page 16



Betty with Senator Leverett Saltonstall, serving a Cranberry-Scallop Booster. Man at right is Octavio Modesto of New Bedford Sea Food Council. (CRANBERRIES Photo)

BETTY BUCHAN OCEAN SPRAY PUBLICITY DIRECTOR COMPLETES 15 YEARS OF SERVICE

Is Well Known Throughout the Industry for the Valuable Work She is Doing for Cranberry Growers

By CLARENCE J. HALL

To say this article, accompanied by the numerous photographs to introduce Miss Betty Buchan, Public Relations Director of Ocean Spray Cranberries, Inc., would not be correct. Miss Buchan who has completed recently 15 years with Ocean Spray needs no introduction to the industry . . . she is too well known in her own right.

Miss Buchan, came to Ocean Spray in July, 1949 as Publicity Editor and Editor of Cooperative News, an Ocean Spray monthly which is no longer printed. Although Betty goes familiarly by the name of Betty Buchan, or more often to her friends Betty B., her full name is Elizabeth L. Buchan, and she was born in Andover, Mass.

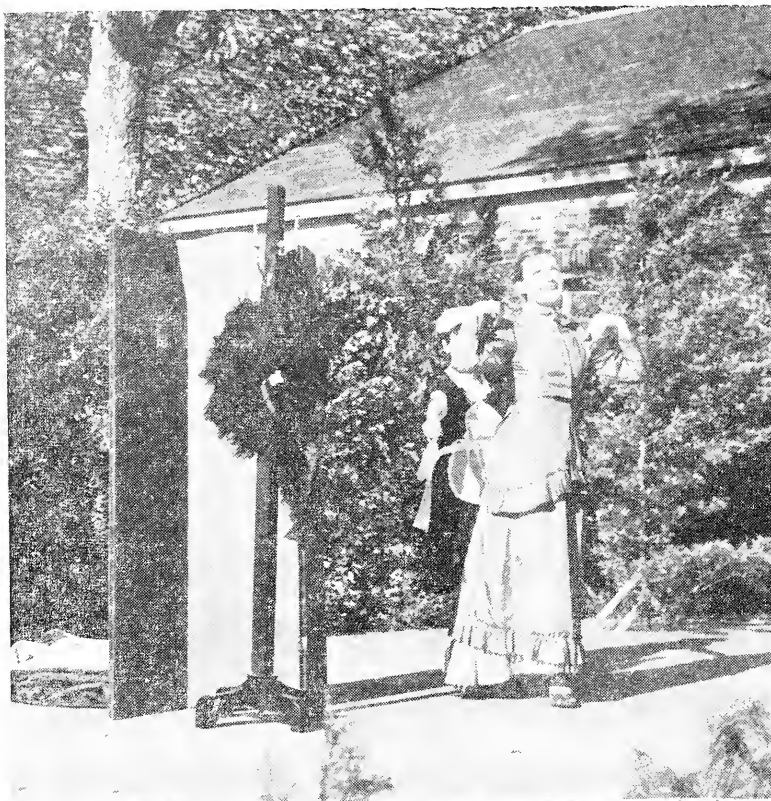
Miss Buchan is listed in recent editions of "Who's Who" of American Women in the East; she is a member of the Public Relations Society of America, the Publicity Club of Boston and American Women in Radio and Television.

After her graduation from school she worked on the "Andover Townsman," a weekly newspaper there. This was during the "Big Depression" and she obtained work as a proof reader.

About 1938 she worked for an insurance company in Boston. She was about five years on the newspaper and then she was employed by a big department store in Washington, the store being Woodward & Lothrop; she was assistant to the adjustment manager and worked on settling claims.

She then went into the U. S. Army, where she was attached to the Signal Corps. She was made a sergeant and worked chiefly near Washington, D. C.

After service she returned to the newspaper in Andover, and had one year editing a paper for a large textile firm in Lawrence. From there she went to Ocean Spray.



Miss Buchan lives alone in her own house in Duxbury, where she had a cat, but this recently died and she is just now "between another cat or a dog at this time."

She enjoys her work at Ocean Spray tremendously and feels that she is doing a good job for the cranberry growers in trying to "push" cranberry sales at every possible event. "There is something going on every minute of the day and every day is a little different. It is exciting work."

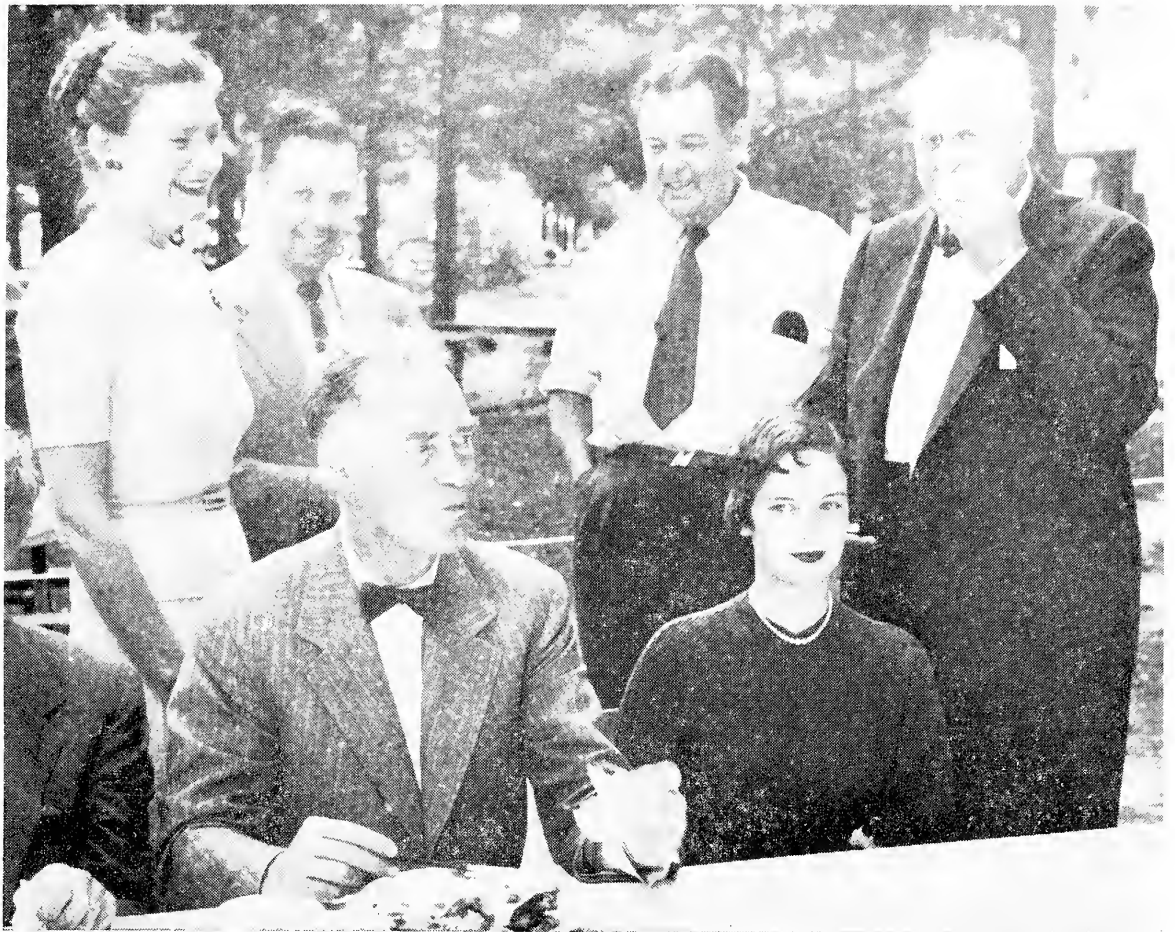
The accompanying pictures show some of the "stunts" and costumes she wears in her public appearances.

BELOW

Betty, an old-fashioned cranberry picker at Cranberry Festival, rests on cranberry wheelbarrow used at the beginning of the 20th century, also a 100-lb. cranberry barrel used as a shipping container.

(Photo by Stanley A. Bauman)





Betty at Cranberry Festival with Christian Herter, A Cranberry Queen and the late Marcus L. Urann, extreme right. (Bauman Photo)



Serving Cranberry Barbecue at Plymouth, Mass, when the Mayflower came in on one occasion. (Stanley A. Bauman Photo)



Betty visiting Cranberry, a mining town in West Virginia.
(Buckley Photo, Beckley, West Virginia)



Betty tries on a Cranberry Hat for Cranberry Fashion Show at the Hotel Statler, Boston.
(Stanley A. Bauman Photo)



Mr. Edward Gelsthorpe (l), executive vice president and general manager of Ocean Spray Cranberries, Inc., Hanson, Mass., attended the recent annual stockholders' meeting of the Springfield Bank for Cooperatives with Mrs. Gelsthorpe. Here they show new cranberry products to Mr. Howell Hughes, Vice President of Springfield Bank for Cooperatives. Among the new products are cranapple juice, frozen cranberries, cranberry muffin mix, and cranberry relish.

Development Of Foreign Markets For U. S. Berries

(Editor's Note; the following is the talk given at the annual meeting of the Cape Cod Cranberry Growers' Association, State Bog, East Wareham, August 18. It is by Clifton A. Cook of the FAS, United States Department of Agriculture.)

European Market Development for Cranberries

We are all interested in developing foreign markets for cranberries not only for balance of payments reasons, but also because bigger overseas outlets can strengthen prices of the domestic crop. The U. S. market is continually supplied with an abundant quantity and a wide variety of fresh and processed fruit and

vegetable items. Increasing or sometimes even maintaining one's domestic market position is often a difficult task. Thus, we have been jointly exploring the market potential for cranberries in Western Europe.

The United Kingdom liberalized trade in cranberries in 1959 and a few fresh berries were exported that year. This stimulated an interest among leader in your industry, which led to a cooperative program between FAS and the Cranberry Institute in 1960.

Whether to start or to continue a foreign marketing program depends on a number of factors. These should be most carefully and thoroughly evaluated in making decisions pertaining to all phases of a program.

Cranberry production during 1957-61 averaged 1.2 million bar-

rels and has increased about 10 percent in recent years. The first evaluation is whether the domestic market will increase sufficiently to absorb the increasing production. If it does not, then the general price level for both fresh and processed cranberries will decline.

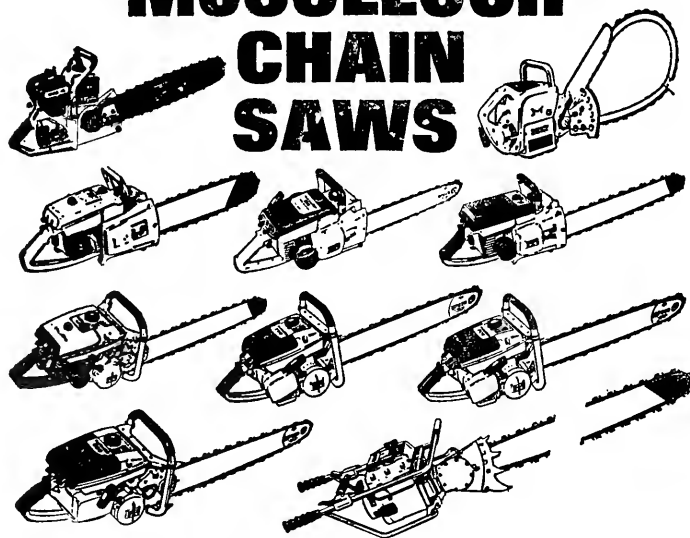
The cranberry industry is spending a rather high percentage of its sales dollar for market promotion in the domestic market. Even at this level of promotion the market has not absorbed the total crop. Thus, the primary question is whether additional market promotional efforts will expand domestic demand enough to justify the cost.

Thus, the principle issue is whether additional markets for fresh cranberries and products can be more efficiently developed in Europe than in our domestic market. This now appears possible especially in view of rising incomes throughout northern Europe.

Practically all of the world commercial cranberry production is in the United States. Thus, we are endeavoring to introduce an unknown product into new markets that are reasonably well supplied with fruit and vegetable products from all over the world. European importers and wholesalers are only interested when a commodity can be furnished year after year at reasonable prices. Thus we need to decide about what volume will be available for export over an extended period of time. If it appears that 1, 2, or 3 countries could be expected to absorb this tonnage, then it might be wise to concentrate on relatively few markets.

We are confident that a well coordinated promotional and sales approach is a fundamental requirement in establishing a market. Currently with several fast freighters sailing out of New York, London and Paris are no farther in time of shipment from Massachusetts than California points. Thus, fresh berries can be delivered to most northern European ports in 8 to 12 days

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which makes reorders possible and eliminates some of the risk in stockpiling fresh berries.

Mr. John W. Stewart, Director of our Division, gave the basic outline of our Market Development Program in his talk at the annual meeting of Ocean Spray August 22, 1962. He described the six basic categories in this program which include: (1) advertising, (2) merchandising, (3) public relations, (4) surveys, (5) supervision and (6) evaluation.

Today we are mainly concerned with the first four categories. With any small-volume, specialty item such as cranberries, we will always be working with a relatively small budget. This makes it necessary to pinpoint our sales efforts where the greatest potential is and with fresh berries or products most acceptable to the market.

Amendment IV of your Market Development Project specifically mentions 11 Western European countries where funds may be used and authorizes other countries subject to approval by the Administrator. It also authorizes activities in all categories. The Marketing Plan for the coming season will spell out the activities and the countries which will be less than the broad coverage in the project.

We think there might be an outlet for cranberry juice in France. In November we will have a fruit and vegetable booth for exhibiting and sampling U. S. products and a trade reception for Paris trade representatives. This will be a relatively inexpensive way to gain a limited knowledge of the acceptance of this product.

Since 1960, approximately \$185,000 of FAS funds and industry contributions of about 50% of this amount are involved in the joint FAS-Cranberry Institute program. Thus, it is readily apparent that a lot of ingenuity will be required in the most advantageous use of funds in developing overseas markets. An example will best illustrate this point. The California

date industry concluded that they needed a foreign outlet for a relatively small quantity of dates. A survey in Japan this spring indicated a potential market. However, the representative making the survey concluded that it would be too costly to develop a consumer market for package dates, so they are concentrating on sales to the bakery and confectionary trades. They plan to conduct demonstrations under contract with Western Wheat Associates who maintain a market development office in Japan. If it works, this small program may solve their problem.

Returning to cranberries, there is no reliable measure of our successes to date. U. S. exports of both fresh and processed cranberries are grouped into basket categories. The Institute should arrange to collect these data. We suspect that costs per unit sold are quite high and this should be expected on a new program introducing an entirely new product.

So far the program has developed more buyers than we have sellers. For the future we would like to make 3 suggestions for your consideration: (1) analyze the market potential in an effort to determine the product or products that appear to have the greatest potential; (2) concentrate promotion on the product and timing, if seasonal, and coordinate sales effort with promotion; and (3) give careful consideration to the cost and effectiveness of the promotional media and whether it should be tied in with another product or products.

Again I want to emphasize as Mr. Stewart did that full responsibility for carrying out foreign promotional activities rests with the industry cooperator. While government assistance is not limited to financial support, the primary responsibility for executing successful promotions must lie with the industry.

CRANBERRY PRODUCTS FOR CALORIE WATCHERS

Weight watchers will have no need to worry about that second glass of Cranberry Juice Cocktail. For their benefit, Ocean Spray has pushed Low Calorie Cranberry Juice Cocktail into national distribution.

The new product, taste-matched with Cranberry Juice Cocktail, has all the advantages of the regular product while cutting the calorie count to 16 in a 6 ounce serving. Vitamin C content in 6 ounces is 45 milligrams, more than the minimum daily requirement for the average person. The Low Calorie Cranberry Juice Cocktail comes in 3 sizes — pints, quarts and gallons.

Another boon to weight watchers, augmented during the summer by bathing suit styles, is Ocean Spray's Low Calorie Whole Cranberry Sauce, now in 12 ounce glass jars with twist-off caps. Serving suggestions on the back of the label give recipes for cranberry salad, omelet and ham glaze.

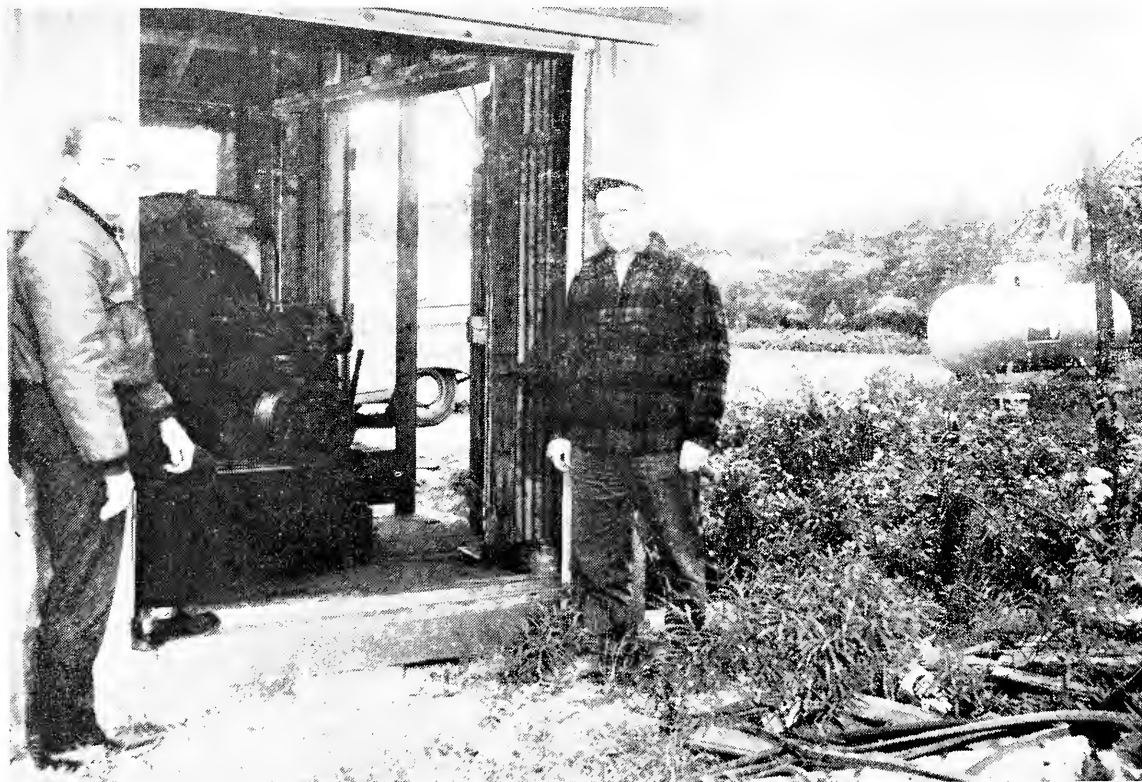
The low calorie products, along with Ocean Spray's regular line of Cranberry Juice Cocktail and Cranberry Sauce, add festive flavor to summertime salad meals, barbecues and cookouts. Stack them with barbecue displays for increased profits.

Sales of Cranberry Juice Cocktail, Regular and Low Calorie, are supported by network radio and television advertising. Arthur Godfrey time on 236 CBS Stations; on NBC-TV, Word for Word, Truth or Consequences, You Don't Say, Let's Make a Deal; and on ABC-TV, General Hospital.

Go Creative posters are available to push sales at point of purchase and a strong publicity program will provide consumers with summertime serving ideas with special emphasis on Cranberry Juice Cocktail and the low calorie products.



This is a picker powered by Propane Gas (the tank shows at the side.) It is being operated by Jack Atwood of Carver, and the developer, Waldo Roby is also shown. (Franklyn D. Rice Photo)



This shows a pumping unit, a Continental engine, driving a St. Jacques pump. The men are "Kenny" Beaton and Waldo Roby. (Franklyn D. Rice Photo)

BULK CONTAINERS AT BANDON, ORE.

Cranberries began rolling into the Ocean Spray Cranberry Warehouse about the first of October, reported William T. Dufort, area manager at Bandon.

About 35 employees were at work numbering the large plywood bulk bins which were used in the operation. About 200 of these large boxes were constructed by Dow-Conn Construction of Bandon.

The anticipated crop for this year is "roughly four million pounds," said Dufort in an interview with the Bandon Western World, "about the same crop as in 1963."

Turkey Crop Expected To Be Up This Year

There could be good news for cranberry growers later on this fall, as the USDA has reported the nation's turkey crop will be

above last year. A larger turkey crop might mean somewhat lower prices, thus inducing more families to buy turkey for the traditional Thanksgiving dinner, which always features cranberry products.

The total crop is expected to be 98.7 million birds, a five percent increase over the 83.7 million produced last year.

USDA ESTIMATES CROP SLIGHTLY UP FROM THAT OF 1963

Low Water Supply Blamed for Frost-Marred Berries in Wisconsin

The official Cranberry report was released by the New England Crop Reporting Service on August 25th. Based on mid-August con-

ditions, the forecast is for 1,298-700 for the Nation. At this level the crop is expected to be 4 percent larger than in 1963 and nearly 2 percent larger than the 1952-62 average.

October USDA Report Is 1,283,700 Bbls.

The October 9th USDA estimate of the cranberry crop for 1964, gives Massachusetts 650,000 (believed by some to be too high); New Jersey, 114,000; Wisconsin, 405,000; Washington, 77,000 and Oregon 37,000. This makes a total U. S. crop as currently estimated of 1,283,700 barrels. This is slightly up from the average (1958-62) production of 1,263,700

READ CRANBERRIES

Ocean Spray Offers New Unit

A new cranberry unit for Home Economics teachers is being offered by Ocean Spray Cranberries, Inc. this fall to acquaint high school and college students with the versatility of cranberries and cranberry products. Offer of the unit, CRANBERRIES—YEAR 'ROUND BERRIES WITH THE BOUNCE, will be made in a 2-color, 2-page spread in the September issue of Practical Forecast For Home Economics, and the advertisement will include an order coupon.

The kit contains information and teaching aids sufficient for one class or several, including a recipe booklet, colorful wall and bulletin board posters, and a history of the cranberry and its unique culture and harvest. Optional is a movie, Heritage of Flavor, also offered free by Ocean Spray.

Besides the complete teacher's kit, additional recipes and histories are available in quantity

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INSECT ENEMY OF SCOTCH BROOM

(Editor's Note: The following may be of interest to cranberry growers of Oregon and Washington troubled by Scotch Broom. It appeared in the May 1964 issue of "Agricultural Research").

An insect that attacks only Scotch broom has been successfully established at five locations in California, where this shrub has become a noxious weed.

ARS entomologists, in cooperation with the California Agricultural Experiment Station, imported the insect from Europe. It lays eggs on the plant's stems and twigs; when the eggs hatch, the larvae bore under the bark and tunnel into the tissue, causing the stems and twigs to weaken and die.

Scotch broom is used as an ornamental in many parts of the country, but it has become a weed pest on the west coast. The shrub now occupies about 100,000 acres of range and forest land in California alone, choking off grass needed for grazing and preventing young trees from becoming established. It is also a fire hazard.

In the ARS tests, Scotch broom shrubs that were heavily attacked by the moth became covered with deadwood. Seed production of the infested shrubs declined 50 percent compared with that of uninfested shrubs. This is the first attempt in the United States to control Scotch broom by using a beneficial insect.

The moth, a stem and twig miner (*Leucoptera spartifoliella* Hubner), was introduced into moths were released in 1961 and 1962. During this experimental period, the insect has made limited inroads on Scotch broom stands.

By weakening or destroying new plant growth, the beneficial miner creates a continuous stress on even the largest Scotch broom shrubs. It causes heaviest damage to the lower branches, which die and fall off. Grass is then able to grow under the shrubs and animals can graze more freely. As the lower branches are thinned out, particularly in forest areas, pine seedlings may be able to compete successfully with the shrub.

In laboratory tests with three other broom species, ARS scientists found no evidence of twig mining following introduction of *L. spartifoliella* into cages containing the plants. One species, French broom, exists with Scotch broom in Mill Valley, California. At this location—one of the insect release sites—the miner infested only Scotch broom.

Since 1960, natural populations of the miner have been reported in Washington at Tacoma, in northwestern Calif., and in the San Francisco Bay region. It is believed to have been accidentally introduced in these areas with the host plant.

Natural increases of *L. spartifoliella* are expected to have a marked effect on Scotch broom. But to hasten dispersal, future releases may be made by collecting the miner at established sites for release in new areas.

At Tacoma, and in California's Del Norte County, a parasite attacks the miner. This parasite, a European species, did not appear at any of the release locations, but it could impair the miner's future usefulness.

In further research on insect control of Scotch broom, a seed weevil that infests the shrub in Europe will be brought to the United States and released in California this year. Larvae of the weevil, *Apion fuscirostre* F., feed only on the seeds of Scotch broom. The insect does not attack other plants.

ADVERTISE IN CRANBERRIES

No Set-Aside For The 1964 Crop

On October 2, the Cranberry Marketing Committee reviewed the current estimated crop prospects and in light of the resulting figures, voted to recommend no set-aside for the industry for this 1964 season.

The revised estimate for the 1964 crop follows:

Massachusetts 651,000; New Jersey 107,000; Wisconsin, 402,000; Washington 68,000; Oregon 40,000.

The notice is signed by Anthony R. Briggs, manager of the Cranberry Marketing Committee.

NOTES FROM CRANGUYMA

Frank O. Glenn, Jr. owner and operator of Cranguyma Farms has been laying a 14-inch Johns-Manville transite pipe main on some new acreage. This will be for the sprinkler system and for flooding purposes. A half-mile of it was put in through the cranberry bog and it has kept the small crew very busy.

WEST COAST PERSONAL

Norman Brateng, Long Beach, Washington cranberry grower has been elected third vice president of the Long Beach Lions Club.

FRESH FROM THE FIELDS

Continued on Page 6

for harvest. This increase in supply enabled growers to hold back on harvesting to get better color. It is hoped the water levels will increase in October and November to insure adequate water for winter protection.

Crop May Be Around 4⁰⁰,000

About twenty five per cent of the acreage was raked by the end of September with some marshes running very heavy and some

very light. Those marshes suffering frost damage in June were running light, along with those suffering hail damage in June. There were several marshes that had both hail and frost loss and these were almost a total loss. While it was still early to estimate actual field counts, it appeared the state would have around 400,000 barrels, with good color, above average size and good keeping quality.

WASHINGTON

Washington Crop May Fall Off

As of September 21 a letter from Dr. Charles C. Doughty, director of the Coastal Washington Experiment Station at Long Beach says the reported production for this year in Washington is considerably less than in 1963. The crop last year was 111,000 barrels. One reason for the reduction is that it is the natural tendency of the McFarlin variety to bear on a biennial basis. There are several other things that may

make the final crop figure for this year lower than the predicted one. There was an extremely long blossoming season. The first blossoms this year were open on June 10th, the last blossom on the bogs closed about the 18th or 20th of July with the full bloom on approximately July 6th. This is a considerably long period, especially when the peak of bloom comes so long after the first blooms are out.

Temperatures Had Much To Do

The temperature had a great deal to do with the bud development. There were wide differences in degrees.

Cooler Season

The cooler season in 1964 coupled with more rain, particularly in July and August when there is generally warm weather has made quite a difference in the development and growth of the berries this season. Many of the berries are small and will go out in the screening process. These small berries, most of them, are the ones that set in the late part of the blossoming period and

there has just not been enough time or heat enough for them to grow adequately.

There was another factor that played a considerable part this year and that is a blossom blight caused by two species of fungi which has reduced the set of the berries this year. Dr. Folke Johnson, and Dr. Makie Eglitis have been working in the problem, and have tentatively identified the fungi. There is yet to be worked out a definite control program. The 1964 season was apparently ideal for growth and development of the organisms.

Harvest

Harvest was expected to start the 15th of October. The berries were coloring very slowly. This is in contrast to the time when harvest started last year which was September 25th.

Rainfall for the Year

The total rainfall for the year up to the first of September was 49.24 inches. During the same

Continued on Page 20

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TAKEN TO TASK

We were taken to task by one and praised by another for favoring Senator Goldwater for President in a recent issue of CRANBERRIES. We were told by one that a farm journal has no business editorializing about politics. But we notice that the Farm Journal, a farm magazine with a tremendous circulation did the same thing in a series of editorials which were certainly not against Goldwater.

ANOTHER GOOD YEAR

By the middle of October Edward Gelsthorpe, general manager and executive vice president of Ocean Spray was able to say he thoroughly believed this would be another good year for the cranberry industry as a whole. The crop apparently not holding quite up to earlier estimates, but the market was strong, sales were brisk and there was no reason to doubt that the price would not hold firm throughout the rest of the shipping season.

BETTY BUCHAN COMPLETES 15 YEARS

Miss Betty Buchan, publicity director of Ocean Spray recently completed 15 years of service to that cooperative and we call special attention to the article with photos about her in the current issue, and think she highly deserves such recognition for her services to the cranberry growers and the cranberry industry in general. We hope you will like this article with the many photos, some more or less "goofy," as she goes about performing her duties of impressing the use of cranberries in their many forms upon the general public.

PROPANE GAS PICKER

We also call special attention to the Propane Gas Picker shown in this issue. This is a development of Waldo Roby of Carver, Mass. and we think he deserves high praise for bringing Propane Gas into the cranberry picture. We do not know of the merits of this picker or the use of Propane Gas in cranberries, but Mr. Roby is certain it is a worthwhile development, and if nothing else it shows the continuing inventiveness of members of the cranberry industry.

CLARENCE J. HALL
Editor and Publisher

EDITH S. HALL — Associate Editor
Wareham, Massachusetts

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Pemberton, New Jersey

"DISMAL" FALL SEASON

This is the "dismal" Fall season of the year, but beautiful nevertheless. Brilliant reds and yellows flame in the maple trees, the fall flowers bloom and the frost has been on the cranberry and pumpkin. It is a season none of us especially like, we suspect, as it foretells the coming of winter with its snows and cold, but it is one of the seasons of the year which whirl around inevitably. We should enjoy it as best we may and look forward to another year and another spring which in due course will roll around.

SERVING THE WISCONSIN GROWERS

Continued from Page 17

period in 1963 there was 32.57 inches.

Temperatures

The minimum temperatures for the month of August this year were 36 degrees on August 4, 38 degrees on August 5, 59 degrees on the 9th, 37 degrees on the 13th, 15th and 16th, 59 degrees on the 14th and 35 degrees on August 30. These are bog temperatures. The high was 71 degrees on the 6th of August, 72 degrees on the 10th, 36 on the 24th, the rest of the highs were in the 60 degree range. There were 17 days during August in which there was measurable precipitation and very few that were not cloudy.

New Ocean Spray Plant

The new cleaning plant at

Long Beach which is being installed by Ocean Spray will be ready to go by the time the berries are coming in. The plant will include two shakers to take care of the trash and leaves, the flotation unit to sort the berries and a belt to sort out the berries which were missed. This is really a revolution in handling and cleaning the cranberries and will mean a much more uniform crop. The berries will be handled in 10-barrel lot boxes. The bulk of the crop will be brought to the plant in dump trucks of different types.

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Commonwealth of Massachusetts
Plymouth, S.S. September 22, 1964

Personally appeared, Clarence J. F. Hall, and made oath that the statements subscribed by him are true, before me.

ELMIRA HOLLIS,

Notary Public

My commission expires January 24, 1970

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Cranberry Institute In 1964- 965 Plans For UK Market

Cranberry Institute in London
Orrin G. Colley, president of
This Past Fall

Orrin G. Colley, president of the Cranberry Institute spent a week last month in London, establishing plans for the foreign market program in the British Isles to start August 31, 1965. A report shows that planned attempts to develop sales of Ameri-

can cranberries in the United Kingdom started in the fall of 1961 with the introduction of fresh cranberries in that market.

Cranberry Institute under an FAS Development Project Agreement made a limited survey of the market and of the problems and opportunities that existed there.

During the 1962 season with limited test market operations being carried out, sales of fresh U. S. cranberries, U. S. value totalled \$25,000 to \$35,000. The

1963 program was extended to include U. S. processed cranberries as well as fresh with total sales approximating \$100,000.

Since the major demand period for cranberries is during the fall season sales figures for 1964 will not be available for some time. It might be noted, however, that a major U. S. supplier has established promotions plans for this period and efforts are being made to convince other brand suppliers of the opportunities which exist in this market.

The minimum selling price ex wharf on both fresh and canned cranberries has recently been increased. Research has shown that the retail price to consumers which was originally established at the equivalent of 35-39 cents per pound on fresh cranberries, at 17 cents on the 7 ounce can and 34 cents on the 1-lb. can of cranberry sauce, can be increased slightly without substantially affecting sales. The reason for this is that the average consumer makes quantity purchases only at Christmas time when the saving of a few pence is not the main consideration. It is the intent of the U. K. representatives of major U. S. brands to recommend an increased consumer price, but promotional allowances which are part of the major

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brand marketing plan will allow the chains to make a special offer and they will be encouraged to contribute part of their profit margin toward this end.

Some marketing activity has been carried out by competitive products called cranberry sauce, but made from Lingonberries and produced in Britain, Sweden and Switzerland. It has been noticed that, since the introduction of American cranberries, greater interest has been taken in the market by competitors. It can be stated, however, that no great impact has been made on the average British consumer and, therefore very little increased interest has been shown by the trade. The flavor is quite different from the American cranberry sauce and generally the product sells at a higher price than the American products.

Long Range Goals

The sales figures indicate that U. S. cranberries are gaining increased acceptance with the British consumer through selected leading grocery outlets. There is sufficient basic information now available to enable a planned marketing approach to be made and to state that with sufficient support there is great potential for sales growth in the future. In order to determine the acceptance of new cranberry products and to state what these should be, and to determine the most suitable related item alternatives to game and turkey, combined research must be undertaken.

Short Range Goals

The objective is to retain the initiative and exploit the penetration so far achieved in leading supermarkets, self-service grocery and delicatessen outlets, by demonstrating U. S. cranberries to the consumer by means of in-store promotion activity, cookery demonstrations, public exhibitions, U. S. Trade Fair Exhibitions, etc.

The Budget

It is the responsibility of the Cranberry Institute to direct and control effectively and competently the program in the U. K. market; to be on top of the situ-

Continued on Page 4

Mass. Cranberry Station and Field Notes

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

Harvest and Frost

The Massachusetts cranberry harvest was completed by the end of October, or about a week or ten days earlier than usual. This was a remarkable achievement considering the late season and the frequency of frost during October. Part of the reason for our shortened harvest season was the increased number of picking machines in use, but some credit must go to careful machine operation in the field and the skillful and efficient service given to the machines prior to and during harvest.

25 General Frost Warnings

The frost warning service was terminated for the season on October 13. We sent out 25 general warnings during the fall, with most coming during the

month of October. It is estimated October 11. Temperatures on the of berries, or 1.5% of the crop, was lost to frost. These losses occurred primarily on the nights of September 15, October 7 and that approximately 9,000 barrels bogs were in the range of 20 to 25 degrees on October 7 and from 12-19 degrees on October 11. On the night of October 11 it was 16 degrees at the State Bog.

Appreciation

The frost warning service depends on many things to make it effective and efficient, but first and foremost it depends on the dedication, attention to detail and common sense of the people who calculate and formulate the warnings. We would like to express our thanks to George Rounsville and his assistant Kenneth Roche-

fort for their excellent work on this most important phase during the 1964 frost season. We are also indebted to the U. S. Weather Bureau, our cooperative weather observers, the telephone distributors, the five radio stations and the Cape Cod Cranberry Growers Association, especially Mrs. Ruth Beaton, who manages the money so well, for making the frost warning service effective.

October Cold

The month of October ended up on the cold side, about $2\frac{1}{2}^{\circ}$ a day below normal. This was the fifth consecutive month with sub-normal temperatures, resulting in a very cool summer and fall season. The rainfall for the month totalled 4.20 inches which is above the 30 year average of 3.44 inches at East Wareham. Three storms on the 2nd, 17th and 21st accounted for 4 inches of the 4.20 inches for the month, so that October was basically a cool and sunny month.

New Bogs

One final note, new plantings should be flooded as soon as the ground begins to freeze, because frost in the soil will cause heaving of the newly set vines.

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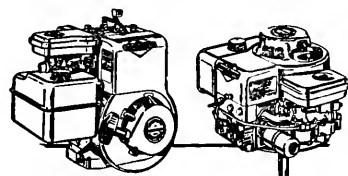
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ation with an eye to alternative approaches to the marketing problem. It is felt this can best be controlled by periodic trips to the U. K. by the Institute representatives. Planned expenditures for the international travel are \$3,000; Sales and Trade Relations, \$400.

It is proposed to establish a Cranberry Kitchen, so-called, for publicity purposes and to obtain the services of an individual to work full time on the cranberry project to maintain personal contact with food editors, attend cooking school exhibitions, trade exhibitions, show the cranberry film at women's clubs and trade groups, attend store openings, demonstrate and in general be considered the U. S. Cranberry trademark in the U. K.

Ocean Spray's Sales Up \$4,000,000

Ocean Spray net sales in the U. S. are up \$4,000,000 in the 12 months ending in August 1964 over the previous year, Edward Gelsthorpe, general manager and executive vice president of the co-op has announced. A final cash payment on the 1963 crop of \$1.11 per barrel was paid as announced in a brief story in the October issue. This brought the total cash payment to \$11.46 as against \$9.41 for the 1962 berries. The growers also received a retain of equivalent to 41 cents this being in stock.

Mr. Gelsthorpe attributes the increase to expansion of cranberry juice cocktail and the addition of new products. Cranberry juice cocktail has attained strong national sales.

Ocean Spray's new Cranberry-Orange Relish has recently moved from test-market to national distribution and initial trade and consumer reaction is enthusiastic. Other new products are reported on the way to introduction.

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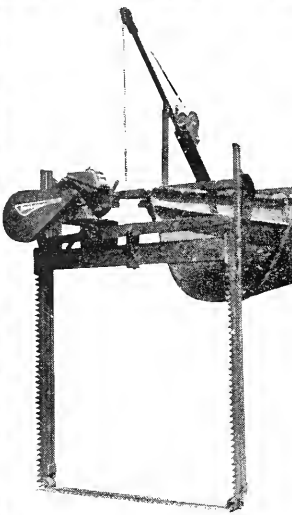
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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of November, 1964 — Vol. 29, No. 7

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Rain Halts Harvest Again

October 16th and 17th were dismal, rainy days precluding any chance of harvesting what of the crop remained out. There were no frost warnings. The rain continued heavy on the 18th. As most of the crop was harvested this did little toward helping water raking where it is practiced, but it did help to fill up the reservoirs for late fall and winter. The rainfall at the State Bog was measured as 2.94 inches, while Dr. Cross recorded 3.18 at Sandwich and it was also heavy in the Hyannis area and on the lower Cape. This storm was apparently the remnants of Hurricane Isabel as she passed out to sea off the Cape.

Harvesting End

About Last of October

The end of October brought mostly beautiful "Indian Summer" weather, and the few late pickers were taking advantage of it to get the last of the crop off. A few berries were still left on the vines the last week of October.

Severe Frost Oct. Last

There was a severe frost on the

last day of October with a minimum of 13 being recorded at the State Bog. There were so few berries left out there was probably no damage to them.

Oct. Cold Month

The month of October was generally a colder than normal one by about 80 or 90 degrees for the month.

Rainy

It was also a month of considerable rain. A total 4.02 inches of precipitation being recorded at the State Bog, with varying amounts elsewhere. Normal for October is 3.74 inches.

NEW JERSEY

Cold October

The month of October was the coldest October on record in the 36-year history of this Station.

The mean temperature was 52.3°, which was 4.3° below normal. The average maximum temperature for October was 66.1°, 2.4° below normal; the average minimum was 38.4°, 6.2° below normal. There were 8 nights when the temperature was 32° or below in the weather shelter on the upland. Six of these were in the 20s, getting as low as 24° on the 12th, the first time it has ever been that cold so early in the month.

22 Frost Alerts

There were 22 frost alerts for cranberry bogs from the Weather Bureau. On 18 nights the actual temperatures in the bogs were below freezing and on 9 of these bog minimums in the teens were recorded. The coldest nights were on October 7th, 11th and 23rd. Temperatures were as low as 12

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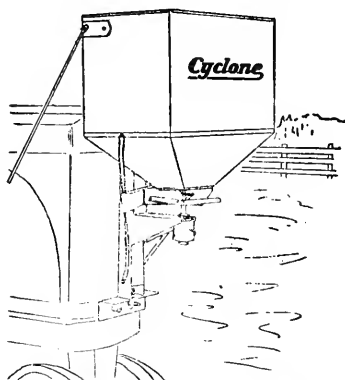
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on a few bogs on each of these dates and down to 10 on one bog on the 23rd. A few growers in the Medford area suffered moderate to heavy frost damage when they were caught without sufficient water in early October frosts.

Rainfall Less

The rainfall during the month of October amounted to 2.24 inches, 1.01 inches below normal. The precipitation since May 1st totaled 13.73 inches compared with the normal amount of rainfall for those months of 23.5 inches, or a deficiency of almost 10 inches for the past six months.

Prospects Up

Most New Jersey growers harvested more cranberries than they had estimated and considerably more than the average yield. When the final statistics are gathered, they will probably show that 1964 was close to a record yield per acre. This good production occurred despite a very severe drought and water shortages. Losses to fruit rots and insects were negligible on most properties. Other factors which contributed to the good crop were very light spring frost damage and a good population of pollinating insects.

WISCONSIN

Oct. Dry — Temp. Near Normal

October was the second driest on record since record keeping started in 1892. The driest October was in 1952. From a total
Continued on Page 14

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(Editor's Note: The following appeared in the Fall issue of Food Marketing in New England, a publication of First National Stores, and it explains how your editors got into the business of running a National Cranberry Magazine.)

For years we've been a reader of a magazine called **Cranberries** and have asked its Editor and Publisher, Clarence Joshua Hall to tell the story of it for Food Marketing, which he has done in the following Piece, as tartly flavored as the veritable berry he knows so well. He writes in the third person as befits a reporter who feels unpleasantly conspicuous using the perpendicular pronoun, I.

This true yarn might be entitled "Joshua was Bequeathed Cranberries," in the telling of how Clarence Joshua Hall came to be editor and publisher of **Cranberries**, published at Wareham, Mass., for the cranberry growers of the U.S.A. and Canada since 1936, with one monthly exception when a few years back the building housing the Wareham Courier office and print shop was swept by a hurricane. Why and how was Josh bequeathed cranberries?

Cyrus and His Wife Lettice

The American Cranberry of commerce (*Vaccinium macrocarpon*) was first cultivated by one Captain Henry Hall at East Dennis on Cape Cod in about 1816. Intensive research can find no one who really started the cranberry "biz" as did Henry Hall. He and Josh Hall had the same common ancestor, John Hall, who was of Cambridge, Mass., as of 1630, later settling on the Cape.

Captain Cyrus Cahoon of Pleasant Lake village in the town of Harwich first developed the Early Black variety about 1840, still the most noted early variety, not only



Editor Clarence J. Hall of **CRAN-BERRIES** Magazine.

in Massachusetts, but in New Jersey and some of the other cranberry areas. The story of how this came to be developed and named is that Cyrus's wife Lettice brought home cranberry vines she obtained from a Captain Nathaniel Robbins, who had found them at his bog near Grassy Pond in Harwich. He did not recognize their true value. Captain Cyrus planted the vines in his bog and they spread. One day he and Letty were screening berries in their barn and he asked her, "What shall we call these dark-colored berries?"

Letty replied: "Be'nt they Early and be'nt they Black? Call 'em Early Blacks!" Your present-day cranberry juice cocktail is made from selected Early Blacks.

Only Wanted Land Abutting

Capt. Cyrus, who had a long, white beard, wore a derby, and bought up many a mortgage on the Cape, was Editor Hall's great-great-grandfather. There are many stories about Capt. Cyrus. One was that he was land-crazy. It was said that he didn't want all of Cape Cod—all he wanted was all that land that 'joined him.

Another incident was that a load of cranberries were at the depot and they were marked "C.C. Berries" for Cape Cod cranberries. grandfather, Capt. Lemuel Hall, was a cranberry grower at North Harwich and his maternal grand- them be shipped without Cyrus's The station master refused to let personal consent, believing "C.C." meant Cyrus Cahoon cranberries. (to retreat a bit . . . many other Halls than Henry were among the pioneer growers. He, by the way, was a veteran of the Revolutionary War.)

The other early developed great variety was the Howes, still the standard late variety and an excellent keeper. It was discovered by Paine Howes, also a Dennis pioneer, and somewhere along the line Henry Hall's branch had married into this particular branch of the Howes.

Boyhood Picking Memories

father, J. Frank Foster, had a small bog at Pleasant Lake. His father, the late Lemuel C. Hall, was secretary of the Cape Cod Cranberry Grower's Association twenty-five years until his death in 1946, and Josh was secretary for one year, but had to resign because of press of other work. His mother, Lettice Modena Gertrude (Foster) Hall, always picked cranberries in the fall at Wareham. Little Josh as a child and by working hard all day could earn as much as \$1.08 a day, by filling so-and-so many tin measures, the standard picking container. At night, fingers were often bloody from vines and briers and there might be a touch of poison ivy and the back ached from stooping and the knees were bruised and sore from crawling along the mat of vines which is a cranberry bog. But it was really healthy fall fun, out in the sun and air all day. In many towns schools didn't begin until well into October, so that the young ones and parents might pick up extra money pickin' cranberries.

Know Every Cranberry Area

It would be remiss, if the associate editor, Mrs. Edith Savary Hall, were to be omitted

from this account. As the wife

Editor Josh Hall's paternal of Cranberries' editor, she has been more than helpful. As a matter of fact Cranberries could scarcely have been published without her. She goes to meetings with the editor; often takes the notes, while he is shooting photographs or consulting with someone he wants to consult with. The Halls have visited every cranberry area in the United States and Canada—north to Cape Breton Island, Nova Scotia, through Maine, where there were a number of bogs at one time, Massachusetts, from the tip of Cape Cod to bogs north and west of Boston. They have visited the Big Bog on Nantucket, also bogs on Martha's Vineyard, and on Cuttyhunk where Gay Head Indians annually observe an island Cranberry Day, when all Indians may pick the wild vines among the sand dunes of the shore near Menemsha Bight. They have been to the bogs on Long Island, and to South Jersey from Bordentown to the tip of Cape May, and to all areas in Wisconsin from Eagle River and Manitowish Waters down to Wisconsin Rapids, and to the Tomah and the Warrens areas.

On the West Coast they have visited bogs on Lulu Island, Vancouver. B.C., the Long Beach regions in the State of Washington, where cranberry culture is a thin red line just back of that beautiful shore; across the Columbia River into Oregon, following the thin red line down the coast of Oregon, from Clatsop county to Coos county and the town of Bandon, heart of the Oregon cranberry industry, thence south into Curry county which is not far from the Redwood country of southern Oregon and northern California.

Hand Picking to Machines

Before inaugurating the cranberry magazine, the Halls owned and operated a seven-acre piece (small, as bogs go) in East Taunton; weeded; frosted on cold spring and fall nights; spread sand on the ice in winter (sanding is good for bogs), and that gave them a practical basis for



Mrs. Edith S. Hall, Associate Editor of CRANBERRIES.

cranberry writing. They have seen changes from hand picking to the cranberry snap, for example, to the 16-toothed cranberry scoop and now to the big and small mechanical harvesting machines. Spraying and dusting once were manual operations; now done in the East by straight-wing and helicopters. There is much heavy equipment in use today. They have seen the annual crop grow from a total U.S. of a little more than half a million barrels to the present million 300 thousand barrels (not berries). A barrel is 96 pounds.

Station Gives Grower Service

Cranberries were once sold only as fresh fruit. Then processing came in, and has grown until today a little more than half the fruit is processed. Fresh cranberries used to be sold in bulk in barrels and then the half barrel or the quarter barrel box. Now they are cellophane or otherwise wrapped, for self-service. From magazine headquarters it is scarcely more than a hop, skip and jump to the Mass. Experiment Station on Glenn Charlie road, East Wareham, and there are not many days in the year when Editor Hall does not visit or telephone. He is assisted by the staff of researchers there, usually in-

cluding half a dozen Ph.D.'s. The Station, foremost of its kind in the cranberry world, is a wealth of information. State researchers are often kind enough to write a technical article for Cranberries. Hall keeps in close contact with other research stations in New Jersey, Washington State and the University of Wisconsin. County agents and other extension workers also are helpful in getting accurate news fast.

The magazine has been fortunate in having a sufficient number of both subscribers and advertisers. Many of them have been in the magazine with ads, and have subscribed, since its inception. It is the Editor's current boast that his magazine goes to every cranberry property in the United States, due to a group subscription provided two years ago by vote of the directors of the Cranberry Institute, the overall body of the industry.

There are less than 2,000 growers, individuals, partners, stockholders in the industry. It takes a relatively small number of growers to produce enormous crops. This is the way it is in all lines of agriculture—comparatively few feed 190 million. Hall expects cranberries to reach the million and a half barrel mark within a few years. It could happen any year now, given perfect weather conditions in all cranberry areas.

Indians Had Words for It

The Halls live on Great Neck road, a quiet by-way, and within an eighth of a mile of their home are two bogs. A walk around the larger one, and up to the top of Brandy Hill is one of their favorite walks and they go by the smaller bog several times a day in going to and fro. There usually is bog work being done on it. The work indicates the time of the year in cranberry growing. It is indeed a proud feeling to be editor of a magazine devoted to such an ancient thing as cranberries. For it is ancient, as things go in this country. No one knows how many centuries cranberries were growing

before the white man came. The Indian tribes had various names for cranberries. In the Narragansett tongue it was Sase-mineach. The Algonquins in Wisconsin knew the red berry as Atoqua, the Chippewas as A'nibi-bim, and in all the names the meaning was "sharp taste."

The familiar story of how it acquired its English name is that it is from the shape of the bud as it appears before expanding into the perfect flower, the stem, calyx and petals resembling the neck, head and bill of a crane. That made it a Crane-berry and it was an easy transition from that word to Cranberry.

Cranberries If In Surplus Could Be On School Lunch

Anyone who tries to stay on a food budget may wonder how so many schools can serve nutritious meals at the prices they do. A typical noon menu might be barbecued beef on buttered roll, potato salad, buttered spinach, fresh apple and milk—all this at an average national cost to the child of 27 cents. Needy children pay little or nothing. How do schools do it?

A good part of the answer lies in the National School Lunch Program which this year will enable approximately 70,000 public and nonprofit private schools to serve low-cost nutritious lunches to 17 million children. In recognition of this program's value and achievements during its 18 years of operation, the week of October 11-17 is set aside as National School Lunch Week, by Presidential proclamation. The theme for the week: School Lunch Serves Youth.

The school lunch program is administered nationally by the U. S. Department of Agriculture, and the State educational agency.

Local lunchrooms participating in the program receive Federal donations of abundant agricultural products and cash assistance which amounts to more than 23 percent of the total program cost.

Children's payments take care of about 56 percent of the cost. State and local sources pay the remainder.

The school lunch manager under the guidance of local educators in each community or school district operates her own lunchrooms and plans her menus, largely using foods bought in local markets, supplemented with the foods donated by the Department Menus for each school in the National School Lunch Program are planned according to the Type A pattern, developed by USDA to insure each child $\frac{1}{3}$ to $\frac{1}{2}$ his daily nutritional requirements at lunch. Included in the pattern are 2 ounces of lean meat, fish, poultry, cheese, or an equivalent quantity of eggs, peanut butter or beans; $\frac{3}{4}$ cup of two or more vegetables and/or fruit; 2 teaspoons of butter or fortified margarine; a portion of enriched or whole grain bread and a half pint of fluid whole milk.

Providing a lunch like this every school day to the 17 million youngsters in the program, or one out of every three school children in the U. S. calls for tremendous quantities of food. Last year's food bill totaled over \$876 million. Almost four fifths of this—\$688 million—was spent by schools in local food markets. The school lunch program, sometimes called the largest single food service in the Nation, is now a 1.4 billion dollar food industry serving 2.8 billion lunches a year.

Through this nationwide service to youth—the school lunch program is helping teach a great many youngsters to enjoy a wide variety of foods from our productive farmlands.

For example, canned grapefruit sections and Bartlett pears are now popular items in many areas where children had never tasted them before they had them with their school lunches. Children in the Southeast have learned to enjoy purple plums from the Northwest. Cornbread, another regional favorite, new to California children with school lunches, is now in demand as a weekly feature.

Thus, the National School Lunch Program serves two worthwhile purposes. It makes effective use of our abundant supplies of food, providing good markets for farmers, food industries and local businesses. Most importantly, it contributes greatly to the health and well-being of our children.

To aid in meeting the nutritional goals of the lunch program, specialists in the USDA's Agricultural Marketing Service provide administrative and technical guidance to State personnel who, in turn, advise some 300,000 local workers in operating the individual programs. Guidance and assistance in everything from planning and equipping a school lunchroom to buying and preparing food is available to participating schools. Storage, safety and sanitation are other areas that receive attention.

Three basic requirements for school participation in the program are that the lunch program be operated on a non-profit basis, that menus follow the basic Type A pattern, and that free or reduced price lunches be provided for children determined by local officials to be unable to pay the full price.

About 10 percent of the participating children receive free or reduced price lunches.

There are many schools in low-income areas having high proportions of children who can't afford to pay for lunch, where it is virtually impossible to finance a lunch program with normal local, State and Federal aid. This year, as part of a nationwide attack on poverty, Federal, State and local officials intensified their efforts to open lunch programs in these schools using special cash and food assistance.

With volunteer labor and minimal kitchen equipment, lunch programs were opened last winter and spring in hundreds of rural and urban schools in Kentucky, West Virginia and Virginia. Thousands of children began getting school lunches for the first time in their lives; for many the only good meal of the day.



Mrs. Marion Wilson, right, and great grandson Michael in their bee swarming costumes. (CRANBERRIES Photo)

Mrs. Marion Wilson Typifies The Stamina of Women Growers Everywhere When They Become Widows

She Operates Five Acres, Near Bandon, Oregon and was 79 When Visited in Spring of 1963

The indomitable spirit of the cranberry growers of the West Coast, including some of the women, wives or widows of cranberry growers, is well testified to in the person of Mrs. Marion R. Wilson of Bandon, Oregon. Mrs. Wilson, neither hesitant nor boastful concerning her age—she is 79—operates a cranberry property of four and a half acres on Prosper Road, mostly by herself. Her late husband Manuel became a cranberry grower in 1937; he passed away in 1950. The Wilsons lost their son, Raymond L., age 39, in 1948. He had been associated with his father in conducting the cran-

berry business after buying one-half interest from partner John Nielson who joined Mr. Wilson in developing the bogs in 1937.

That left Mrs. Wilson, a small, neat and courageous woman, to carry on the cranberry business. This she has done—with some assistance from neighbors and others.

Mr. Wilson was a scaler in the logging business and also worked in sawmills. He had also been a commercial fisherman operating fishing seines on lower Coquille river. He worked for some time as a longshoreman; Bandon being a port of call for many vessels.

Mr. Wilson grew up in Bandon and vicinity. The Wilsons were married in 1904 and lived in Prosper, a small community three miles from Bandon until they

moved to the present home in 1946 at which time their only son, Raymond L. Wilson purchased the one-half interest from Mr. Nielson. The son, Raymond L., wife Dorothy, and son, Raymond G., lived in Prosper until his death in 1948 while the son Raymond G. was in the service.

Manuel Wilson took a partner, John Nielson, and in the fall of 1936 they began preparation of the bog. The following spring two and one-half acres were planted.

The property is in five pieces, with a total of about four and a half acres. The bogs are numbered from one to five.

The bog is all planted to McFarlins with the exception of one small section (no. 2) which is Stankavich berries.

The Wilson property consists of 90 acres in all and this was included when the property was purchased by Mr. Wilson and Mr. Nielson in 1936.

Unique Water System

There is a reservoir 50 feet by 50 feet and six feet deep, made of concrete. There is a rise of 80 feet up to the reservoir and the water comes down by gravity flow to a ditch irrigating system. This reservoir is the water supply for all the bogs. In the spring of 1961 a sprinkler system was put on part of the bogs and in 1962 all bogs were put under sprinkler irrigation. Drainage from numbers 3, 4 and 5 bogs flows into number 1 bog which is the largest. This in turn drains into a large sump which Mrs. Wilson refers to as the "Pit." A 25 horsepower electric motor supplies the power for the entire sprinkler system; starting the water at frost danger and stopping as the temperature rises above the danger area. Conservation of water is accomplished by the drainage from all the bogs into the "Pit" and then returned to the sprinklers for irrigation.

Harvest by Water Since 1952

In 1950 five Western pickers were used but the vines did not seem to be suited to this type of harvest and the method was

given up. Mrs. Wilson considered there was too much waste of berries and did not like the damage to the vines.

In 1959 there was a top crop of 600 barrels, excellent production per acre.

Mrs. Wilson is assisted by Jimmy Olson who brings equipment, hires help, harvests, grades and cleans for her. Olson takes the berries as the final step to the Ocean Spray plant at Bandon, unless Mrs. Wilson and family can manage to do this.

Mrs. Wilson

Mrs. Wilson who is the former Marion Hatfield was born in Kansas. For a time she was a school teacher. She was greatly interested in the Prosper grammar school, serving several times as director, then as school clerk for 17 years until 1942 when she resigned to take a more active part in bog work. Mrs. Wilson served a term in 1946-1947 as State President of the Rebekah

Lodge, subordinate of the Odd Fellows Lodge, and as the Oregon representative to International Associations of Rebekah lodges at Winnipeg, Canada in Sept. 1947. At the close of 1947 she "retired" to give all her time to her family and to help on the bogs.

Bees

Sometime ago, Mrs. Wilson was given a swarm of bees by a neighbor. From that time on she has become interested in bees and found she has an aptitude for bee culture. She learned to handle bees the "hard way" through trial and error, and studies any literature on bees as it comes along.

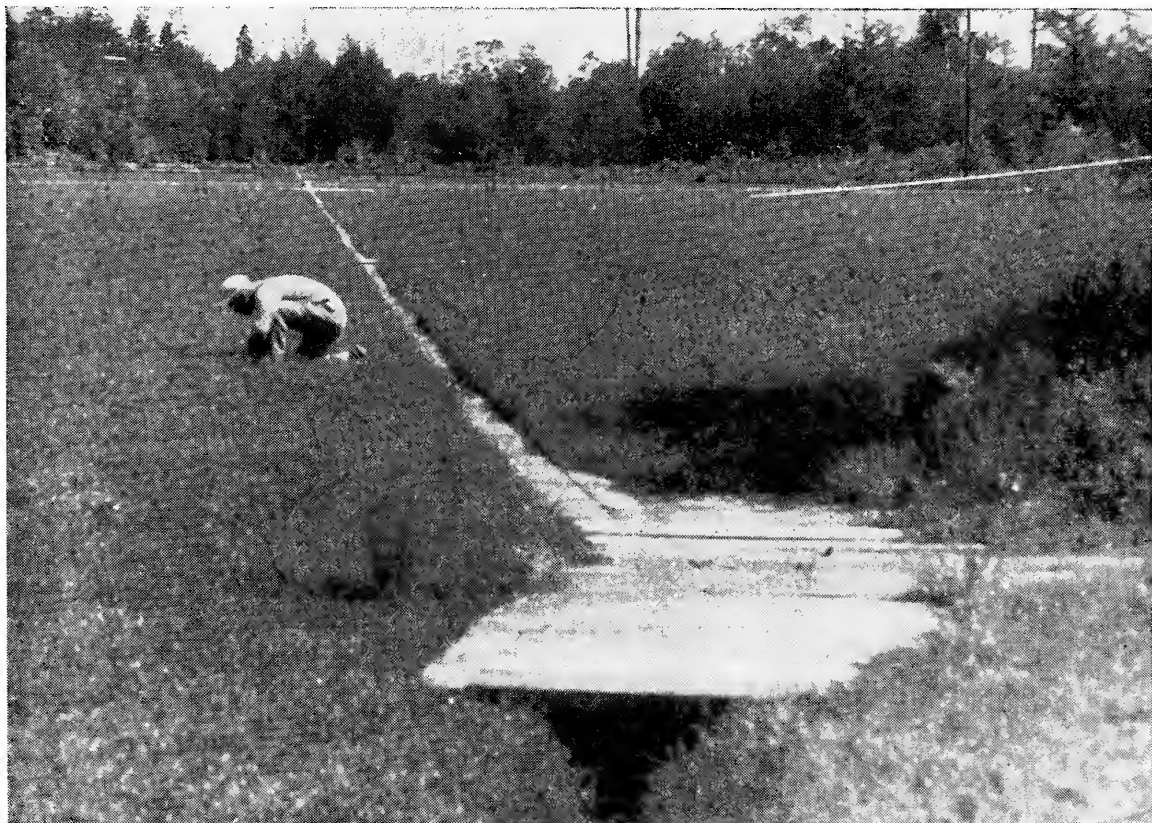
The day we visited Mrs. Wilson at her most attractive home near the beautifully kept number 1 bog, she and her great-grandson Michael were attired in the costume of bee workers, with nets over their faces, setting a swarm.

Cranberry Products, Inc. Reports \$12 Per Barrel

As of October 19, Cranberry Products, Inc., Eagle River, Wisconsin, reported it was making a \$12.00 per barrel advance on the 1964 crop. The corporation expects to make a larger advance in 1965, according to Vernon Goldsworthy, president, if the market stays good. It reported that as of that date it was all sold out.

ITEM

The photograph of Edward Gelsthorpe, executive vice president and general manager of Ocean Spray Cranberries, Inc. together with Mrs. Gelsthorpe and Howard Hughes, vice president of the Springfield Bank for Cooperatives appears in the November issue of the "New England Homestead." This is the same photo CRANBERRIES published in its October issue.



Jimmy Olson looks over the Wilson vines on the No. 1 bog.

(CRANBERRIES Photo)

London Trade Center's 1965 Food Exhibit To Promote U. S. Fruit and Vegetable Products

**Offers Opportunity to
Display Cranberries in
Their Various Forms —
Show Also in Tokyo
Here is Where Cranberry
Institute Comes In**

Producers and distributors of U.S. fruit and vegetable products are being invited to participate in the 1965 food exhibit at the London Trade Center, February 23 through March 5. This will be the first of two food exhibits to be presented next year at U.S. trade centers overseas by the Grocery Manufacturers of America in cooperation with FAS. The other will be held in Tokyo, March 8-19.

Eligible for display in London are fresh and processed fruits and vegetables, and nuts, other products which principally contain fruits and vegetables, such as soups, pies, and other specialty and convenience items.

The United Kingdom is the big-

gest customer of the U.S. fruit and vegetable industry and is becoming even bigger. At a record-setting \$52 million, U.S. sales to this important market last year represented more than a twofold increase over the 1958 figure.

Value of Trade Center

Promotion at the London Trade Center provides what many consider to be the most effective and least expensive way to break into the lucrative U.K. import market with new products, as well as a way to further promote U.S. agricultural items which already find a good market in the United Kingdom. At this exhibit center, a U.S. firm can be assured that its products will get maximum exposure to select buyers as a result of pre-show publicity conducted by the Trade Center at no direct cost to the participant. For the firm which does not already have representation or agencies in the United Kingdom,

the Center assists in making the right contacts.

More and more U.S. tradesmen are taking advantage of these services. At the recent U.S. Processed Food Exhibit held in London, for example, 107 American commercial firms exhibited—the largest number ever to participate in a USDA-sponsored Trade Center event.

The upcoming 1965 food exhibit at the London Center presents an opportunity to capitalize on brightened sales prospects for U.S. fruits and vegetables in the United Kingdom. The show is being held at a time when the competitive positions of a number of products are expected to be much improved from what they were this past spring.

Favorable prices for canned U.S. fruit cocktail, resulting from this year's record pack, are expected to spur U.S. fruit cocktail exports to the United Kingdom to an alltime high. In 1963—the United States supplied 891,000 cases, or two-thirds of total U.K. imports.

Competitive U.S. Peach Prices

Canned U.S. peaches, also with a record 1964 pack, already have a price edge in the United Kingdom over peaches from South Africa and Australia, despite the 12.5-percent duty paid by the United States as a non-Commonwealth supplier. Last year the latter countries held the price advantage. U.S. sales to this market in 1964-65 are expected to be substantially above the 386,000 cases shipped in 1963-64, but probably will not exceed the previous year's 1.1 million cases. In recent years, canned U.S. peaches have accounted for about 25 percent of total U.K. imports of canned peaches.

While it is too early to forecast the competition fresh U.S. apples will meet next spring in the United Kingdom from Southern Hemisphere exporters, sales should be good this fall. Competition at this time of year, normally the big season for U.S. apple shipments, comes mainly from Italy, the Netherlands, and

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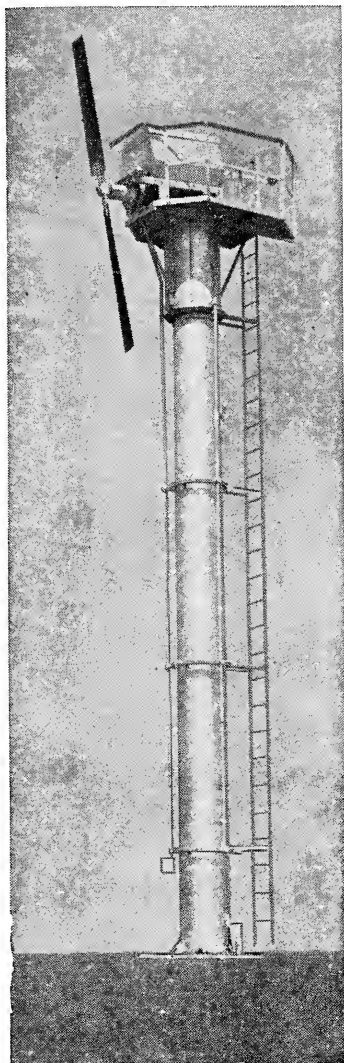
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Wind Machines have also been found ideal for protection of blueberries and other bush fruits.

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France. During the fall of 1964, however, these countries are expected to export fewer apples to the U.K. market and more to West Germany (world's largest apple importer), which had an exceedingly poor apple harvest in 1964. U.S. apples are in a position to fill the gap in the United Kingdom, and the 1964-65 exports to this market should be at least as great as last year's 1.4 million boxes.

A big U.S. prune pack this year—the largest since 1957—will combine with favorable U.S. prices to push 1964-65 exports to the United Kingdom well above last year's 6,100 short tons. Though Yugoslavia's pack (chief U.S. competitor) will also be larger, the quality of its prunes is not comparable to that of the U.S. product. In the past, U.S. prunes have had 75 percent of the U.K. market.

The picture for U.S. raisins is somewhat cloudy. The United States has a larger pack of marketable raisins than last year, but so do Australia, Greece, and Turkey—the big three raisin suppliers to the U.K. market. On balance, U.S. exports to the United Kingdom may top last year's 6,345 tons.

The United Kingdom also presents bright prospects for sales of certain fresh and frozen U.S. vegetables and to a less extent, frozen fruit juice concentrates.

Sales opportunities for fresh celery and carrots will be excellent during the February-April period when U.K. stocks are at low levels and imports from nearby countries are practically nil. Though the United Kingdom is not a significant market for U.S. vegetables, last February's successful test shipment of specially packaged U.S. vegetables opened up new possibilities for trade.

Frozen Vegetable Prospects

Frozen vegetables, like fresh, do not find a big market in the United Kingdom because of severe price competition from well-established products that are processed locally. However, it is believed that some varieties of



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READ CRANBERRIES

"FOG ON THE BOG"

Article with photographs appears in the Wisconsin Rapids Daily Tribune October 31.

The Wisconsin Rapids Daily Tribune had a lengthy news article on October 31, headed "Fog on the Bog—Sprinklers Save Berries, Water." Story says the sprinklers being used are cutting the water needs of the growers by nearly 90 percent or more and offer the prospects of finer fruit production in the future.

The pipes range in size from eight inches for the main feeder lines down to 1¼ inches at the ends of the branch lines. They are taken up in the fall after harvest to prevent damage when the bogs are flooded over during the winter, the story continues.

FERSH FROM THE FIELDS

Continued from Page 6

of more than 200 reporting stations covering the entire state there was generally less than one half inch. Temperatures averaged near normal with cold readings the first half of the month and above normal readings the latter half. Thus the month was pleasant with sunny, rain free days. Highest temperature was 76 on the 17th and coldest was 14 on the 10th. Freezing nights were common the first part of the month. Snow showers were common in the northern marshes in early month and reached southern marshes on one day. Killing frosts on the 3rd and 4th ended the growing season in all parts of the state and was one of the earliest on record. Normal rainfall in the cranberry areas is 2.35 inches and only 14% or .33 inch was recorded.

Continued on Page 16



frozen vegetables may find a ready acceptance. In this category are frozen lima beans—virtually unknown in the United Kingdom where the closest thing to lima beans are the popular marrow-fat beans.

Frozen U.S. fruit juice concentrates, providing they are competitively priced with single strength juices from countries as Israel, might also gain with proper promotion.

Big Thanksgiving Turkey Crop Good News For Berrymen

A big turkey crop was in prospect for Thanksgiving, according to the USDA. Turkeys raised this year totalled 6 percent more than the preceeding year.

This is good news for the cranberry growers too, as cranberries in one form or another accompany turkey at Thanksgiving dinner.

CRANBERRY CARTOONS

We call special attention to the cartoon appearing in this month's issue. These cartoons were drawn especially for CRANBERRIES magazine by Bill Shelly of St. Petersburg, Florida and we hope you will find them amusing. We expect to have one every month for the next several months.

ABOUT OURSELVES

We would also like to explain the article which appears in this issue about ourself and Mrs. Hall, associate editor of CRANBERRIES. This article is a reprint from "Food Marketing in New England," a trade journal published by First National Stores.

It tells something of the early history of cranberry growing — how the "Early Blacks" got their name and then sketches in the cranberry background of your editor. It tells how Captain Cyrus Cahoon and his wife Lettice came to so name the "Black."

Just a word about "Food Marketing," which is a beautiful little magazine, published four times a year. It contains color photographs by some of the most distinguished color photographers in New England. The magazine has a sizable circulation. It is not a house organ in the strictest sense, but devotes its space to people who have something to do with food in one manner or another. As a matter of fact, we are rather proud to have been so written up in such a fine publication.

We hope you will read the article in its entirety.

MRS. WILSON

We also have an article about Mrs. Marion Wilson of Oregon, who is another widow who typifies the indomitable spirit of a cranberry grower. We think we have an interesting article about her.

WE REGRET GOLDWATER LOST

This publication sometime ago had an editorial urging Senator Goldwater for President. For this we were both criticized and praised. Well, now we all know that Goldwater was not chosen by the electorate of the nation. But,

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we are not sorry we wrote the editorial, as we think even an agricultural journal such as this should take an interest in a presidential election. But as President Johnson says, we should now all unite behind him as he has been chosen to lead the Nation.

THANKSGIVING AGAIN

This is November with the great holiday of Thanksgiving taking place. That holiday of Thanksgiving taking place. That brings the traditional dish of cranberry sauce (or a glass of cocktail) to be enjoyed. It is in one sense a "cranberry" holiday. And this year we think the growers have much to be thankful for. The industry is at last apparently on the way up with a fairly large crop, good prices and sales.

SERVING THE WISCONSIN GROWERS

FRESH FROM THE FIELDS

Continued from Page 14

Berries All Harvested

The ideal weather enabled many of the smaller marshes to complete harvesting the first of the month and the entire state was finished by the 15th. This was earlier than average. Cold temperatures and inclement snow showers in the north held harvesting up a few days with ice forming over some un-harvested beds. Growers were getting concerned over lowering water supplies in the central area, due to continual flooding early in the month. Vines went dormant early due to the cold temperatures and berry color was excellent on most varieties during the month.

Brisk Shipments

Brisk movement of berries both fresh and processing were re-

ported by all agencies, with an estimated sixty per cent of the total state crop out from the growers warehouses by month's end. There was some storage rots showing up along with the warm weather the last half of the month. Overall the keeping quality appeared better than average.

Casoron Applied Liberally

Growers were busy getting considerable marsh work done with the continued good weather. This work was being done all over the state with equal speed. One of the most important work projects was the application of 4% Casoron granules for weed control. An estimated 1200 to 1400 acreages was expected to be treated or about 25% of the state acreage. Application rate was mostly at the top level rate of

100 lbs. per acre. Three different type mechanical granular applicators were in use with the Dana Machine using the Noble Spreaders the most common.

Oregon

Harvest Completed

Many growers in the Bandon area had completed their harvest by Nov. 8 and were busy with fall bog work. A few were still harvesting.

The Ocean Spray Cranberry Plant was closing for the season.

Crop Below Estimates

It is expected the Oregon crop will fall below earlier estimates.

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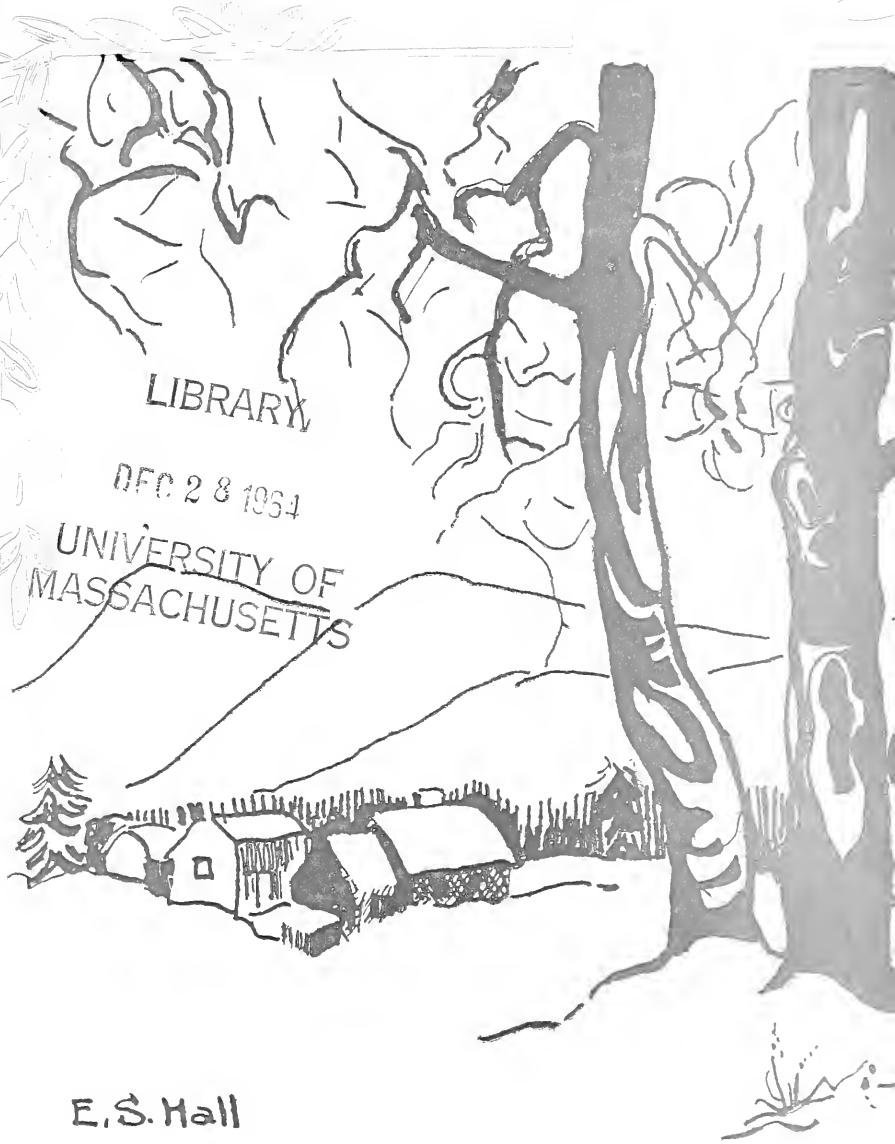
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Latest USDA Crop Report

In the latest USDA crop report released November 10th, the nation's cranberry crop is estimated at 1,292,800 barrels, up 100 barrels from the October first estimate, 3 percent larger than average. An increase in production during harvest season in New Jersey more than offset reduced production in Washington and Oregon.

Production in Massachusetts is expected to total 650,000 barrels,

2 percent above the 1963 crop and average. Harvest is complete but there was a little more frost damage than usual. Color of the crop is good but the berries are smaller than a year ago.

In Oregon and Washington the crop failed to size, as had been expected earlier. Harvest was expected to be completed in November on the coast.

The total now stands, New Jersey 138,000; Massachusetts 650,000; Wisconsin 405,000; Washington 67,000 and Oregon 34,800.

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During November and December, the campaign will divide promotional benefits among the three top selling Ocean Spray products in national distribution — Fresh Cranberries, Cranberry Sauces and Cranberry Juice Cocktail — and will pick up new products, waiting in line, after the new year.

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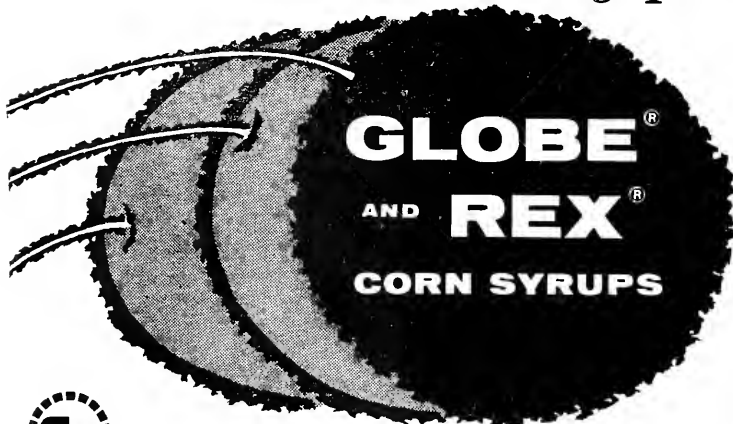
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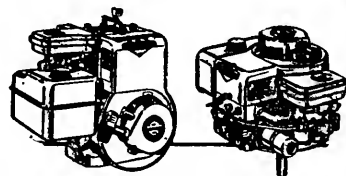
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Cranberry-Orange Relish, already building up distribution and consumer demand in advance of its promotional debut.

Two network radio shows Arthur Godfrey Time and Don McNeill's Breakfast Club, are both currently promoting Fresh Cranberries, Cranberry Sauce and Cranberry Juice Cocktail while Cocktail has a heavy daytime television schedule together with additional nighttime spots in key markets as well as 4-color ads in regional issues of McCall's and Life. Shows carrying the Cranberry Juice Cocktail TV advertising on a 52 week schedule are The Price Is Right, General Hospital, Truth or Consequences What's This Song and You Don't Say.

A full scale public relation program ties in with the advertising campaign, and 4-color banners, cards and shelf-talkers for all products will be the sale clinchers at the point of purchase

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Mass. Cranberry Station and Field Notes

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

Personals

Dr. Bert Zuckerman and Dr. Wes" Miller attended the Technical Committee Meeting of NE-34, the northeastern regional group of nematologists. The meeting was held at Beltsville, Maryland from November 30 through December 2.

Dr. Fred Chandler, recently retired from the Cranberry Station, and his wife have been visiting friends and relatives in Minneapolis since mid-October. They are expected back about December 10.

Weather

The month of November went into the records at slightly less than one degree a day below normal. For many years Dr. Franklin supported a theory, based on his long appraisal of weather records, that if the months of

April and November were above normal temperature then the following winter was more likely to be mild and open. If these two months were below normal in temperature the following winter was apt to be severe. Based on "Doc's" theory, both April and November were colder than normal this year, therefore, a severe winter is very possible. We will see how well this theory works out about four months from now. The precipitation recorded at the Cranberry Station for the month totaled 1.54 inches, this was only one-third of the 30 year average of 4.60 inches, and most of this occurred during the period of the 25th to the 29th.

Advisory Committee

The Cranberry Advisory Committee held its annual meeting at the Cranberry Station on the

afternoon of December 3rd. This Committee assists the Extension Service in appraising its educational program for the past year and in development of what we hope will be an effective program for the coming year. We had excellent representation from the Cape Cod Cranberry Growers Association, shippers, service organizations, county agricultural agents, University of Massachusetts and Station staff.

Dr. Cross Speaks

Dr. Cross gave a brief talk on the present situation in the cranberry industry, stating that with the surplus gone and cranberries returning more money, the growers were in a more optimistic mood. Money is being spent on neglected cultural practices such as sanding and ditching, flumes are being repaired and sprinkler systems installed. He felt that the goals for the Massachusetts growers should be to increase production per acre without a corresponding increase in the production costs. Also that the quality of the fruit should be equal to or better than in the past. He listed some of the problems that still plague our industry such as declining water supplies, berry damage during the harvest operation, the need for more vine-ripened fruit and the careful use of pesticides.

Discussion

The committee then discussed a number of items, with quality receiving the most attention. The general feeling among the group was that the grower should be concerned with raising the best quality fruit possible, consistent with good economic practices. That we should strive to keep the fresh fruit market and the expanding cocktail market supplied with the best possible fruit.

Bog Labor Major Problem

While the above topic highlighted the discussion, other problems received consideration. Bog labor is still a major problem and more mechanization is required. Improvements on our present picking machines or perhaps a new machine which will cause less bruising of the fruit and quicker, cleaner harvesting.

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Prof. Stan Norton, our Station engineer, may work on this problem. Applying pesticides through sprinkler systems, can be done effectively and what should the spacing of the heads be for uniform application? Other subjects of interest were water harvesting, fertilizer usage, weed control and water management.

Members Attending

The suggestions and advice of this committee are most helpful and are sincerely appreciated. The following members are present: Oscar Johnson, Dominic Marini, Chester Cross, John Decas, William Stearns, Robert Hammond, C. E. Morse, Charles Hastings, Paul Morse, David Eldridge, Edward Lewis, Kenneth Beaton, David Mann, Peter Stanley, Sidney Vaughan, Robert St. Jacques, Arnold Lane, Raymond Morse, Bradford Crossman, William Atwood, Raymond Thatcher, William Crowell, Arthur Handy and Irving Demoranville.

"A Cooperative Is Democracy In Action," Gelsthorpe Says

In a recent address to the Springfield Bank for Cooperatives, Edward Gelsthorpe, general manager and executive vice president of Ocean Spray Cranberries, Inc., according to the Cooperative Digest told the cooperative leaders that democracy in itself is a cooperative. In his talk on "Keeping Cooperatives Competitive," he said that both are characterized by self help, mutual aid, capital pooling, social concern and the best service for the majority.

The leader of Ocean Spray attributes Ocean Spray's recent marked progress to enlarged investment in research and development of new products, and new uses for old ones. "Research and development," he said, "are the keystone to our success."

Only one third of cooperative failures have been due to fire, flood, inadequate financing, competition and low prices. Mr. Gelsthorpe reported 65 percent of



Perley V. Merry of Marion and Duxbury, Mass. displays a replica of a box of cranberries he sent to President Johnson for Thanksgiving dinner. The berries were grown by "Herbie" Dustin, prominent West Wareham, Mass. grower and packed by Decas Bros. of Wareham Massachusetts. (CRANBERRIES Photo

the failures have been due to management weaknesses. While cooperatives' boards of directors must set goals and assess how well they are being achieved, he said management must have and take the responsibility of determining how the goals are to be achieved.

BLUEBERRIES

Blueberries are the latest addition to ready-to-eat cereal. You'll soon be able to buy corn flake with freeze-dried blueberries right in the box. The new combination is being test-marketed now in the Rocky Mountain area by General Foods. (American Fruit Grower)

Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of December, 1964 — Vol. 29 No. 8

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Getting Colder

By the 23rd of November the month had been slightly colder than normal, the departure being 2 degrees below the normal, with another week of November still to go. The temperature the night before dropped to five above in Carver, and there had been heavy frosts nearly every night toward the end of November.

However the ground had not frozen as the sun shone most days and the days were warm.

End Of Month

The month ended slightly less than one degree a day colder than normal. The last day of November the cranberry area barely escaped a snow storm, which passed close off shore and continued on into Eastern Maine and Nova Scotia, where the Maritime Provinces had a bad snow storm.

The rainfall for the month totalled 1.54 inches as recorded at the Massachusetts Experiment Station. This is less than normal, that being, 3.89 average. This is leaving rather a serious water problem on many bogs for win-

ter flooding as supplies of water are so low.

WASHINGTON

Dr. Doughty Transferred

Dr. Charles C. Doughty, about whom we have the feature article this month is to be transferred to the Western Washington Experiment Station at Puyallup, Washington on January 1, 1965. He will be on the faculty of the Washington State University and will still be working one-half time on cranberry research problems. The other one-half of his time will be spent on other small fruits. Mr. Azmir Shawa will probably take over the station work at Long Beach. He is expected to be appointed to one-half time research and one-half Extension work. The official an-

nouncement as of November 30 had not come out.

The Washington Crop

The Washington cranberry crop came in about as follows: the Long Beach and Warrenon, (Oregon) areas produced 17,798 barrels; Grayland and North Beach produced 45,000 barrels. This is about 57 percent of the 1963 crop. Production was extremely variable even within the same bog. Small areas produced 100 barrels to the acre, another area next to it would have 30 barrels to the acre. This condition was characteristic of all the bogs this past season. The blossom blight, as previously mentioned, was partially responsible for this. The rot was much more serious on the late-picked berries than on those picked earlier. Controls have not been fully worked out yet. Dr.

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Folke Johnson and Dr. Maksis Eglitis, of the Western Washington Experiment Station have been working on these problems for the past two years.

Weather

The weather was as follows: October was 17 days without measurable precipitation. The maximum temperature was 84

degrees F on the 5th and the minimum bog temperatures were 25 on the 10th and 25th. Precipitation for the month was 3.94 inches. The mean maximum was 61.8 and the mean minimum was 42. November had ten days without rain. The maximum temperature was 56 with a minimum bog temperature of 19. Rainfall

for November was 9.76 inches.

Bog Sale

Wilson Blair has purchased the old bog formerly owned by Dr. J. B. Clarke. Mr. Blair is plant manager for Ocean Spray at Long Beach.

WISCONSIN

First Half of November "Indian Summer"

The month of November averaged four degrees above normal temperature and 1.80 inches of precipitation or about one half inch below normal. Indian summer weather dominated the first half of the month with a balmy 75 degrees recorded on the 3rd. This was the third highest record for that date, topped only by a 77 reading in 1933. For the first 16 days of the month the temperature moved above 50 degrees daily and barely reached freezing at night. Dandelion started to bloom and other plants showed signs of new growth.

Last Half Colder

Conditions reversed by the 17th with a cold front moving in causing 1 to 2 inches of rain over the entire state. This moisture came ahead of the frost and allowed a soaking of the top soil. The last 14 days of the month brought nighttime sub-freezing weather and five days when the mercury failed to top the freezing mark. Coldest in the north where readings of minus 15 were common over snow cover. Small lakes and streams began to freeze over after the middle of the month in the north and about a week later in the south. All except the larger deeper lakes were frozen over by early December. Snow depth at month end found from 9 inches in the north to six inches in the south and about two in the center. Frost averaged from 4 to 6 inches in depth on the open fields. The outlook for December calls for precipitation to be above normal and temperatures to be from normal to slightly below normal for the month.

Most Berries Shipped Out

Except for a few lots of late
Continued on Page 16

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The State Of Washington Has A Most Modern Experiment Station for Cranberries, Blueberries

**This is Headed by Director
Dr. Charles C. Doughty, with
Several Able Assistants**

by

Clarence J. Hall

Washington has had one of the most modern experiment stations, of any which assist growers of cranberries and cultivated blueberries since 1949 at Long Beach. The Station, formerly a rather non-descript affair has been in operation since 1923. Under D. J. Crowley, now retired, who was superintendent from the 1923 date until 1954, the station was known as the Washington Cranberry and Blueberry Station and was and still is under the direction of the Agricultural College of Washington State University, one of seven experiment stations.

About four years ago the name was changed to Coastal Washington Experiment Station to broaden its scope.

A little about the Station, all of which has previously been published in CRANBERRIES (June 1950.) This is a one-story structure made of pumice block and the decor is white and pale green, with a very large window. There is a glassed-in entrance, and the building has a wide overhang. Inside are a large reception room, with desk space; two offices, a laboratory and a library. The building is radiant-heated, fluorescent lighted, has toilets and washrooms.

6 Acres In Cranberries

The Station is on Pioneer Road, the whole property consisting of about 45 acres, about six of which are in cranberries. Parts of the bog are more than 20 years old. All of the bog is in McFarlins. A variety plot for cranberries is maintained, one half in new varieties produced by the USDA, in Massachusetts and New Jersey, besides a number of seedlings developed at the Station.

Production on the Experiment Bog has varied from 40 to 50 barrels per acre in poor years to 150 barrels in good years since

1961. Commercially-operated bogs in Washington produce considerably more barrels per acre.

Harvesting on the Long Beach Peninsula is mainly done by the use of the so-called "egg-beater." Harvest is also done in half-barrel field boxes.

Objectives Of The Station

The Station under Dr. Doughty has been working on a program to develop improved varieties adaptable to Washington climate. One object has been to get a variety which will ripen earlier and with good color, to be sold on the fresh fruit market. Of these has been the W. S. U. (Washington State University) known as no. 72, also one called no. 108 which seems to be the better of the two. "We are trying for a berry that is bright red, with less bloom than the McFarlin and a little sweeter than the usual cranberry and which is adapted to the climate and environment as the McFarlin is," says Dr. Doughty. About ten years ago a program was started to develop new varieties. Twelve parent varieties were used. About 2000 seedlings were produced and out of these, thirteen seedlings were selected. This new variety

program has been carried on in the field as well as in the greenhouse.

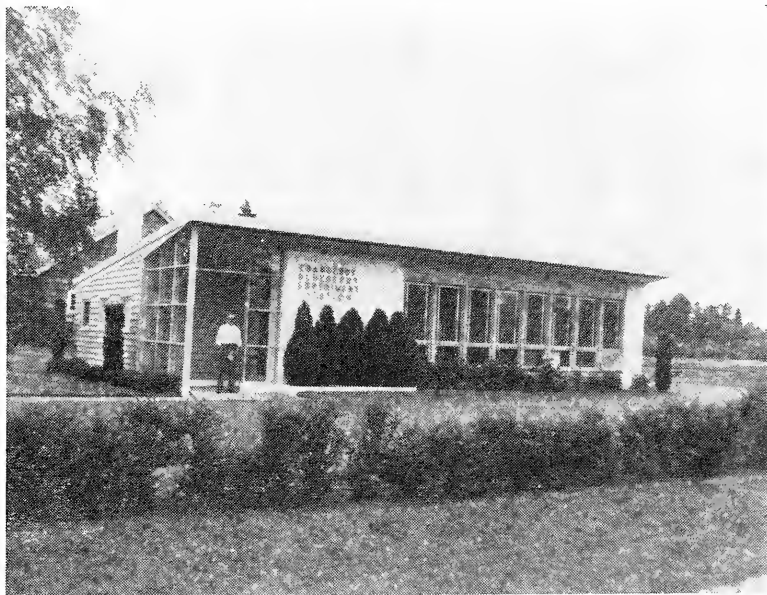
Has Written Research Papers

Dr. Doughty has written a number of research papers, one being, "The Effects of Certain Growth Regulators on the Fruiting of Cranberries, *Vaccinium Macrocarpon*," published in the Proceedings of the American Society for Horticultural and been reprinted in bulletin form.

it is the hope of this Magazine that the relatively new subject may be abstracted for us).

The Long Beach Station does not have a large staff, there is Azmi Shawa, who is an Arab. Born in Palestine in 1924, he studied at an agricultural college there for two years, then working four years at the Haifu Department of Agriculture. He does general work at the Station.

Dr Doughty succeeded retiring R.J. Crowley as superintendent of the Station in February, 1954. Doughty, who is known as "Chuck" as are so many Charles, was born in Alamos, Colorado in 1915, his parents living there some five years after his birth. Then the family moved to Kansas City, Missouri. His father, Charles H., was a fruit grower and so "Chuck" had experience in apple growing until he was about 25.



the entrance.

A View of the Washington Station, with Dr. Doughty standing at

Then, during World War II, he went into service putting in 4½ years in the Air Force. He was a crew chief and flight engineer. He was in charge of training combat crews on the four-engine planes. His rating was staff sergeant and term of service from June, 1941 to November, 1945.

June 1941 to November 1945. After working at miscellaneous Kansas State University and graduated with a B. A. degree in agriculture in June of 1948.

He continued his studies at the graduate school of Washington State University, receiving his PhD in 1959. Plant Physiology and Horticulture are his main professions although his PhD thesis was Growth Regulators and Their Effect on Fruit Set.

Doughty was married to the former Reta Oroke of Laurence, Kansas in June of 1943. The couple have two children, Charles C., Jr. 19, and Galen L. who is 12. Doughty's people, like many of the present day Pacific north-westerners, came from Ohio and New York. They moved to Kansas and then to Washington.

Doughty is a member of the American Legion, has been president and vice president of the Long Beach-Ilwaco Kiwanis Club, a member of the Sigma xi (Science Honor Society) American Society for Horticultural Science. He attends the Long Beach Presbyterian Church and serves as clerk and member of the church board. The Boy Scouts of America and photography are Doughty's chief non-work interest. He was chairman of the Peninsula District Boy Scouts of America for two years.

The Doughty's live at Long Beach, Washington.

Azmi Shawa

After his four years at the Department of Agriculture at Haifu, fighting broke out between the Jews and the Arabs, and he came to the U. S. to finish his agricultural studies. Entering Utah State University at Logan, Utah in 1948, he received his B.S. in Agriculture in 1951. He had felt with all the trouble in Palestine there was no future for him there.



Dr. Charles C. Doughty, Director of the Coastal Washington Experiment Station at Long Beach, Washington. (CRANBERRIES Photo)

English was compulsory in the Palestine schools when the British were in control. This study of English started in the third grade. After Shawa studied in Utah he went to Colorado State University in Collins, Colorado where he obtained his master's degree in horticulture.

He then went to Washington State University at Pullman to study for his PhD, but did not finish. He had worked his way through college picking fruit in orchards, washing dishes, etc. In 1955 he left college studies and took a job at the Irrigation

Experiment Station, Prosser, Washington.

One year later he married Florence Zimmerman of Yakima, Washington. He spent two years at Prosser. In 1957 he went back overseas and accepted a position as horticulturalist at Benghazi, Libya, where he stayed until 1959. He came back to the States and worked another year at Prosser.

In 1960 he transferred to the Coastal Washington Experiment Station at Long Beach. In 1959 he obtained his U. S. citizenship. He has no particular specialty at the Station, his title being senior

experimental aide. He has worked on weed problems, cranberry nutrition and on cranberry fertilizers. He also has done work on the cross-breeding program and on storage rot and similiar research.

The Shawas have two children, a son Nabel 8, and a daughter Lawrence. They make their home at Ilwaco. Mr. Shawa feels he would like to return to his native country and take part in Arab activities and to help establish a peaceful situation, but thinks for the present, conditions are too disturbed.

Mrs. Gustafson

The able secretary at the Station in 1961 when your editors made their visit there was Mrs. Aloha Gustafson, who had been at the station then since the previous summer. She was brought up in Seattle where she attended Roosevelt High School. With her husband, who is a carpenter, she lives at Sea View on the Long Beach Peninsula. "I find cranberry work fascinating," she said. "I also find anything to do with geography intriguing. I am really sort of a Man Friday here as I am called upon to do a number of things."

That Mrs. Gustafson has learned a great deal could be testified to by the writer who has long been in communication with her, asking for various bits of cranberry Station activities and cranberries in general, and she always had the answers.

The couple have two children, a son Jack and a daughter, Della.

Mrs. Gustafson is now on leave of absence from the Station because of an eye ailment.

Foreman

Foreman at the Station is Angus Sayles, who has been at the Station since 1945. He formerly worked at famed Cranguyma on the Peninsula.

Area Bog Acreage Slowly Growing

Concerning Long Beach cranberry growing Dr. Doughty was of the opinion that this is growing slowly. "There is a little new acreage going in all the time." He said the increase in acreage in the past seven years (to 1961) had been roughly 150.



Azmir Shawa, Arabian-born, is able assistant to Dr. Doughty.

(CRANBERRIES Photo)

"About 7 to 10 acres is all one man can reasonably take care of himself. Most growers have some other work as well as cranberry growing. It is the ambition of most to become full-time cranberry growers."

Pollination

The problem of pollination, or lack of it in the Long Beach area has been referred to, that is as far as honeybees are concerned and also the Station is trying to induce more bumblebees to gather around bogs through the installation of artificial nests and the planting of shrubs and

flowers, the nectar of which the bees like.

He told us of the night in 1960 when there were two very cold days and growers sprinkled as they have for years now. These cold spells, Dr. Doughty found to be harmful when the humidity is down and when wind damage occurs. Normal humidity is rather high, 60 to 100.

A record of sprinkler use at the Station showed that in 1955, the sprinklers were used about 20 times, beginning with March 20 (for low temperature, frost) twice in June and September for

heat control and the last in October for frost protection. In 1957 April 20 for frost, 28 degrees reached, from 5:45 to 7 a.m. In April, 1957 for frost, six times in September for heat and nine times in October, November for frost, the final one being November 2, with 22 reached and the duration of sprinkling from 11:15 p.m. to 6:30 a.m. In 1958 sprinkler use began on February 27 for a low of 10 degrees and for heats in June, July and September with a maximum temperature of 95 on July 27. In 1959 there were 19 frosts from April 18 to July 30.

Thus the Long Beach Station, which among other things, under the then-director D. J. Crowley gave the first impetus to the use of sprinklers in cranberry growing, is, like the stations in Massachusetts and New Jersey, together with various state universities and colleges of agriculture, providing its part in the development of cranberry research and knowledge, and always with a practical view in mind.

Soil Acidity of Wisconsin Marshes

by

Dr. George L. Peltier

Recently Chandler (Cranberries, Sept., 1960) reviewed the relationship of soil acidity (pH) to the production of cranberries and incidentally to weed population found in cultivated bogs. Through the years the pH of bog soils and flood waters has received considerable attention, particularly when the pH was near neutral (7.0) or above (alkaline.)

The range in pH in Wisconsin bogs is rather a wide one, from 3.5 (very acid) to near neutral or above (alkaline). Most of the sphagnum bogs are quite acid (around pH 4 or less). It has been a common practice to add a ton of agricultural lime per acre to very acid bogs, with an extra 500 lbs. per acre every third year. As the pH is increased the vines make a healthier looking growth, yields are improved, and the current growth of sphagnum and wood mosses inhibited. The use of lime for the killing of patch-



Mrs. Aloha Gustafson, Secretary of the Station, now on Leave of Absence. (CRANBERRIES Photo)



Exterior of the Greenhouses, at the Station.

of sphagnum is an old practice on some bogs in Wisconsin.

At the other extreme some bogs have a pH near or above a pH of 7.0. Too, alkaline flood waters have a tendency to slowly increase the soil pH. In other words, it has an accumulative effect over a period of 10 years or more. Under these conditions vine growth is inhibited, yields decrease and upland weeds move in to take over in areas of sparse vine growth. The typical weed flora consisting primarily of grasses and sedges is replaced by annual and perennial weeds usually present on the uplands in crop areas. So far no promising control method has been found to alter a soil with a high pH to acid condition. One suggestion often made is the use of more acid components in fertilizers. My observations over a 10 year period indicate that the usual application of fertilizers has little or no effect on the pH of bog soils. Another suggestion made by soil chemists was the use of sulfur to modify the pH of soils.

During a 4 year period (1952-1956) Prof. A. R. Albert of the Soils Department of the University of Wisconsin in connection with comprehensive fertilizer tests in 3 areas included a series of plots (30 x 120') on a bog where yields were decreasing, with soil pH's higher than considered desirable for cranberries and infested with upland weeds (ragweed, lamb's quarter, thistle, alsike clover, plus other annuals and perennials.) On this bog, water for flooding purposes was drawn directly from the Wisconsin River, which due to paper mill pollution had a tendency to be slightly alkaline.

Sulfur was applied in 1952 and 1954 at rates of 500 and 1,000 lbs. per acre alone or in combination with fertilizers. A summary of Prof. Albert's data (Table 1.) indicates that sulfur has little or no effect on the soil pH of this cranberry bog.

Prof. Albert's data on the influence of sulfur on soil pH can be summarized as follows:

1. No evident change in pH occurred in the plots receiving

a total of 1,000 and 2,000 lbs. of sulfur per acre, applied alone or in combination with complete fertilizers.

2. Little or no increase in yields were obtained on any of the sulfur plots, in fact yields were inhibited by the 2,000 lbs. per acre application. Too, berries averaged smaller (cup counts.)

3. Sulfur, though it had little or no influence on yields or berry size, did improve the keeping quality of berries in storage.

4. Sulfur treatments produced no visible changes in the weed population during the 5 years. Little effect could be expected without

a considerable reduction in pH which did not occur.

5. Sulfur did not seem capable under the conditions of the experiment to influence the soil pH.

6. The negative results may have been due, in part, to the absence of sulfur bacteria capable of oxidizing sulfur.

It can be concluded from these tests that under the conditions enumerated, sulfur, for unknown reasons, is ineffective in influencing soil pH's to the point that vines become more productive and the inroads of upland weeds in the bogs inhibited.



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'Tis The Season To Be Jolly!

No one but old scrooge denies Christmastide is the season to be our jolliest! To help us in our merrymaking we traditionally call on age-old Christmas symbols—the Christmas tree, yule log, mistletoe and holly, Christmas cards, presents under the tree, lights and tinsel, the wassail bowl, and, of course, the stockings hung by the chimney with care.

We've gathered this Christmas potpourri from centuries of folklore and legend around the world. For instance, the Christmas tree originally symbolized the Garden of Eden to Germans. The "Paradeisbaum" (tree of Paradise) was a central theme of their medieval mystery plays. When these plays were suppressed, the tree (usually a fir) was brought into the home and gradually it became the custom to decorate it with cookies and fruit at Christmas time.

Many believe that it was Martin Luther who first put candles on the Christmas tree. Supposedly, while walking through

the countryside one Christmas Eve, Luther was awed by the sight of the snow-tipped evergreens sparkling in the moonlight. At home, he tried to recreate this effect for his family by placing candles on their Christmas tree.

Mistletoe is another symbol of Christmas from the annals of legend. The ancient Druids thought it was sacred. Forests in which this precious plant grew were dedicated to their gods. Legend has it that Druids cut mistletoe sprigs with a golden knife and hung them over their doors. They believed this pacified the woodland spirits and that only happiness could enter while the mistletoe was in place.

Mythology reveals that Scandinavians, too, hung mistletoe over their doorways on the first day of winter to ward off the evil spirits. To the Romans, mistletoe was a symbol of peace and when enemies met under the "supernatural" sprigs, they discarded arms and declared a truce. From all these myths and customs, mistletoe became a symbol

of love and gradually, perhaps inevitably, the custom evolved of kissing under the mistletoe.

Holly, which has always been a popular Christmas decoration, was also thought to be endowed with unusual powers. In legend, Christ's crown of thorns was made of holly leaves. From this emerged the custom of Christmas wreaths of holly.

British Saxons were the first to gather 'round the wassail bowl to toast a joyous season and a fruitful New Year. As early as the fifth century, they passed a golden cup of mead wine around the feast table with the salutation "Waes Hael!" or "Be Whole!" Wassail came to signify the special mixture of wine and other magic ingredients that every Christmas, village wassailers carried in an immense bowl around town, toasting the season with their neighbors. The idea, though not the same practice, spread and the Christmas punch bowl today embodies the wassail spirit.

There are many different versions of the Christmas stocking. Research in the Esquire Socks Library of Footlore reveals that the only fact which can clearly be established is that the first Christmas stocking was fashioned of woolen shreds. In the 1600s, St. Nick put his gifts in hose of pure silk.

Looking into legend once more, we find that the first Christmas stocking was really hung by the chimney to dry—and St. Nick making his rounds of chimneys on Christmas Eve, dropped a bag of gold into the stocking by accident!

Another tale uncovered in the Esquire Socks Library holds that the children of Amsterdam set their wooden shoes in the chimney corners because they believed St. Nicholas would drop goodies down the chimney **only** if he saw shoes there. Later, the children hung up stockings by the chimney reasoning that shoes couldn't stretch and that stockings could hold more gifts.

Burning the yule log is an ancient pre-Christmas custom originating with the Scandinavians.



At their feasts to Juul—from which we get our “yuletide”—on the first day of winter, they kindled huge bonfires in honor of the god Thor. This occasion was a rollicking and happy one for the people and remained when Scandinavia became Christian. In feudal times, the bringing in of the great yule log to the wide hearth in the baronial hall was one of the most joyous ceremonies connected with the Christmas celebration. The men hewed down the greatest log they could find, singing merry yule songs while they dragged it to the waiting hearth. According to custom the yule log was lighted with a brand of the previous year's log. Burning the yule log is still a beloved and picturesque custom in many rural districts around the world.

During the early period of Christianity it was the custom in England for the poor to sing carols — joyful songs — in the streets at Christmas time. As they sang from house to house, they were given food, clothing and money. This is one way that today's Christmas caroling might have begun.

Another story of Christmas carols claims that St. Francis of Assisi introduced the custom of community carol singing. St. Francis staged a manger scene one Christmas with real people and animals. The onlookers were so delighted with this pageant that they burst into joyous song. Those first carolers became as important to St. Francis' Christmas celebrations as modern carolers are to ours.

“FMC” PROGRESS” MAGAZINE

“FMC Progress,” published by the giant FMC Corporation, executive offices, San Jose, California, surely puts out a fine magazine which we are privileged to receive. Volume 14, Number 2, which we are looking at now has some wonderful color photographs. They are like paintings in their beauty of subtle coloring. One, for instance of three girls is all in yellow and a delicate shade of green. We service FMC with various advertising.

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ALL BEATON CRANBERRIES BOUGHT BY SYNDICATE

A multi-million dollar cranberry transaction, termed "one of the most important and largest" in the cranberry industry in the Cape Cod area took place on November 21.

John J. Beaton Cranberry Corporation and its affiliated companies transferred the entire capital stock of all its companies to a syndicate acting for the Cranberry Corporation of America.

A statement from the syndicate said, "The transaction is reputed to have involved a multi-million dollar consideration to the Beaton interest for their vast cranberry bog holdings and extensive land ownership of almost six thousand acres located in many of the Cape Communities, and all the operating assets of the several companies including their large interests in plants and buildings."

The syndicate said the new corporation headquarters will remain in Wareham and new plant and automated processing methods will be introduced for the first time in harvesting and marketing of cranberries. No change in personnel policies are contemplated in the move, it said.

The syndicate is composed of Chester A. Dolan, Jr., of Boston, President of the Guaranty Trust Company of Waltham; Thomas E. McGovern, treasurer of Milton; and All A. Comeau of East Bridgewater, operations manager.

The Beaton Cranberry Corporation was started by John J. Beaton "who bought his first bog about 1910," his son Melville C. Beaton said yesterday. Mr. Beaton, who succeeded his father in the cranberry business, told the Courier, "I guess you can say

I was born in the business."

He said he had no definite plans "except to relax for awhile and spend a little time in Florida." When asked if he intended to move to Florida permanently, he replied emphatically, "No, I was born and raised in Wareham and I like it here."

Notes From "Goldy"

Vernon Goldsworthy writes from Eagle River Wisconsin that Cranberry Products, Inc. is working night and day and is still not caught up with orders. The firm is buying berries from Decas Bros. at Wareham, Massachusetts even though the Wisconsin growers had more berries than ever before. His own crop was particularly good. The fruit from Decas costs \$14.50 a barrel, plus the freight.

A Lot Of New Planting

A lot of new planting is to be

Continued on Page 16

THE SAME CRANBERRIES

We, the editors and guests, enjoyed fresh cranberry sauce for Thanksgiving dinner made with berries from the same bushel as the berries which went to President Lyndon B. Johnson at his home in Texas. Of course the President does not know this and it is of no real importance. But an eight-barrel box was sent to the President by Perley V. Merry of Marion and Duxbury, Mass. And for his thoughtfulness he received a letter from the personal secretary to the President, as reported elsewhere in this issue. This is rather late news for our December issue, but it was not done in time for the November, which we trust all our subscribers have received long ago. The berries were grown by "Herbie" Dustin, well-known West Wareham, Mass. grower and packed by Decas Bros. of Wareham.

CHRISTMAS, 1964

Christmas in the true sense of the word means "Peace and Goodwill toward GOD and Man."

And we think, this Christmas of 1964 can well be expressed in these words—*The crop is in; the prices have been excellent with a strong market. The outlook for 1965 is for an even better year.*

Yes, the cranberry grower has much to be peaceful and thankful for. We never knew of a time when the prospect was brighter.

MAKING — AND KEEPING — MONEY

"The plowman homeward plods his weary way," reads the line in Gray's *Elegy Written in a Country Churchyard*, and once upon a time farming was about that simple. That dreary, too. About all the plowman had to think was another day's plowing. But not today. Nowadays he has to be sharp at something generally called "management." Just raising crops or livestock is no longer enough, for then comes the battle of getting something for them — and trying to keep what you get.

Life is more complicated than in the time of Mr. Gray's "plowman." But it's a lot more interesting, too, and for the fast-of-foot, a great deal more rewarding.

Editorial from "The Farm Journal"

CLARENCE J. HALL

Editor and Publisher

EDITH S. HALL — Associate Editor
Wareham, Massachusetts

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New Jersey

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

1965

Now, as 1964 drags to an end, we are looking forward to 1965. This should be an even better year for cranberry growers and the cranberry industry as a whole. The crop did not shape up in size or in quality as much as might be desired, but it may another year.

CREDIT TO OCEAN SPRAY

Have you noticed that Ocean Spray commercial on "CRAN-apple Juice" on the TV? It has a catchy jingle and is a credit to the sponsor, Ocean Spray.

SERVING THE WISCONSIN GROWERS

NOTES

Continued from Page 14
done in Wisconsin next year, "Goldy" reports, and almost every grower he has talked to is adding acreage. As far as possible, most of them will be planting Stevens, the new hybrid variety, and there will not be enough of this variety for everyone who wants to plant it.

Sprinkler Interest

An extreme amount of interest is being shown in irrigation systems in Wisconsin and a good many acres will be going under sprinklers this year.

FRESH FROM THE FIELDS

Continued on Page 6
Howes and McFarlins, all berries had been shipped out of growers warehouses by the end of the month. An estimate of only four thousand barrels remained. The

extremely warm and humid weather the first half of the month following on the heels of similar conditions the last half of October, brought storage rots to a high peak, slowed milling drastically and hampered all packing. The end result was those growers having berries after the first week in November suffering heavily from shrinkage and paying high packing costs.

Storage and End Rot

Most of the storage rots were end rot and black rot. Black rot was the greatest in years and was probably inoculated into the berries during the deep frost flooding in mid-August. This marked the third year in a row that shrinkage had been excessive and packing costs high.

Winter Flooding

Cold temperatures the middle

of the month brought winter flooding to new plantings and the raising of water in the ditches and over the surface on producing beds. Growers with short water supplies checked up early and had plugged outlets to be able to hold all water possible. It appeared everyone would have sufficient water for the flood unless extreme cold would develop and freeze up the winter flood water in the reservoirs. Early flooding was freezing down well and with the absence of snow the danger of water under the ice to cause oxygen deficiency lessened.

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Mass. Cranberry Station Plans Series Of Winter Seminars

Irving E. Demoranville, Extension Cranberry Specialist of the Massachusetts Cranberry Experiment Station, East Warham, Mass. has sent out notices to growers that the Station is planning a series of discussions on the practical aspects of growing cranberries. These meetings will be held during the winter and there will be 7 or 8 of them.

They will be held one after-

noon per week and each meeting will deal with one important phase of the growing of cranberries. Each meeting will be 1½ to 2 hours in length, and will be of a seminar type; that is, a member of the Station staff will present information on his particular field for part of the session and then the remainder of the meeting will be devoted to answering specific questions from those present.

Topics to be covered will be: sprinkler systems for frost and irrigation, flood and winter management, frost protection, fungus

and virus diseases, insects, weeds weather factors in frost and with comments on nematodes, fertilizer and varieties.

The Station feels these discussions will be helpful to newer bog owners and foremen, but everyone interested is invited to attend any or all of these sessions.

"Dee" points out these will not replace the cranberry club meetings.

Cranberry Meetings

The seminars or discussion meetings on the practical aspects of raising cranberries will be held in the auditorium at the Bourne Memorial Community Building, Main Street, Buzzards

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Bay. This is a large building located on the north side of Routes 6 and 28 (Main St.), to the east of the Buzzards Bay railroad station and business district. Meetings will begin **promptly at 1:30 P. M.** The following is the schedule of dates and topics to be discussed:

Wednesday, January 20

Historical and present views of flood management on cranberry bogs. Dr. C. E. Cross.

Wednesday, January 27

Sprinkler frost protection and irrigation systems (including pesticide dissemination). Prof. J. S. Norton.

Wednesday, February 3

Life histories and present controls of destructive insects on cranberry bogs. Prof. W. E. Tomlinson.

Wednesday, February 10

Fungus and virus diseases of cranberry vines with comments on the ectoparasitic nematodes of cranberry soils. Dr. B. M. Zuckerman.

Wednesday, February 24

Weeds of cranberry bogs: their propagation, spread, and control. Prof. I. E. Demoranville.

Wednesday, March 3

Weather factors in cranberry production with emphasis on frost and frost protection. Dr. C. E. Cross and Mr. G. B. Rounselle.

Wednesday, March 10

Cranberry varieties, fertilizer practices and cranberry pollination. Dr. C. E. Cross and Prof. I. E. Demoranville.

WESTERN HEMISPHERE EXPORTS UP — INCLUDING CRANBERRIES

The United States agricultural export to countries of the Western Hemisphere reached an all-time high of \$1,154 million during the fiscal year; 1964 — 15 percent above a year ago.

The leading exports were wheat and flour \$238 million; corn \$114 million; fruits and preparations (which would include U. S. Cranberries) \$128 million; vegetables and preparations \$86 million; soybeans, \$79 million; cotton \$63 million; dairy products \$53 million and meat and preparations \$54 million. (Foreign Agriculture)

Mass. Cranberry Station and Field Notes

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

Attend Meeting

Dr. Cross, Dr. Miller, and the Extension Specialist attended the New England Agricultural Chemicals Conference and Herbicide Workshop in Concord, New Hampshire, on December 9. This was an excellent meeting, with a variety of subjects covered. The principal speakers were Dr. C. C. Compton of Rutgers University, on "Pesticide Residues"; Denis Hayley of National Agricultural Chemicals Association, on "The Manufacturers Viewpoint"; and J. J. Jernigan of the Federal Extension Service, U.S.D.A., on "Extension's Educational Role in the Safe Use of Pesticides."

One of the speakers at the editor of "N.A.C. News and Pesticide Review," the official publication of the National Agricultural Chemicals Association. This is one of the magazines received regularly by the Cranberry Station. In reading the most recent issue, some interesting information was noted.

The following is from a talk by Dr. John A. Schnittker, Director of Agricultural Economics, U.S.D.A., as printed in the N.A.C. News and Pesticide Review.

"First, an efficient agriculture has provided us all with an abundant supply of low-cost food and fiber. U. S. consumers not only enjoy diversified diets of quality foods; they also spend the smallest percentage of their income for food of any country in the world."

"Fifteen years ago the average U. S. family spent 26 cents of each dollar of spendable income on food. Last year it was less than 19 cents. Next year it will be lower still."

"In the other developed countries of the world, consumers spend an appreciably higher proportion of their income for food. In the United Kingdom it is 29 percent, and in Russia about one-half. In developing countries such as India the proportion is even higher, including some countries in which three-fourths of all income goes for food."

"Much of the credit for this preferred and fortunate position of U. S. consumers today must go to the American farmer."

Weather

The month of December ended up slightly less than one degree a day below normal and continued the below normal temperature pattern which persisted since May. Total precipitation for the month was 6.03 inches or nearly 50 percent above nor-

mal at the Cranberry Station. We also had a total of 8.6 inches of snow which is also about 50 percent above normal for us.

For the year 1964 the temperature was a whopping -42.5 degrees, or slightly more than a degree a day below normal. The precipitation total was 41.93 inches which is about 5 inches less than the 30 year average at the Cranberry Station. Snowfall total was about double the 30 year average. Highest single temperature was 98 degrees on July 1 and lowest an even 0 on January 1. These are official temperatures as recorded in the weather shelter at the Station and there were undoubtedly both higher and lower temperatures in unsheltered areas. Largest single snowfall was 10.25 inches on January 13-14 and largest 24 hour precipitation 2.38 inches on October 17-18.

Club Meetings

The tentative dates for the 1965 cranberry club meetings are as follows:

Barnstable County:

Barnstable — Feb. 18, 7:30 p.m.

Barnstable — Mar. 18, 7:30 p.m.

Plymouth County:

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Kingston—Feb. 16, 7:30 p.m.
 Rochester—Feb. 17, 2:00 p.m.
 Kingston—Mar. 16, 7:30 p.m.
 Rochester—Mar. 17, 2:00 p.m.

U. S. Cranberry Crop For 1964 Was 1,292,800 Bbls. USDA Figures

Production of United States cranberries in 1964 totaled 1,292,800 barrels, up 3 percent from last year and 2 percent above average. A sharp increase

from 1963 in New Jersey's output, plus a moderate increase in Massachusetts and Wisconsin, more than offset a decline in production in Washington and Oregon. Massachusetts, with 650,000 barrels, was the leading producer and accounted for one-half the total of United States output.

The Massachusetts crop got off to a good start with a heavy bloom and favorable conditions for pollination. There was some

damage from spring frosts and by vines being under water for extended periods when the bogs were flooded for frost protection. Berries were well distributed deep down in the vines. Rainfall was below normal through most of the summer but late August rains along with cool weather added color and size. Harvest started about September 3, a few days earlier than usual. Harvested acreage at 11,700 is the same as last year. The yield per acre of 55.6 is up 1.2 barrels from 1963.

The New Jersey crop of 136,000 barrels was more than double last year's production and 39 percent larger than average. Wisconsin produced 405,000 barrels in 1964, up about one percent from last year. The set was average to heavy and berry sizes generally ranged from average to large. Production in Washington was 67,000 barrels down 40 percent from 1963 and 16 percent below average. Oregon's production was 34,000 barrels—14 percent less than last year's crop. The crop was smaller in the Northwest because of poor pollinating weather, poor set and a cool damp growing season.

As of December 1, total 1964 65 citrus production prospects were up 18 percent from last year with prospects for large crops of oranges, grapefruit, tangerines, and limes. Growers expect fewer lemons and tangelos. The orange crop is 22 percent larger than last year with much larger Florida output, but fewer oranges in California. Production of grapefruit is expected to be 19 percent greater than the 1963-64 crop.

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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of January, 1965 — Vol. 29, No. 9

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Published monthly at Wareham, Massachusetts. Subscriptions \$4.00, Foreign, \$5.00 per year.

FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

First Snowfall

The first snowfall of the winter occurred in the cranberry area, at least at Wareham on Sunday, December 6th. This followed several days of pelting rains.

Storm

The rain to the 7th of December totaled 2.11 inches as recorded at the Cranberry Station. There were varying amounts elsewhere, but it was a miserable storm with the cold rain. It stopped most work. The snowfall was recorded at the State Bog as $\frac{1}{2}$ inch, but there was more in upper Plymouth County and less on the Cape. The combined storms caused a number of auto accidents with several fatalities.

Temperature to that date

The temperature to the 7th was minus 12.

There was a pea soup fog over the weekend of December 13, which resulted in 17 fatalities in New England. The month had warmed up by the 14th and the temperature was plus 4 for the month to that date.

The same storm also brought

.59 inches of needed rain as recorded at the Mass. State Bog.

There was the worst snow storm of the year on December 19 when there was a total of 5.1 inches of snow as recorded at the State Bog. Rainfall for the same storm was recorded as .045.

Christmas turned out to be a "green" one in the cranberry area with only a few remnants of snow left on the ground. The weather was mild and foggy. It was reported as the warmest Christmas since 1889.

There were heavy storms on the 26th and the 27th of December, with lashing winds. This storm brought 2.43 inches of rain as recorded at the Cranberry Station.

Rainfall and Snow Up for Dec.

Total rainfall for December as

recorded at Mass. Cranberry Station was 6.03, the normal average being 3.00 inches. Snow totaled 8.6 inches.

Month Slightly Colder

The month of December was a minus 26 or a little less than a degree a day.

January

The month of January started cold, with blustery winds and quite a bit of snow and ice on the ground.

WISCONSIN

The cranberry growing areas of the state ended the year in typical Wisconsin weather with a snow cover of from six inches in the south to almost a foot in the north. Reservoirs were all frozen over with about twelve to sixteen inches of ice

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reported. The month averaged about one degree below normal in precipitation and about normal to slightly above normal in precipitation. Precipitation was both in the form of snow and rain. Coldest readings were in the northwest on the 14th when readings of minus 24 degrees were reported and warmest was 40 degrees in the southeast on the 11th. All in all it was a rather normal month with no records broken or seriously threatened. The outlook for January calls for near normal in both temperature and rainfall.

Winter Sanding

The early freeze down of the winter floods enabled some marshes in the south to start sanding operations early in December and some were hopeful of completing their work by Christmas. This would be an early date, brought about by early cold and lack of snow. Most areas plan to do some sanding and considerable Casoron treated areas will be sanded, especially on beds which contained heavy stands of perennial grasses.

Resume of the Year

Looking back on the year's

growing season there were several highlights which affected the state crop both good and bad. The spring was early and growth got off to an early start. May temperatures of 8 degrees above normal brought some hooking. Continued warm weather in June fostered growth. The month also brought damaging hail and frost, the hail on the 20th and the frost on the 15th. The frost was most damaging in the south and estimates ran as much as 75,000 barrels lost. The temperatures were above normal during the setting season, but precipitation was below and much irrigation was necessary. Berries set well and size was good. Keeping quality was poor primarily due to the frost flooding the middle of August. Harvest was completed in record time with ideal weather conditions. Those marshes without frost or hail damage came up with good crops with many in the 175-200 bbl. range. At the end of the harvest, growers were feeling more optimistic and were making plans for next year with much enthusiasm.

NEW JERSEY

Weather for December and for Year 1964

December was quite mild and wet. Precipitation totaled 5.28 inches, about 2.25 more than normal. The temperature averaged 37.3°, almost 2° warmer than normal. There were 10 days during which the maximum was over 50°F.; 3 of these were above 60° and 1, Christmas Day, was 70°F.

A Dry Year

In summary, 1964 was cooler and drier than normal. It will be remembered as a year of severe drought. For 7 consecutive months, May through November, the precipitation was below normal. May, with only 0.36 of rain, was the driest May and one of the driest ever recorded for any month. August, with 0.90 inch was the second driest for this month. The total rainfall throughout the important growing months May through September was only 11.90 inches, or only about one-half of normal. Only 1957, when rainfall from May-September was only 8.83, was drier for this period during the past 35 years.

The total rainfall for 1964 was 36.01 inches, 7.15 inches less than normal. This was the fifth driest year in the 35-year weather recording history at Pemberton. Drier ones were 1930, with only 33.24 inches; 1955, with only 34.04 inches; 1957, with 34.91 inches; and 1963, which had 35.11 inches.

A Cool Year

The year was cooler than normal. Every month but March, November, and December averaged cooler than usual. The greatest departure from normal occurred in August and October. In both of these months new records were set for the lowest average temperature. However, extremely hot days were no notably more rare in 1964. There were 26 days in the 90s compared to the average of 28 per year.

Jersey Cranberry Crop Up

The dry weather and the coolness were mixed blessings for cranberry growers. The New

Continued on page 18

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MAYNARD O. HOLMES HAS THE IMPORTANT JOB OF EASTERN PRODUCTION MGR. OF OCEAN SPRAY

He has been familiar with Cranberries all his life — In season he has 200 men working for him, and about 275 women — Has enviable World War II Record

by
Clarence J. Hall

The production of any item, including cranberries in fresh or processed form is, obviously necessary, in this case referring to mechanical production. The vital job of producing the end product of cranberry growing for Ocean Spray members falls on Maynard O. Holmes, Ocean Spray Cranberries, Inc. Production Manager East. That is Massachusetts and Canada. His counterpart is Marcus Havey of North Chicago, who is in charge of production for Wisconsin, the West Coast and also, it happens, New Jersey.

Responsible Position

He is responsible for the smooth production of 36 percent of total Ocean Spray production of canned sauce, 50 percent of total packing of fresh berries, 90 percent of cranberry juice cocktail, or 65 percent of all berries received by Ocean Spray. For example, in the big production year of 1962, Ocean Spray handled about 625,000 barrels of production in Massachusetts. About 50 percent of total Ocean Spray fresh fruit pack comes from Massachusetts, and the bulk of the rest from Wisconsin.

"Natural for Cranberry Work"

Maynard, as it happens, is a "natural" for cranberry work. He is not only is a small grower himself (so far) but is a third generation to be in cranberries. This means that he has known cranberries since his earliest recollection. As a boy and youth he picked cranberries, dug weeds and did other jobs, including summer work on his father's bog while in high school. He also has built and rebuilt bogs for himself and others and has operated cranberry bog service for others.

His grandfather was the late Solomon Holmes of Plymouth, who had a bog of 4 acres in 1887 at Billington Sea in Plymouth. His father, also named Solomon had a total of 8 acres at Billington Sea and at Ellenville.

Maynard was born in Plymouth January 24, 1907, went to the

schools of that historic town and was graduated from Plymouth High. He was interested in forestry and he took an extension service course in that subject at a private school on West Newton Street in Boston. With this training and his experience in forestry, which at that time was just coming to be of general interest he entered the employ of the late Henry T. Thayer who had 80 acres of bog in Wareham and Plymouth. This property was later bought by the late Erving C. Hammond of Onset, a leading Massachusetts grower of some years ago. Maynard's uncle,

Ernest Holmes also worked for Mr. Thayer as foreman and Maynard worked under him and as foreman on some operations.

He also was superintendent of the Plymouth Town Forest until 1943, working for the Thayer interests for 7 years. He then went into the bog building and rebuilding and maintenance business for himself. He built bog for Fred Paty in Plymouth, Ben and Al Raymond in Bourne, this included the rebuilding of an old section of bog and the building of new for the large property now owned by Elmer E. Raymond, Jr., Ocean Spray director, at Great Herring Pond.

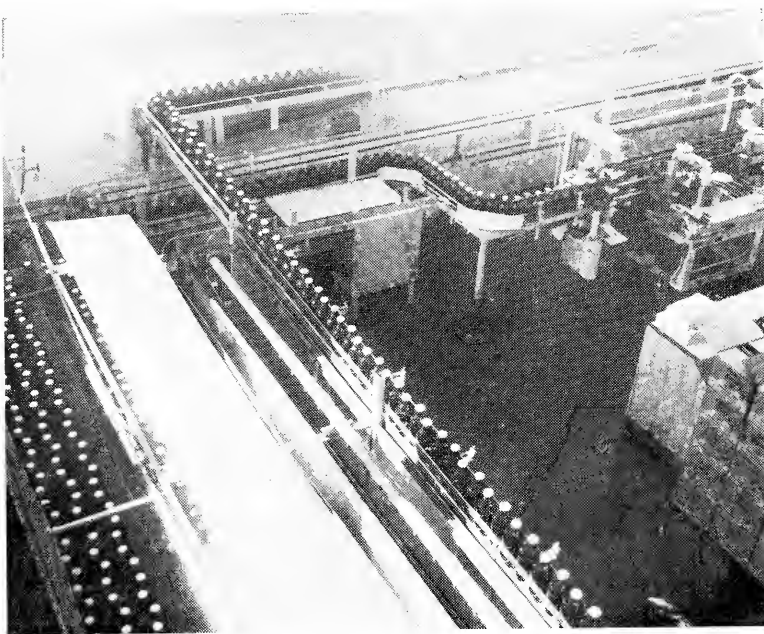
His War Record

His cranberry activities were then cut short by World War II, in which he chalked up an enviable record of service. In 1943 he entered the 168th Combat Engineer Group of the U. S. Army. In February of that year he went overseas after receiving his basic training at Ft. Belvoir, Virginia. He took part in the D-Day invasion of France in June 1944 landing at Normandy Beach.



Packing a case of Ocean Spray Cranberry Juice Cocktail.

(Photo by The Hudson Studio, Brockton, Mass.)

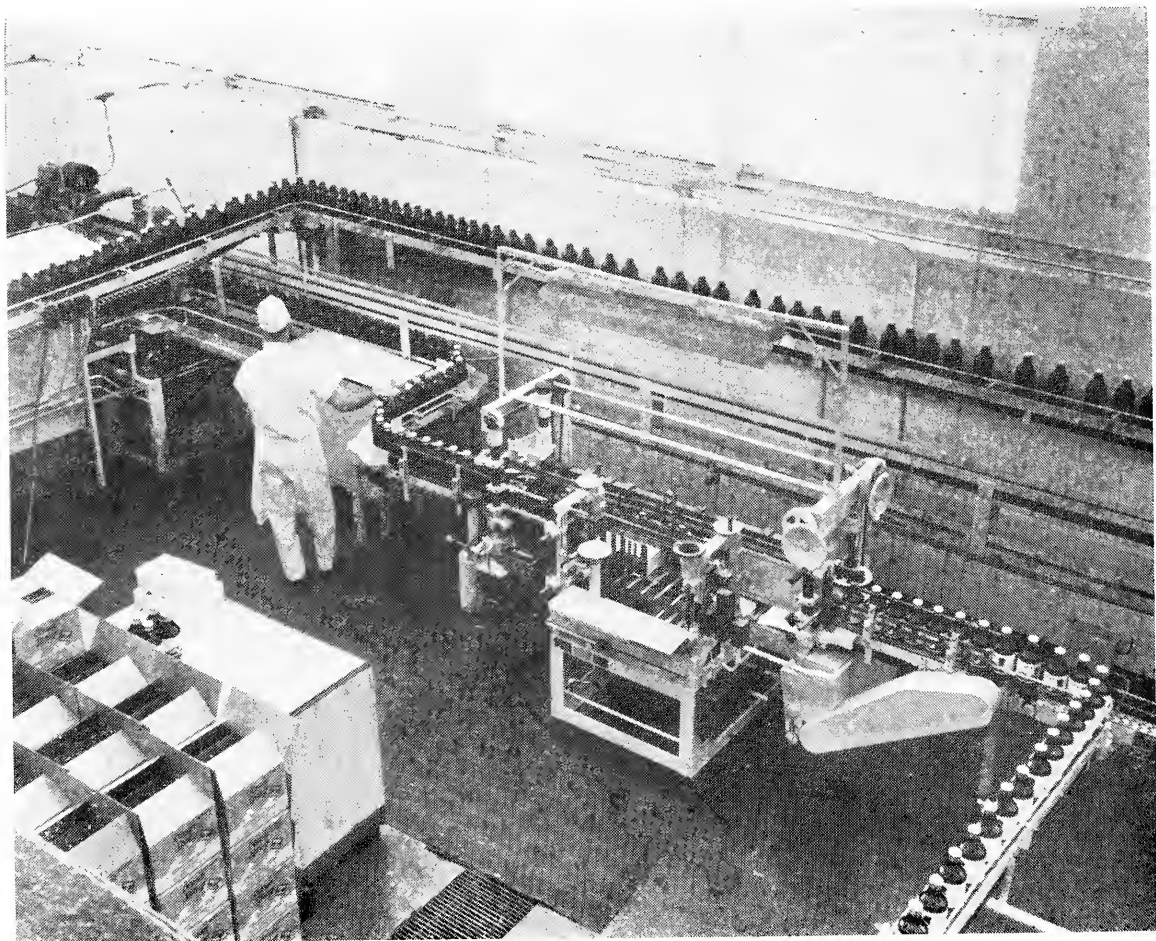


Bottling line of cocktail at Ocean Spray.

(Photo by The Hudson Studio, Brockton, Mass.)

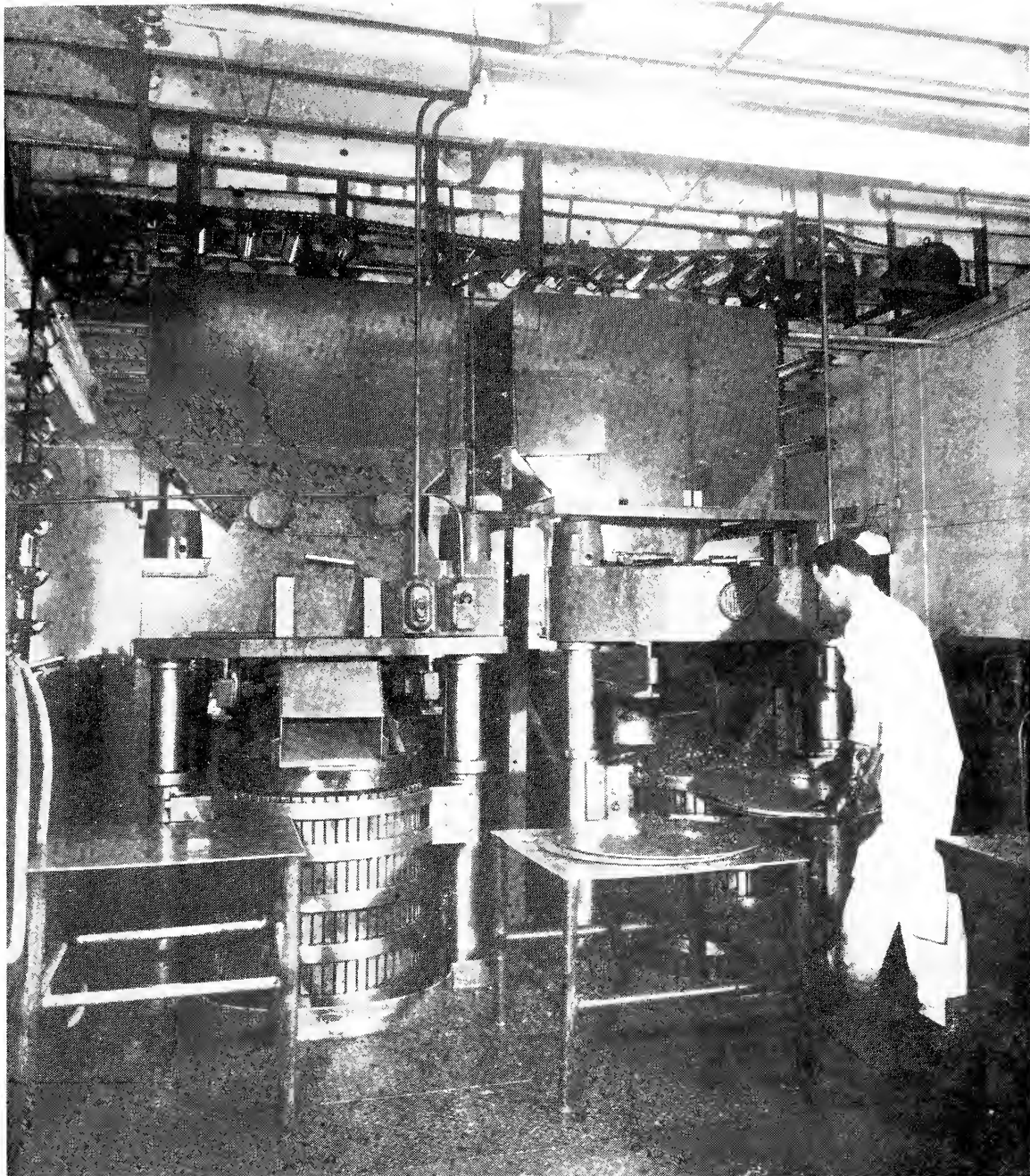
He was later with General Patton in his historic tank corps advance through France. He was thus in the Battle of Normandy, Northern France and Ardennes Forest. He was in an assault crossing of the Rhine River and received five pieces of shrapnel in his back, hospitalizing him for two months. Later he served in Belgium and Czecho-Slovakia. He received the Bronze Star for gallantry, and for his wounds, the Purple Heart. He had the rating of Sergeant.

He was returned to Camp Devons after hostilities ended on August 26, 1945 and was mustered out two days later. He had intended to take a rest after having been at war, but he received, he says, three job offers one of which was from Ocean Spray or then National Cranberry Association. Within two days of his discharge he had chosen the NCA job and was at work.



Cocktail Bottling operation at Ocean Spray.

(Photo by The Hudson Studio, Brockton, Mass.)



New cocktail press on left and the old on right.

(Photo by The Hudson Studio, Brockton, Mass.)

His first duties were being in charge of growers' service under Ferris Waite. Mr. Waite was operating the Cranberry Trading Post (growers' supplies) at Plymouth which the cooperative maintained. He also built and rebuilt bog for NCA members, this totalling about 100 acres. One of these bogs was the 11 acre property now owned by Mrs. Hope Ingersoll at Head-of-Bay, Buz-

zards Bay. This work gave him an even broader understanding of cranberry growing in general and experience in the operations of the big cooperative.

In 1951 he was given charge of the fresh berry operations of the Ocean Spray plant at Onset. In 1954 he was placed in charge of the processing plant at Hanson, with the title of Plant Manager.

Elevated In 1956

In 1956 he was elevated to his present position as Production Manager, East. This includes supervision of the Ocean Spray plant at St. John, near Montreal, Canada. He has charge of 90 percent of Ocean Spray Canadian production. He makes several trips to the St. John plant each fall and at other times to supervise these foreign operations.

In 1962 when Ocean Spray had its plant improvement plan in operation it was Mr. Holmes who had direct supervision and contact with contractors doing the actual work. These improvements included a multi-storage building, which is combination freezer and temperature-controlled cooler at Hanson, and also improvements increasing the output of the popular Ocean Spray Cranberry juice there. Now two lines can be operated at once, turning out pints and quarts or pints and gallons, total capacity, 6,000 cases a day.

Growers who attend the annual Ocean Spray meeting at Hanson and other such gatherings know that when information about production is wanted, it is Mr. Maynard who is called upon.

He has been to all the Ocean Spray plants, but has never visited the Wisconsin growing area. At present he has 200 men under him and there are about 275 women screeners and packers.

Work Split

In October of 1964, he requested of Mr. Bob Lucas, Director of Operations that the work load of Production Manager for Massachusetts be split, as the processed which includes cocktail, was a full-time job for one person and the fresh, full-time job.

The request was granted and a week later, Mr. Spencer Davis was put in charge of processing for Massachusetts with Mr. Holmes being in charge of all fresh operations, which include Hanson, Onset, Harwich and all freezers. This means handling of over 50 percent of the National crop.

With headquarters at Onset, Mr. Holmes will be in charge of all receiving, handling, screening and packing of fresh fruit in Massachusetts—this will involve over 500,000 barrels of berries per year. He will also be in charge of bog inspection and grower relation work.

His Cranberry Growing

As to his own cranberry growing this is still on a small scale. He had an acre and a quarter at Manomet, which is old bog he had rebuilt and is not in full production yet. This is a part of a 70-acre tract on Beaver Dam

Road, across from the big cranberry property of Harrison Goddard and now owned by Robert Briggs. Maynard says there are 30 acres of this which, if he ever desired to do so, can very readily be made into good bog. He recently sold his four acre bog at Billington Sea to Colburn C. Woods, Jr. He also has 3 acres of bearing bog and has just finished making 2 acres of new bog ready to set vines in Manomet. He hopes to put in two acres per year.

Maynard is married to the former Ruth A. Haley of Lynn, Mass. and they live in Manomet. He is a member of the Manomet Village Club, a civic improvement association, and was president of it for three years. He is a member of the South Shore Cranberry Club and of Cape Cod Cranberry Growers' Association. He is a member of the Second Congregational Church of Manomet. He belongs to the Veterans of Foreign Wars.

Other Activities

He is a member of the Plymouth Rod and Gun Club as he is an ardent hunter and fisherman as is Mrs. Holmes, particularly in the sport of salmon fishing. "Whenever we get a chance we go on a fishing trip," he says. They fish every year they can at Grand Lake in New Brunswick; at Moosehead in Maine. They have fished in the Pacific Northwest where there is the famous salmon run. Maynard has landed a 21 pound salmon. Ruth is just as keen on fishing as he is, Maynard avers.

Ocean Spray Sold Out December 21

Under date of December 21, 1964 Ocean Spray sent out to the trade a notice it was completely sold out of all cranberries except for a limited supply in Massachusetts which would be shipped out by the first of 1965. All other areas were completely shipped out. The notice announced sales of Ocean Spray fresh cranberries topped all previous records.

Anthony R. DeMarco Killed in N. J. Crash

Anthony R. DeMarco, 60, prominent cranberry and blueberry grower of Hammonton, New Jersey was killed New Year's day at 5 p.m. in a head-on auto crash in Tabernacle township. The crash also proved fatal to two others.

Mr. DeMarco, who has been featured in this magazine, was owner of the Chatsworth Cranberry Company and an Atlantic County freeholder. His car was in a head-on crash with a pick-up truck.

According to a police report the north-bound truck swerved into the opposite lane and struck the DeMarco car which burst into flames. The medical examiner said the death of Mr. DeMarco was due to hemorrhaging from a ruptured artery and jugular vein. The victim was burned beyond recognition.

The truck driver, Bernhard Koelbl, Jr., 26 and his wife Helen were hospitalized with multiple injuries. The truck driver died later.

Mr. DeMarco was a member of the American Cranberry Marketing Committee.

A Tribute to Anthony R. DeMarco

The year 1964 ended on a very sad note for the cranberry industry in New Jersey. Anthony R. DeMarco met with sudden death in an auto accident on New Year's Eve. He was returning home to Hammonton from his cranberry bogs at Chatsworth when the tragedy occurred.

Tony was a leader of the cranberry industry in New Jersey. He was a large robust man of high spirit. He was much respected and admired for his friendliness, his acumen, his cooperativeness, and his competence. He had great versatility and enjoyed successful careers as a pharmacist, businessman, politician and cranberry grower. He was a former mayor of Hammonton, a freeholder of Atlantic

County, past president of the American Cranberry Growers' Association and, at the time of his death, was representing Ocean Spray as the New Jersey representative on the Cranberry Marketing Order Committee.

Outside of his family Tony's main interest in life was his cranberry bogs. He was the son of a trusted cranberry harvest "padrone" (supervisor) in the days of the large hand harvesting and scooping crews. As a boy he did odd jobs around cranberry bogs and caught the cranberry fever which he never lost. From these humble beginnings Tony DeMarco worked his way up to become one of the most successful cranberry growers in New Jersey.

Going on a tour of his cranberry property with Tony was a delightful experience. He spouted out stories rich in cranberry folklore. He could recall in detail the planting dates, harvest records, weed and rot problems, etc., of almost every bog. He was a keen observer and conducted much experimentation of his own, quickly adapting new ideas and practices after he had demonstrated their practicability to his own satisfaction. Paradoxically he liked to hold on to old established methods; for instance, he was one of the very few still using bone meal fertilizer and reflows for insect control.

Tony liked being on the wide expanses of his cranberry bogs. He was imbued perhaps with somewhat the same mystic feeling about cranberry bogs that old sailors have about the ocean. His interest in cranberries never waned, it could only grow. He instilled this zeal in his supervisor, Earl Kerchner, who had no previous experience with cranberries when he was first employed. Under Tony's tutelage Earl has become an extremely capable and knowledgeable cranberry grower.

Tony was a successful and widely known buyer and shipper of fruit and produce and had excellent relations with the Tru-Blu Blueberry Cooperative which

he served as broker and trucker in several large cities. He also headed the DeMarco Trucking Co., Inc., with headquarters in Hammonton, N. J. He was busy enough for one normal man in these enterprises yet almost always managed to be on hand to help on the sleepless frosty night chores.

Of all his accomplishments, Tony's finest and the one of which he was most proud was the rearing of a wonderful family. His partner in this was the former Gladys Alloway. His two sons, Mark A. and J. Garfield, and his daughter, Anna Lynn, have reputations as excellent scholars. He is also survived by three brothers and two sisters.

Philip E. Marucci
Cranberry-Blueberry Station

CRANBERRY INSTITUTE MEETS - ELECTS

**President Orrin G. Colley
Makes His Annual Report —
Prospects for 1965
Encouraging**

At the annual meeting of the members of the Cranberry Institute held in Boston, January 5 the incumbent slate of directors was re-elected for the fiscal year 1965. They are Leon April, Bridgeton, New Jersey, Gilbert T. Beaton, Buzzards Bay, Mass., Orrin G. Colley, Duxbury, Mass., George C. P. Olsson, Plymouth, Mass., Behrend G. Pannkuk, Wisconsin Rapids, Wisconsin.

Following the member's meeting the board held an organization meeting, re-electing the following officers: president, Orrin G. Colley, vice president, Leon April, secretary - treasurer, Gilbert T. Beaton.

The following is the report of President Colley:

Export Promotion

Overseas market development efforts during 1964 have been carried out in the United Kingdom. A variety of techniques have been used to stimulate the interest of trade groups and con-

sumers in American cranberries. One of the most successful has involved participation in exhibits sponsored by the U.S. Trade Center. These exhibits have been held in several areas of the United Kingdom and untold numbers of British tradesmen and consumers have sampled cranberry products with gratifying results. Many familiar techniques have been used in consumer promotion programs. These include, publicity releases to the press, point of sale displays and posters, the distribution of literature and samples, special showings of the cranberry film and, in a few cases paid advertising.

The costs of establishing a position in the British market, in terms of time and money is high particularly as it applies to a product as unknown and unique as American cranberries and dramatic results cannot be expected quickly. But, in the U.S.A. it has taken many years and a large amount of money to develop a sizeable market for cranberry juice cocktail, now one of the industry's most valuable products.

Promotional effort in other European countries has been limited, but surveys and some testing activities are being conducted to determine the marketing future for cranberries in that area. The strongest influence on European customers will come from due regard for details, such as the use of local languages on the labels, recipes and promotional materials; use of the metric system; credit terms to conform to European customs and servicing.

Interpretation and adherence to government procedures particularly as they pertain to the use of FAS funds for certain promotional activities has been somewhat of a headache to us. The heart of the problem is not just the government penchant for red tape. It is in the main from trying to avoid the too close establishment of project activities to a brand promotion when for the most part the overseas op-

erations are supported with availability of product and resources of only one U.S. supplier.

In the main, however, our decisions on what needs to be done, the resources industry groups can provide and the development of a plan of work will determine what will produce the greatest total market.

Industry Growth

1964 has seen a continued improvement in sales and returns per barrel, of values of cranberry producing properties and in particular a return of confidence in the future of our industry. Thus, with the period of uncertainty behind us, continued growth will be the keynote in all planning.

Industry growers have been making substantial investments in production modernization and production capacity will most certainly increase in the years ahead.

Large scale investments by marketing organizations in improved plant facilities, new product development and in advertising and merchandising programs reflect a commitment to broaden the operating and marketing opportunities wherever they are to be found.

We must also continue to reach beyond the markets of today and develop new markets for tomorrow. Surprising as it may seem, agricultural exports are more important to U. S. farmers and to the entire nation now than at anytime in history. They provide markets for over one-sixth of the total farm output of the United States. These exports strengthen farm prices and improve farm incomes. They provide jobs for about one million farm workers and many thousands in towns and cities, who produce and help market things farmers buy as well as those who transport, store, process and otherwise service the agricultural export industry.

The market for U. S. cranberries is not limited to 190 million Americans but can grow to

include the several hundred million people who live in the relevantly more prosperous nations of the Free World. Our industry's skill in marketing is sufficient to meet any challenge abroad.

The Cranberry Institute through its cooperative program with the Foreign Agricultural Service of the U. S. Department of Agriculture has an important role in helping this industry to expand exports.

This bid for a share of the foreign market, if adequately carried out and supported by the industry, can be an insurance policy for the future betterment and marketing of U. S. cranberries.

Varying Activities

During the year we have attended meetings of international organizations concerned with agricultural products, trade policy, economic development and market promotion. Close liaison has been maintained with the U. S. Department of Agriculture. Calls were made on members of the U. S. Congress. Visits with growers, handlers and processors have been valuable means of keeping them informed on all phases of the Institute program. We have also worked with other industry groups on matters of joint interest.

This brings my grateful thanks to those who have been directly concerned with Institute affairs during 1964 and a warm appreciation for the continued interest and support of so many other people both in and outside the industry.

N. J. 1964 Blueberry Crop Is Up

New Jersey's 1964 blueberry crop according to the New Jersey Reporting Service totaled 1,782,000 trays, each tray holding 12 pints. This is a 25 percent increase over the small 1963 crop and 6 percent more than the 1958-62 average. Blueberry output in 1964 was exceeded only by the record high of 1960 when 2,310,000 trays were pro-

duced.

Average price received by growers for all 1964 crop berries (both fresh market and processing) was \$2.95 per tray, 10 cents below the preceding year, but 21 cents above the five-year average. Total value of the 1964 crop was \$5,257,000, up 21 percent from a year earlier and 15 percent above the 1958-62 average.

Bandon Hit By The Great Pacific Storm Just Prior To Christmas

Winter blasted its way to Bandon, heart of the Oregon cranberry growing area amidst a storm of high winds and rain which added the rainfall up to 5.41 inches in a four-day period. Wind with gusts up to 60 knots were reported between Cape Blanco and Hauser stations. They blew down portions of a new motel under construction at Bandon and blew in a window at a grocery store.

The lower Coquille river on which Bandon is situated looked like the open ocean.

The only death which can be attributed to the storm was that of a 12-year old boy at Coos Bay. He was electrocuted in his home just south of Coos Bay, after flood waters entered the house.

The storm was classified by those of the area as the worst in many years.

HEAVY SNOW WASHINGTON CRANBERRY AREA

Southwestern Washington, at Long Beach experienced more snow in late December than it has in the past 15 years. There was a very heavy snow which threatened both telephone and power lines, although both services were maintained except for 20 minutes of power loss in Oysterville.

ADVERTISING

RATES ON REQUEST

The 1964 Cranberry Season In Wisconsin

by

Dr. Geo. L. Peltier
Cranberry Consultant

Cold arctic air moved into Wisconsin December 13, 1963 and for the remainder of December it was the longest and coldest period on record for the month. In fact, the lowest temperatures of the entire winter were recorded. The rest of the winter can be classified as mild and dry with little snow, conditions ideal for sanding throughout the bog areas.

By mid-April most of the winter floods were removed and as soon as the beds were dry, fertilizers were applied. The threat of a water shortage remained critical going into the growing season.

May was the fifth warmest month on record with occasional temperatures in the high eighties, and fortunately with above normal precipitation (4.59 inches at Cranmoor). May was a good growing month.

In contrast, the first two weeks in June were below normal with bog temperatures in the twenties on six nights (Cranmoor), culminating on the night of June 15 when a rapidly moving cold front dropped temperatures to 15° in a period of 20 minutes before midnight, which caught too many growers before the bogs were flooded. Just how fast the cold air moved in can be judged by the fact that the maximum on June 15 at Cranmoor was above 80°, while the bog temperature was in the 40's. On the morning of the 16th the bog temperature was 23°F.

While it is impossible to estimate the exact amount of frost damage, it did have a profound influence on the total crop yield. June was a dry month with below normal rainfall.

July was a warm month with temperatures in the 90's or high 80's on 14 days, and extending into the first week of August for another six days. Precipitation, while extremely spotty, was near normal. So July favored a good set of berries. Fortunately no hail occurred nor was frost

protection necessary. The rest of August was on the cold side, with little or no rain. Too, bog temperatures in the 20's occurred on five nights, necessitating flooding with the reservoirs nearly depleted.

The welcome rains during September (Cranmoor 5.21 inches — 18 rainy days) relieved in part the extreme water shortage, although on eight nights bog temperatures in the 20's were recorded which did not help the perilous water situation.

This same situation extended to mid-October with a low of 9°F registered at Cranmoor on October 10. Fortunately, due to the threat of water shortage, harvesting started in early September and most of the growers completed harvest by the second week of the month. From this point on through mid-November, temperatures were above normal, so that shrinkage in storage was high.

Most of the bogs were frozen in by mid-December, earlier than usual.

Insect losses were held to a minimum in 1964 on the majority of the bogs. Total losses to insects were less than 1%, a remarkable change from a decade ago when a 50% loss from fruitworms were not uncommon, while the familiar "brown out" caused by the black-headed fireworm seldom is observed now.

Where three applications of fungicide are applied, leaf and stem diseases are held down. When the third application is applied the first week of August the incidence of the fruit spot can be markedly decreased. The above normal temperatures during the storage season was conducive to the rapid development of end and back rot resulting in above normal shrinkage losses. The time is at hand when all berries for the fresh market should be held where exact temperature and humidity controls can be maintained.

Hail occurred early, off and on, and extended into August. During the week of May 8, accompanied by a series of severe storms, high

winds, and a few tornados, hail fell on three separate occasions over a wide area in Cranmoor down to the Warrens area with hail stones measuring 1/4 to 3/4 inches in diameter, with some damage to the buds and new growth in localized areas. In mid-June a very severe hail storm occurred in Jackson County which resulted in a complete loss to the strawberries ready for harvest. This storm also caused varying losses ranging from 10 to 90% to the cranberry bogs extending from City Point to the Warrens area. Two hail storms occurred the third week of August in the Biron area, with varying damage to the berries.

Casoron became available this fall, and after harvest, many growers put it on from one or two beds to the entire acreage. Let us hope that the Casoron was applied in the proper amounts and more important, distributed evenly over the beds in order to avoid the experiences of 1963. With the widespread useage of Casoron under widely varying ecological conditions the value of this herbicide can better be evaluated so far as its effectiveness as a weed killer and its effect on the vines.

Owing to the extended drought from March 1962 to the present, many growers in their anxiety over available water created a surge for installation of sprinklers. Installations varied from several acres to complete coverage of the entire bog. Motorized pumps are powered by electricity, gasoline or propane gas. The year will see more installations if the drought continues. Too, sprinklers create a problem in water management, where the water released by one grower was reused by other growers. Since the ratio of water usage of 10:1 with sprinklers less water will be released to others, which means that the last users will be denied the same amounts as in the past.

The installation of sprinkler systems was the outstanding development in Wisconsin in 1964. Incidentally, interest in wind machines has waned with the advent

of the sprinkler systems.

A method of removing bad berries, adapted from the canning industry, i.e., the floatation process, was tested experimentally this fall by Ocean Spray. From observations and discussions with growers the main disadvantage of this process is the bruising of the berries to such an extent that they do not hold up in the fresh market. More extended tests of this method to reduce the amount and extent of bruising must be made.

All in all, in spite of the drought, hail storms, and the fast moving cold front that caught some of the growers without frost protection, the yield of over 400,000 barrels from 4,200 acres can be considered good. Too, the shipping season to the fresh market ended shortly after Thanksgiving so that there remained a shortage of quality berries for the late market. For the second consecutive year the "bug-a-boo" of a recurring surplus has been dissipated.

OCEAN SPRAY MEETS ON A NOTE OF HIGH OPTIMISM

The 34th annual meeting of Ocean Spray Cranberries, Inc. was held at the Wareham Town Hall, January 13th with a large attendance. President George C. P. Olsson presided and his report in full follows at the end of this article. The meeting was held on a high note of optimism. Directors were elected as follows:

Victor F. Adams, Osterville, Mass.; Alfred E. Bark, Wisconsin Rapids, Wisconsin; Norman I. Brateng, Long Beach, Washington; Frank P. Crandon, Acushnet, Mass.; William E. Crowell, Dennis, Mass.; John E. Cutts, Vincentown, N. J.; Thomas B. Darlington, New Lisbon, N. J.; Donald S. Duckart, Wisconsin Rapids, Wisconsin; David W. Eldredge, South Carver, Mass.; Lester M. Gordon, Tomah, Wisconsin; Carroll D. Griffin, South Carver, Mass.; Richard A. Heleen, Middleboro, Mass.; Tony

Jonjak, Hayward, Wisconsin; Russell Makepeace, Wareham, Mass.; James Olson, Bandon, Oregon; George C. P. Olsson, Plymouth, Mass.; Harold D. Gross, Manitowish Waters, Wisconsin; Cecil Richards, Grayland, Washington; Elmer E. Raymond, Jr., Braintree, Mass.; Alvin R. Reid, Hanson, Mass.; Miss Ellen Stillman, Hanson, Mass.; Chester W. Robbins, Onset, Mass.; Marcus M. Urann, South Duxbury, Mass.

Executive Vice President Edward Gelsthorpe spoke encouragingly to the stockholders. He said Ocean Spray had spent a million dollars in promoting sales of juice cocktail. He reminded his audience that when you introduce a new product you do not make money. "When the new product is established you do make money."

He said the people at staff level who work for the growers are responsible for the increase in business.

He referred to the Cranberry House at Onset and said he hoped in the next few years to open more.

Cranberry-Apple, Orange Relish sales are going up he reported.

"Our frozen bread is an increasing development. We must plan ahead and spend money. Demands are made for growers to get more money. We have lost members to competitors in the past when we were growing and when members felt their returns should rise. Let us stay together."

In addition to Mr. Olsson's address, Chester W. Robbins spoke, also Counsel John R. Quarles, Esq. There followed a general discussion from the floor.

Cranberry products were on display for the stockholders.

The meeting lasted about two hours, and immediately after the general meeting the directors met.

MRS. GUIDO FUNKE SPEAKS

Mrs. Guido Funke of Long Beach, Washington at a meeting of the Ilwaco-Long Beach Kiwanis described the advent candle wreath and her childhood days during Yuletide season when she lived in Germany.

Japan Growing; Buying More Fruit

(Editor's Note: This could include American Cranberries, but there is no indication yet that any have been sent half way around the world to the Oriental Country.)

Japan has the most rapidly growing economy in the world. Between 1950 and 1961 the Gross National Product rose from about \$15 billion to \$41 billion. Income rose too, and the result has been a radical change in the life of the Japanese people which is reflected partly in the food they are eating.

Today the average Japanese has a more varied diet. He still prefers rice, but he also eats meat, fruit, and vegetables—and he particularly likes fruit.

The Japanese are growing more of their own fruit. In recent years, most of the major fruit crops have increased about half. Young orchards will add further to output in the near future.

Fruit, however, takes land and Japanese plantings are small; consequently there has been increased demand for U. S. fruit in the bigger cities. U. S. lemons and fresh pineapple are now allowed to enter freely; other fruits face restrictions. Lemons are the biggest item; however, Hawaiian pineapple meets 40 to 45 percent of total demand. U. S. grapefruit is sold mostly in gift baskets or through Western-style hotels.

American canned fruit is also finding a market in Japan, larger for some items than for others. Japanese packers must pay high prices for raw fruit, so U. S. imports are competitively priced, around the world. Also, they may even after traveling halfway be preferred: U. S. canned yellow peaches sell at a premium over exotic Japanese white.

A new FAS publication, "Factors Affecting U. S. Fruit Markets in Japan," FAS M-161, gives details concerning both the Japanese industry and the import trade.



A typical cranberry-picking crew such as was employed by Charles Dexter McFarlin in his Coos County, Oregon Meadow, back in the last century.

(Photo by Emil R. Peterson, North Bend, Ore.)

Concerning Pioneer Cranberry History In Oregon

The "Western World," the weekly newspaper of Bandon, Oregon, cranberry center in that state, recently had a full-page spread with many photographs of cranberry scenes. The article began "The cranberry, like the covered wagon is part of the picturesque tradition of Pioneer

Days in the Northwest just as it is part of the Pilgrim traditions in the East.

"This unique American fruit is mentioned in the diaries kept by the 28 men in the historic expedition led by Lewis and Clark in 1804-1806 to explore the Northwest Territory. When the explorers reached the lower Columbia River, near the coast of what is now Oregon, they bought cranberries growing wild on the Clatsop plain, from the In-

dians. The explorers spent the winter in this area, now one of the cranberry growing regions of Oregon (Clatsop County).

"Later in Oregon's history, homesteaders on the Clatsop Plain gathered the wild fruit for their own use and to ship to settlers in California."

(The rest of the article deals with the cranberry industry and especially the harvest and would be an old story to the growers who read Cranberries Magazine.)

Report of the President George C. P. Olsson

At the last Annual Meeting of Stockholders, I opened my remarks by stating that for the first time I felt optimistic about the future of the cranberry business and in particular about our own cooperative, Ocean Spray Cranberries, Inc.

I feel now that my optimism has been justified. The year just completed has been the best in the history of our company.

For the third year in a row

the pool has been closed in a year or less. The 1963 pool closed on September 15, 1964, involving a period of eleven months and one week.

Sales have been the largest in history, reaching a total of 8,519,273 converted cases of all products.

Cranberry Juice Cocktail continued to show a healthy increase.

Cranberry-Orange Relish, introduced for the first time in its present form, has had an excellent reception in the marketplace, although national advertising for this product does not begin until the first of next week.

In the new products field, great progress has been made beyond the items mentioned above, and I am sure that you will hear much more in detail about this subject from our General Manager, Ed Gelsthorpe.

Let us review some of the reasons for our present position:

First, we have come from a surplus position to a position where supply and demand are substantially in balance. This has been brought about with the help of the Marketing Order, which, in 1962 enabled the industry to withhold approximately 150,000 barrels from the market, and the

purchase by the United States Department of Agriculture for its School Lunch Program from the 1961, 1962, and 1963 pools a total of over 265,000 barrels of cranberries.

While we are speaking of the Marketing Order, the Marketing Order Committee met in August of 1964 and on the basis of estimates of the 1964 crop, no set aside was voted.

We have changed our fiscal year to conform more nearly with our pool year. Our present fiscal year ends on August 31 of each year.

It is our hope that beginning with this pool year, each pool can be closed on August 31 and that each pool will be open not more than twelve months.

Although we still need more modern plant facilities, particularly in Massachusetts, the recent improvements in plant capacity such as warehousing in Massachusetts, New Jersey, and North Chicago, additional freezer capacity in Massachusetts, New Jersey and North Chicago, plus a new

juice line in North Chicago, all have helped us to meet the increasing demand for our products, old and new.

The modernization of the New Jersey plant, which will be completed early this fall, will contain a cocktail line which should help ease the pressure on the existing cocktail production facilities.

We are continuing our support of the Cranberry Institute and its principle responsibility at this time is to co-ordinate foreign markets through the Foreign Agricultural Service of the United States Department of Agriculture.

It is just over a year and a half that our new manager assumed his position as the executive head of this company. I think that you will agree that few if any could predict the tremendous progress which has been made in this short period of time. The whole management team has been changed. Many faces are new and some old ones are wearing new hats. The attitude of the entire personnel has been changed from one of un-

certainty to one of optimism and steady progress for the future. Ed Gelsthorpe has brought and applied solid business techniques to this company — something it has needed for a number of years.

If there was any doubt it certainly must be dispelled by the new products, increased sales of all products, consolidated total increased dollar volume, 16% over last year, and last, but not least, the increased dollar return per barrel to each of us as grower-members of Ocean Spray. Under our present leadership again feel certain that we can face the years ahead with continued optimism.

The schedule of payment which was adopted several years ago has been continued and has been very favorably received by all growers. Under this system a grower is able to plan his own financing when he knows the approximate date on which he will receive his next payment from the company.

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history of the company, and this is reflected in our ability to borrow the necessary monies to meet our needs for operating expenses and plant improvements.

We have taken steps to put our house in order with relationship to the ownership of our common or voting stock. Today you are voting on three amendments which are part of the program to place the common stock of the corporation in the hands of its grower-members, where it belongs. If we are successful in this program, it means that within a year, all the stocks in the hands of those who do not hold marketing agreements with Ocean Spray will be repurchased. It also means that stock held in excess of patronage requirements will be repurchased. No one member will have any greater voting power than his patronage entitles him to have.

In short, we have had a good year—a year in which progress has been made and sound plans have been made which look to the future continued progress of your Cooperative.

The directors re-elected Mr. Olsson president; Lester M. Gordon, vice president; Russell Makepeace, secretary; Chester W. Robbins, treasurer and Edward Gayghan assistant secretary-treasurer.

CORN PRODUCTS COMPANY NAMES JAMES W. McKEE, Jr., COMPTROLER

James W. McKee has been named comptroller of Corn Products Company, it was announced by Alexander N. McFarlane, president of Corn Products. Mr. McKee succeeds Eugene J. Northacker who will continue to serve the company as a consultant.

Corn Products is a multinational manufacturer and marketer of more than 600 industrial and consumer products.

Born in Pittsburgh, Pennsylvania, Mr. McKee joined Corn Products in 1947 in the international division. After progressing through the financial positions in the firm's overseas affiliates in Italy and Brazil, he was

made managing director of the Cuban affiliate in 1958. The following year he became managing director of the Brazilian affiliate. He became executive assistant for finance in the New York headquarters in 1964.

A 1942 graduate of McGill University, Mr. McKee was a pilot in the Army Air Corps in World War II. He is a member of Rotary International, Phi Delta Theta fraternity and the University Club of New York.

Mr. McKee makes his home in Greenwich, Connecticut.

Honey in Cranberry Juice Cocktail In Place Of Sugar?

Vernon Goldsworthy, president of Cranberry Products, Inc. of Eagle River, Wisconsin has been in correspondence with the Wis-

consin State Department of Agriculture regarding the possibility of making cranberry juice cocktail with honey instead of sugar.

He has a letter from Marlon L. Schwier, in charge of the Fruit and Vegetable division concerning this. Mr. Schwier wrote that he was sure the honey industry would be much pleased to hear of this proposal, and that he will make further inquiries around and see what the potentials might be. "It sounds like a terrific idea," he wrote.

The Jim Olsons of Bandon Entertain Son

Pat Olson has been visiting his parents, Mr. and Mrs. Jimmy Olson at Bandon, Oregon. He was to leave the end of January for Okinawa where he will complete the final 18 months of his service.

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Miss Betty Buchan Recovering From An Illness

Miss Betty Buchan, publicity director of Ocean Spray Cranberries, Inc. is in the Lawrence, Mass. General Hospital recovering from an illness. She is reported as improving rapidly and expected back on her job shortly.

Ray Bates Elected To ASC

Ray Bates of Bates Road, Bandon, Oregon, has been selected to serve on the Agricultural Stabilization and Conservation Board of Coos County, Oregon for the 1965 year. The election was held at a county convention December 10 at the Courthouse, Coquille, Oregon.

PERSONAL ITEM

Charles A. Doehlert, former director of the Cranberry-Blueberry Station at Pemberton, New Jersey plans a trip. He and his wife, Irene, will spend two months in England and Ireland and ten days in Denmark.

FRESH FROM THE FIELDS

Continued from Page 6

Jersey crop was considerably better from the standpoint of keeping quality and field loss due to rot but berries were considerably smaller than normal. The dryness during the important pollination period reduced the nectar secretion of cranberry blossoms and made bees less attracted to the flowers. It was very unfavorable during the growth period of the berry and caused undersized berries. The coolness was favorable from the standpoint of rot.

Northwest Pacific Weather Notes

According to Cranguyma Farms Long Beach, Washington, 1964 was a wetter year than 1963 by 7.03 inches. The past year of 1964 totalled 79.45 inches against 72.37 inches for 1963.

The first day of January for both 1964 and 1965 hit the jackpot for rainfall. January 1964 gave out 3.03 inches and January 1 of 1965 gave out 2.40 inches. The month of January 1964 hit a high of 21.07 inches, being the top month of the year in rainfall.

December of 1964 had a precipitation of 8.41 inches. The greatest amount of a 24-hour given period fell on December 22.

High temperature recorded at Cranguyma for December was 53.

Continued on Page 20

NEW MACHINERY EVERY YEAR

A note from the editor of the FARM JOURNAL marvels at how the machinery companies can keep coming up with new and better implements year after year. They keep making it possible for a farmer to produce more and do it faster, with more precision, and more comfortably. They keep getting more and more out of a man, an hour and a gallon of fuel, while making it easier on the man at the same time. In this trend the cranberry industry is going right along with the best of the agriculturists.

1965

Here is the start of a New Year, the Year of Our Lord, 1965. It will bring a whole set of new opportunities to cranberry growers as well as others.

Never has the cranberry industry started a new year with better prospects. The 1964 crop is all cleaned up. There was no need of the marketing order to be enforced in 1964, as the crop did not justify it. Yet, there the order and agreements are, to be used in case they are needed in 1965.

We take this opportunity to wish all a most happy and prosperous 1965.

MASS. CRANBERRY SEMINARS

It would seem as if the new series of winter seminar type meetings as arranged by Irving E. Demoranville, Extension Cranberry Specialist would be well worth while, not only for the newer growers and foremen but for all growers. Each one of the 7 or 8 covers a different topic, all of vital interest to the cranberry grower. (Story elsewhere in this issue.)

GOOD LUCK IN NEW POSITIONS

We wish success to Dr. "Chuck" Doughty in his new position at Puyallup, Washington state, and to his probable successor in charge of the Coastal Washington Experiment Station at Long Beach Mr. Shawa.

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GOOD CLEAN-UP

It was indeed good news to the cranberry industry that Ocean Spray was all sold out by the first of the year. This is a mighty good clean-up of the 1964 crop and good news to all of the industry.

SERVING WISCONSIN

Continued from Page 18

degrees on the first and the sixth. Low temperature for the month was 15 degrees on Dec. 17; 13 degrees on December 17th, 13 degrees on the bog.

Clatsop Oregon airport weather station gave a figure of 13.67 inches of precipitation for December, including all snow and rain for the month.

Notes From Vernon Goldsworthy

As of December 23, according to Vernon Goldsworthy of Eagle River, Wisconsin. There has been considerable snow in Wisconsin. Most growers were in pretty good shape for the winter flood, except for some in the Mather area, who were short of water, and as of that date did not have enough for the winter flood. This did not take in very much acreage, however.

Indications are that there will be about 300 acre planted in Wisconsin in 1965, mostly to

the newer varieties. Goldsworthy is planting about 20 acres of Stevens, plus about three acres of Pilgrims.

It is estimated there are about 400 acres of Wisconsin marsh under sprinkler, put in during the past year, and about 400 to 500 acres will be put under sprinklers during 1965. This will make approximately 20 percent of (the state acreage under sprinklers.

Cranberry Cake Recipe In German By Indian Trail

INDIAN TRAIL cranberries of Wisconsin Rapids, Wisconsin has been sending out cranberry publicity on a Cranberry Cake recipe printed in German to some of the German newspapers in that state and on the radio.

Behrend G. Pannkuk, president, reported that response has been exceptionally good. In the recipe there is a tie-in with Robin Hood flour.

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Observations on the Effectiveness of Cranberry Juice in Urinary Infections

By D. V. MOEN, M.D.

Shell Lake, Wisconsin

(Editor's Note: The following is from "Wisconsin Medical Journal" and was sent to us by Vernon Goldsworthy)

Folklore medicine has often mentioned cranberry juice as being used by the women for the relief of the frequent and ancient complaint of dysuria. The juice has been widely used in the Cape Cod area of Massachusetts in the treat-

ment of urinary tract infections.

In 1923, Blatherwick and Lang studied the effects of feeding cranberries to human beings and found that they could produce an increase in the hippuric acid in the urine. Ten years later Fellers determined that the quinic acid in cranberries was the precursor of the hippuric acid which is a strong anti-bacterial agent.

An article appearing in *The Journal of Laboratory and Clinical Medicine*, December, 1959, regarding the use of cranberry juice in chronic urinary tract infections, stimulated my interest in the problem. The article reiterates that cranberry juice contains quinic

acid which is converted to hippuric acid which in turn has a strong antibacterial action in the urine.

Our observations have been made on patients seen in a general practice of medicine. Our impressions are based on objective and subjective patient response.

One of the most common complaints encountered in general practice is recurrent dysuria, frequency, and urgency of urination in the female patient. A large percentage of these women have a negative urine, both grossly and microscopically. They do not respond satisfactorily to sulfas, antibiotics, bladder sedatives, urethral dilations or bladder irrigations. If there is a response, it is often of short duration, the symptoms will recur and can be very persistent in spite of the usual treatments.

This particular group has been most gratifyingly relieved of all urinary symptoms as long as they continue to take two 6-oz. glassfuls of cranberry juice daily. Into this group will fall the patients with chronic urethritis, with or without caruncle formation and these with so-called chronic trigonitis. Also, the male patient who

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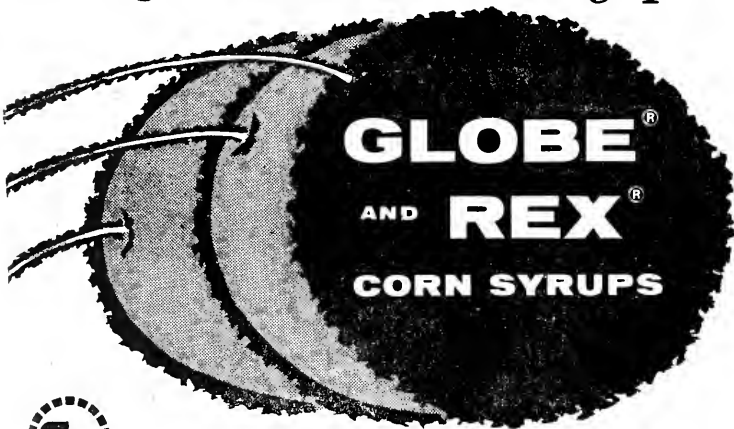
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has recently had a transurethral resection and has urinary frequency will often have relief of symptoms if cranberry juice is taken daily.

Chronic pyelonephritis remains a difficult therapeutic problem. The condition carries the threat of kidney deterioration and requires continuous lifetime treatment. There is no effective universally accepted prescription for this condition. The drugs recommended are expensive and often toxic to the patient.

Our interest in this problem was stimulated by the response of a 66-year-old lady with proved chronic pyelonephritis. The disease was known to have existed for five years prior to 1959, and she had been given continuous drug therapy under careful supervision for the entire five-year period. Many drugs were used for extended periods without demonstrable effect on the patient or on her persistent 4+ albuminuria or 4+ pyuria.

Cranberry juice was begun in January, 1959; the patient took 6 oz. with the morning and evening meals. This was the only medication given to this patient for the next two and one-half years. After eight weeks of the juice therapy, the urine gradually began to clear. At the end of nine months, there were only occasional pus cells in voided centrifuged specimens, and no albumin. The urine is still negative, and the patient refuses to stop the cranberry juice because she feels so much better and knows no other medication has helped her before.

Patients with recurrent kidney stones need continuous therapy, and again we are faced with the problem of what to recommend for prolonged therapy. From our short experience with cranberry juice therapy it is felt that the hippuric acid produced in the urine from cranberry juice can be an effective deterrent to the formation of recurrent stones and possibly arrest the progression of existing stag-horn-type stones.

This problem is being followed and no definite conclusions can be drawn yet, but we feel that after two years observation

Mass. Cranberry Station and Field Notes

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

PERSONALS

Prof. "Stan" Norton attended the Technical Committee meeting of NE-44 in New York City on January 4 and 5. This is a regional project concerned with fruit and vegetable harvesting.

Robert Norgren is the newest member of the Station family. He arrived from Minnesota in late January, and will be working on a special nematode problem under Dr. Bert Zuckerman. This problem will involve about two years' work and the results will be used in his Doctoral thesis. He expects to reside in East Wareham. We at the Cranberry Experiment Station extend a warm welcome to Bob and his family and wish him every success.

We had a very pleasant session with the Associate Director of Extension who dropped by one morning to visit the Station and its staff. In case you are wondering, this high official is none other than our old friend and co-worker "Dick" Beattie. He appeared to be in good health and looked much as he did when he was out tramping the bogs a few years back. Perhaps "a little thinner on top," but then aren't we all.

WEATHER

The month of January was more than 4 degrees a day below nor-

mal in temperature, which is a continuation of the cold cycle we seem to be experiencing. Precipitation totalled 2.76 inches or about $\frac{2}{3}$ of normal. Total snowfall for the month was 29.3 inches, an all time record for any month at the Cranberry Station. Some snow fell on every weekend except the last one (January 30-31). The snow was very dry and although it piled up high and deep, the water content just wasn't there.

CHARTS

The Cranberry pesticide charts have been revised and are now being printed. The Cranberry Station will mail the new charts to growers in March. The assistance and observations of the growers who helped with the chart revisions is greatly appreciated. Plans do not call for a revision of the fertilizer chart, so growers

should not discard their 1964 copy. There is a limited supply of these charts still available at the Station for any one who needs one. Dr. Chandler's fertilizer bulletin is also available.

SCUM

Growers are reminded that February or early March is a good time to check bogs for the presence of green scum around shore ditches. If present it should be treated with copper sulfate using the recommendations on the 1964 weed control chart.

O. D. WARNING

A warning on oxygen deficiency conditions was released by the Cranberry Station on January 15 and read as follows:

"The present cold weather and recent snow has resulted in conditions that could cause oxygen deficiency on flooded bogs. Cold weather is expected to continue. The only practical method of eliminating the oxygen deficiency hazard is to remove completely the winter flood at this time."

As conditions in January developed this was a very timely warning, because the bogs are still well covered with snow and ice. These are excellent conditions for oxygen deficiency to develop. Be sure and pull the flood water com-

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pletely off the bog and down into the ditches, low areas with shallow water will develop oxygen deficiency conditions very rapidly.

CRANBERRY SEMINARS

The first cranberry seminar was held on January 20 with Dr. Cross presenting an excellent discussion on "Historical and Present Views of Flood Management on Cranberry Bogs." 150 were present.

The second seminar, held on January 27, featured Prof. "Stan" Norton on "Sprinkler Frost Pro-

tection and Irrigation Systems." 175 were present.

We at the Cranberry Station are extremely happy with the interest and enthusiasm that these meetings have generated. The presentation of information has been accomplished in 45 minutes but the questions and discussions have covered a greater period of time, indicating the interest of the group.

While we realize that the large turnout and interest is in part due to the bright outlook in the cran-

berry industry, we also feel that there are many growers who will always be eager to receive all current information on raising cranberries. This keeps an industry healthy and growing.

Maine Leads in Blueberry Production

New Jersey is not the nation's largest producer of blueberries. This honor is indisputably held by the state of Maine. In 1963 Maine produced and marketed 22,795,250 pounds of blueberries in comparison to 16,395,200 pounds of New Jersey.

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—The American Fruit Grower

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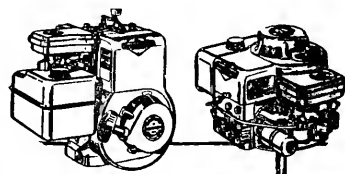
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Cranberries

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

Up to the 10th of January there had been remarkably little snow. On the 10th of January the departure in the temperature from normal was a plus 17.

On the 10th of January there came a blizzard which deposited 7.01 inches as recorded at the Massachusetts Cranberry Station.

Four below zero was recorded at the Massachusetts Cranberry Experiment Station on January 15th, the coldest in a long while. The temperature did not go above 20 all day with a bitter wind blowing.

The snowfall of the 16th and 17th was recorded at the State bog as 9.10 inches, but it was hard to record as the high winds blew the snow about. Irving E. Demoranville, Extension Cranberry specialist, sent out a flash card reading:

"The present cold weather and recent snow has resulted in conditions that could cause oxygen deficiency on flooded bogs. The only practical method of eliminating the oxygen deficiency hazard is to remove completely the winter flood at this time."

The 18th of January deposited 2.70 inches of new snow as it was

measured at the State bog.

The precipitation for the month was 2.76 inches, of which 29.3 inches was snow. The temperature for the month was 4.3 below normal.

OXYGEN DEFICIENCY

The month of January was very cold and snowy. The temperature averaged 28.3° or more than 5° colder than normal. It was the second coldest January in the past 17 years and the fifth coldest in the 36-year weather recording history at Pemberton. Fortunately a period of mild weather (January thaw) occurred from the 22nd to the 28th and this prevented oxygen deficiency conditions from developing on cranberry bogs. Maximum ice thickness was 6

inches but most bogs had only 4 to 4½ inches of ice. Analysis of flood water from representative bogs showed that the oxygen content did not decline to critical levels.

SEVERE TEMPERATURES

Minimum temperatures were extremely severe on a few nights. Seven below zero on the 18th and one below on the 15th were recorded in the weather shelter but unofficial readings close to 20° below zero were reported in several blueberry fields. Moderate damage to fruit buds has occurred in the Toms River area.

TWO STORMS

Precipitation converted to rain during the month totaled 2.97 inches. Most of this was in the form of snow; 15 inches fell in two

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storms. A half inch of rain, with temperatures in the 40s from the 25th to the 28th, broke up the ice on cranberry bogs.

The 95th Annual Winter Meeting of the American Cranberry Growers' Association was at the Fireside

Restaurant, Mount Holly, on February 18th, with Captain John Haines presiding. Research specialists from Rutgers University discussed cranberry nutrition, cranberry rot, aerial application of fungicide for rot control, insect

control, bee management and cranberry pollination. The business session included reports of the delegates to the New Jersey State Agricultural Convention and of the Frost Committee and elections of officers.

WISCONSIN

January started out in mild fashion, but old man winter soon lowered the boom with some of the coldest and most prolonged cold in recent years. Accompanying the cold was ample supplies of snow, with the entire state snow covered with from ten to twenty inches at month's end. Surprisingly the average temperature was only three degrees below normal and precipitation was only about one-half inch, or half of normal. Heavy winter fog and drizzle was common the first week of the month. There was a slight warmup on the 21st, but for the balance of the month the high temperatures for the day never reached zero. Lowest official readings were minus forty in the Hayward area during the last week of the month. Readings on marshes were reported even lower. The outlook for February is for continued below normal in temperature and normal precipitation.

Sanding

Needless to say, the cold bitter weather suspended most outdoor activity on the marshes. Most of the marshes in the south completed their sanding work, while the others were waiting for February and warmer weather. Frost depths in the pits were making digging very difficult. Almost every marsh was planning to do some sanding work.

Low Water

A survey of areas where critical water shortages were noted at the winter flood period failed to show up any significant amount of vines not covered with the winter flood. Reservoirs in the drainage districts of central Wisconsin were at an all time low. Severe losses of fish and fur bearers were expected with the low water and possible oxygen deficiencies. The ground water index continues to decline and is now 18 inches below the normal

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value. It is estimated that the state would have to receive the equivalent of 16 feet of snow to bring the water levels back to normal.

Marvin W. Hewitt

Marvin W. Hewitt, 63, Lindsey, retired cranberry grower, died at 8:15 p. m., shortly after he was admitted to St. Joseph's Hospital. He and Mrs. Hewitt were preparing for a vacation trip to Arizona when he became ill.

Funeral services were held at 1:30 p. m. Saturday in the First Methodist Church here, the Rev. Wesley Defoe officiating.

Mr. Hewitt was born Aug. 9, 1901, in Butler County, Nebraska, and received his education there. At the age of 18 he moved to Ogema, Wis., where he resided for six years before moving to Arpin. His marriage to Crystal Hahn took place July 12, 1926, at Bessemer, Mich. After their marriage they resided in Flint, Mich., four years, then moved to Thorp, where they lived for one year before coming to Lindsey.

Mr. Hewitt had organized and operated the Hewitt Packing & Processing Co. until his son, James, took over following World War II. He then started the C. & H. Cranberry Corp. marsh at City Point, which he owned and operated until August, 1964, when he retired.

He was a member of the Methodist Church, Wood County School Committee, a 32nd degree Mason, past master of Pittsville Masonic Lodge 232, past worthy patron of the Order of Eastern Star, past president of the Wisconsin State Cranberry Growers Association, and a member of the United Commercial Travelers.

Survivors include his wife; two sons, James W. Hewitt, Lindsey, and Richard L. Hewitt, Marshfield; his mother, Mrs. Nora Hewitt, Lindsey; a brother, Raymond Hewitt, Cambridge; and five granddaughters.

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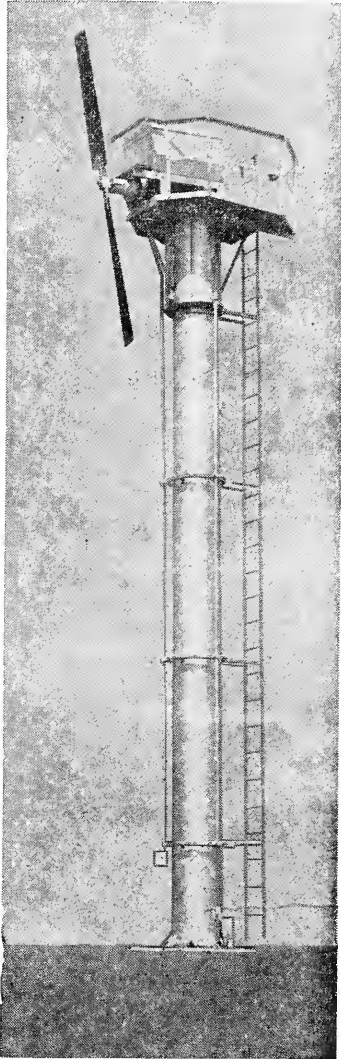
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Robert St. Jacques, Versatile and Influential Heads the Hayden Separator Manufacturing Company of Wareham

by Clarence J. Hall

"Just as a chain is no stronger than its weakest link . . ." we wrote in an article in this magazine in June, 1944. This was in reference to a mechanical equipment link of the cranberry industry, and to the late Emile C. St. Jacques and the Hayden Separator Manufacturing Company of Wareham, Massachusetts, which was a very strong link, indeed, we reported.

Now, twenty-five years later, with the industry more mechanized than ever, the Hayden Separator Company is an even stronger link. The business is under the management of Emile's son, Robert St. Jacques. He is a university graduate in mechanical engineering. He has been familiar with the cranberry equipment business ever since he was a child and worked summers for his father while he was attending high school.

"Bob" became manager and sole owner upon the death of his father in 1958. At the time he was associated with his father and very active in the cranberry industry. Today, as the cranberry industry has grown in mechanization, the Hayden Separator Company has grown along with the industry, and Bob has become increasingly active in the industry.

Along with the growth of the Hayden Separator Company has come the natural transition into the growing end of the business where Bob has an interest along with Bill Atwood in fifty-five acres of bog, operated under the name of Porter Bog Co., Inc. In addition, Bob has been active in the grower organizations presently serving as Vice President of the Rochester Cranberry Club and member of the Advisory Committee of the Cape Cod Cranberry Growers Association. He also serves as instructor at the annual picking machine schools, demonstrating and explaining the use of the Darlington picking machine, which is the most commonly used harvester in Massachusetts and is manufactured solely by the Hayden Separator Company under an arrangement with its inventor, Tom Darlington of New Jersey.

The Hayden Separator Company business is one of the oldest in the industry. It was taken over by E. C. St. Jacques in 1926, when he bought the business from the widow of Lothrop Hayden of South

Carver, where the business was founded in 1892. Mr. St. Jacques moved the business to Main Street, in Wareham, where it was operated for many years.

Its present location is on Carver Road, at West Wareham, where the St. Jacques first rented space for a couple of years and then bought the property in 1957. They acquired the property from the present Ocean Spray Cranberries, Inc., and prior to that, it was a screenhouse for the late New England Cranberry Sales Company.

The property consists of approximately 33,000 square feet of floor space which the Hayden Company fully utilizes. It consists of four buildings, plus a main building, having six units, two of these being two story and one having a basement. There is one building, known as the old Coyne screenhouse, which the Hayden Company does not use, but contributes for use of the West Wareham Explorer Boy Scouts.

The Hayden Company manufactures and repairs about every conceivable sort of equipment used in the cranberry industry. As its name implies, it manufactures the Hayden Separator, but this branch of the business has declined in general market as more and more growers turn to having Ocean Spray to screen their berries for them. It makes clippers, vehicles for bog work, the so-called "bog buggies," Sprayers (it is also agent for the Myers Spray line); it did make its own ground dusters, although these have now more or less gone out of use, cranberry tools, belts and pulleys.

As an engineer, Bob designs and installs sprinkler irrigation systems in rapidly increasing numbers



One of the Buildings of the Hayden Separator Manufacturing Company of Wareham

—Cranberries Photo

as the demand for this equipment has increased greatly in the last few years. The Hayden Separator Company serves as distributor for a complete line of irrigation equipment including Shurrane aluminum, Marlow pumps, Plymco plastic pipe and either Rainbird or Buckner heads. This business has increased to the point where it constitutes a major portion of the Hayden business.

The Darlington picker, which has now been used for twelve years, is firmly entrenched in both Massachusetts and New Jersey and is used extensively in all growing areas with the exception of Wisconsin. The manufacturer of the new machines, along with service and repairs of older machines, has had a large part in the success of the Hayden Separator Company.

Hayden also manufactures the well-known Hayden pump for cranberry bogs. There are four sizes with capacities up to 20,000 GPM, applicable to either electric or gas motivation.

The original bog which young St. Jacques and Atwood have bought in 1961 is one of thirty-one acres. It is the former "Porter Bog," owned by the Cape Cod Company, from whom St. Jacques and Atwood bought it. This is one of the earlier bogs and is located at Leonard's Pond in Rochester. It is flowed from this pond and from a 12½ acre reservoir. There is plenty of water. In fact, a problem is keeping the bog dry enough.

The owners have two gas pumps for winter and frost flowing. The water is pumped on and off. There has recently been installed a power line, and an electric pump to improve the drainage. Air insert control is through Wiggins helicopter service.

In 1964, the Porter Bog Company purchased the Onset Bog of the Smith-Hammond Company, a twenty acre bog with about an even split between Early Blacks and Howes. A sprinkler system is in the plans for this property at the earliest possible chance. Three men, with some help at times, are employed there full time during the season. Berries are disposed of through Ocean Spray.

The Hayden Company employs

eight full-time skilled workmen who know how to operate the equipment in the complete machine shop and in the woodworking section. There were four such workers in 1944. Additional help is added in the peak season.

Bob was born in Pawtucket, March 3, 1924. He attended schools in Wareham and was graduated from Wareham High School in 1942. He then entered Cornell University, but his courses there were interrupted by the Second World War. He put in thirty-two months in all in the Service, partly in the Infantry, but largely in ordnance. He trained in ordnance schools at Aberdeen, Maryland; Toledo, Ohio, in Virginia and Pennsylvania. He was also overseas in Italy in military government. He was a staff sergeant. He finally graduated from Cornell in 1948, and then became associated full time with his father.

He was married to the former Bernice Walker of Onset, in 1952. He lives with his wife and four children, Roberta, 11; Elizabeth, 7; Raymond, 6; and David, 4 months, on High Street in Wareham.

He is President of Wareham Community Associates, a business organization. He has served on the Wareham Finance Committee. He is a member of the Cornell Engineering Society, Cape Cod Cranberry Growers Association, South-

eastern Massachusetts Cranberry Club.

Bob's hobby is sailing and he races out of Marion in the Cape Cod Bulls-eye class with cups to prove it. Golf and gardening are new additions to the list.

"Bob" is actually a second generation cranberry grower, as his father for a time owned and operated a bog of four acres on Crooked River Road, Wareham. This was badly damaged in the 1944 hurricane and the elder St. Jacques sold the property. As the second generation operator of the major cranberry equipment manufacturer and supplier, a qualified engineer, and a cranberry grower he has, as he says, "a real stake in the cranberry industry."

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View of Porter Bog Co., Inc.

—Cranberries Photo

Evaluation of Newer Fungicides on Cranberries in Massachusetts

by

BERT M. ZUCKERMAN

and

KENNETH ROCHEFORT

*University of Massachusetts,
Cranberry Experiment Station*

Results

The results of these tests are summarized in Table 1. A composite analysis of the comparative performance of each of the newer fungicides follows:

Folcid—The two-year performance of this fungicide showed the greatest promise. Rot control was mostly equal to or better than that of maneb. Unfortunately, the results of the tests an effect of color development were not as encouraging. The term color as used refers to the amount of red pigment in berries as measured by color evaluating instruments. In 1963, color at harvest and after 12 weeks of storage of folcid-treated berries was better than that of ferbam-treated berries on both Early Blacks and Howes. In these tests, both folcid and ferbam occasionally enhanced color, as shown by comparison with untreated berries. However, that year the plots treated with folcid had been treated with Bordeaux mixture for the previous 6 years. Vines were thinner and the yield lower. In 1964, folcid was applied to a new series of plots which had not been injured by previous treatments. Low dosages of folcid (3 and 4 lbs./acre/application) retarded color development in both Early Blacks and Howes. Color retardation was not as much as with maneb, but further testing is needed to definitely establish whether or not folcid consistently performs better than maneb in this respect. The lower rate used, 3

lbs./acre, gave excellent control, indicating that the cost of application would be less than that of fungicide programs currently in use. The treatment did not affect the size of berries. Larger scale experiments to test the effectiveness of this fungicide as a concentrate, and a sampling program for residue analysis, are scheduled for the 1965 season.

Dyrene and Polyram—Both of these materials gave very poor rot control and polyram significantly retarded color development. Dyrene had no effect on color development. In addition, at both the high and low dosages, dyrene appeared to reduce yield slightly. Polyram was evaluated only in 1964, but the unfavorable results of these experiments indicate that further testing would not be warranted.

Other Fungicides—The erratic performance of ferbam received further confirmation in the 1963-1964 tests. In one series, rot control by ferbam was equal to that of maneb and folcid, but in most experiments control was significantly poorer. Maneb has consistently given excellent performance over the past 9 years, and was equalled for the first time in this respect by low dosages of folcid. M-45, a fungicide similar to maneb, gave rot control approaching that of maneb, but also retarded coloring. Similarly, zineb retarded coloring to almost the same degree as maneb, but was slightly less efficient as a fungicide. One application of maneb followed by an

During the past two years, several of the newer fungicides have been evaluated at the State Bog, East Wareham. This article reports on the results of these studies. The statements contained herein should not be construed as a recommendation for use of any fungicide. It must be emphasized that these newer materials have not been cleared for use on cranberries in Massachusetts.

Methods of Application

In all tests, materials were applied in the equivalent of 300 gallons of water/acre, and their efficiency compared with that of three standard fungicides, ferbam, zineb and maneb. Each material was applied at the rate of 9 lbs. formulated material/acre/application. In addition, dyrene was applied at 6 lbs. 50% WP/acre and folcid at 3 lbs. and 4 lbs. 80% WP/acre. In each case there were two applications spaced 11 to 14 days apart. All tests were made on small plots with 5 replicates per treatment. The extent of the experiments is indicated by the fact that 175 plots were treated, on either Early Blacks or Howes, over the 2-year period. Evaluation of the efficiency of the fungicides was made on the basis of berry counts made at harvest, and at 5 and 10 weeks following harvest.

TABLE 1. RELATIVE PERFORMANCE OF FUNGICIDES ON CRANBERRIES

Fungicide	Rate/acre/ Application	Efficiency ¹	Effect on Coloring	Effect on Yield	Comparative Cost of Materials Used ²	Ease of Use of Concentrate
Maneb	9 lbs.	1.0	Retards coloring			
Zineb	9 lbs.	1.5	Retards coloring			
Ferbam	9 lbs.	2.0	Highly colored	None	5	Excellent
Folcid	9 lbs.	1.0	Results inconclusive	None	4	Excellent
	4 lbs.	1.0	Results inconclusive	None	3	Excellent
	3 lbs.	1.0	Results inconclusive	Not determined	4	Not tested
Dyrene	9 lbs.	3.0	No retardation	None	2	Not tested
	6 lbs.	3.0	No retardation	None	1	Not tested
Polyram	9 lbs.	3.0	Retards coloring	May reduce yield	—	Not tested
¹ Efficiency—1.0 Best rot control; 3.0 poorest rot control.				May reduce yield	—	Not tested
² 1—least costly; 5—most costly.				Not determined	—	Not tested

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application of ferbam, or 50-50 mixtures of these fungicides for 2 applications retarded color and gave poorer rot control.

The Best Fungicide Program?

Several dozen fungicides have been tested on cranberries over the past 9 years, and based on the experimental results several facts have become apparent. The most important is that the more efficient the fungicide, the more color development is retarded. Thus maneb and folcid, which give in the range of 70-80% rot control up to 12 weeks after harvest, retarded coloring the most. Control by ferbam ranges from 30-70%. In instances where control was more efficient, some color retardation was noted. Chemicals, such as dyrene, which gave very poor rot control, had little effect on color development.

These observations appear to have a close relation to the fact that fungicide-treated cranberries are more frost resistant than untreated berries. As previously reported, the more efficient fungicide gave better protection than the

poorer ones. Further studies showed that fungicide-treated berries had the same freezing point as untreated ones.

What is the answer then? A logical speculation is that the more efficient fungicides, in addition to giving better protection against berry decay organisms, act in a similar manner in protecting leaves and stems against the invasion of fungi which cause leaf drop and stem dieback. A large body of experimental and observational evidence exists to support this theory. Included is the fact that fertilization practices which result in heavier vine growth also cause retardation of coloring. Unfortunately, certain evidence which would give final proof is lacking.

But let us assume that this is so. Then the denser foliage and vine growth resulting from an efficient disease control program will always result in retardation of red pigment development. There are two possible solutions:

1) The discovery of a chemical which enhances coloring. For a time there was an indication that

ferbam would do this, but enough evidence has been gathered to show that this is not so. It is simply a poorer fungicide when used on cranberries.

2) The development of a berry variety which has an over-abundance of color, in which case a small loss in pigment would not be missed.

At present, the second alternative appears to be the most promising. This is a most pressing problem in light of the increasing demands of the industry for both color and quality.

Ocean Spray Officials Visit West Coast

Western growers in the Long Beach Peninsula and in the Bandon Oregon area were visited during the month of January by the president of Ocean Spray Cranberries, Inc., George C. P. Olsson and Edward Gelsthorpe, executive vice-president and general manager.

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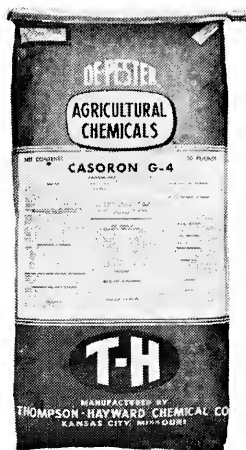
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Hawkweed
Western Lilaeopsis
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Smartweed (Marshpepper,
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Swamp and Water)

**Important Miscellaneous
Weeds Controlled:**

Bracken Fern
Royal Fern
Sensitive Fern
Hair cap Moss
Common Horsetail
Water Horsetail (pipes)
Rushes (Juncus spp.)
Dodder

Grass Weeds Controlled:

Bluejoint Grass
Rattlesnake grass
(Manna grass)
Summer grass
Velvetgrass
Bent Grasses
Little Hairgrass
Crabgrass
Rice cutgrass

Sedges Controlled:

Bunch grass
Muskat grass
Nutsedge (Nutgrass)
Short Wiregrass
Wideleaf grass
Stargrass
Woolgrass
Cotton grass
Needlegrass
Oniongrass

PACIFIC NORTHWEST

In the Pacific Northwest two equal applications may be made in early spring with an interval of 3 to 6 weeks between treatments. Total application should be 100 pounds per acre.

Supplies of DE-PESTER CASORON G-4 are available from:

Ocean Spray Cranberries, Inc.
321 12th Avenue South
Wisconsin Rapids, Wisconsin

Miller Products Co.
7737 N. E. Killingsworth
Portland, Oregon

R. F. Morse & Son, Inc.
Cranberry Highway
West Wareham, Massachusetts

Parkhurst Farm & Garden Supply
301 Whitehorse Pike
Hammonton, New Jersey

Cranberry Products, Inc.
Eagle River, Wisconsin

Indian Trail, Inc.
Wisconsin Rapids, Wisconsin



DE-PESTER CASORON is a Product of

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Subsidiary of Philips Electronics and Pharmaceutical Industries, Corp., Inc.
Kansas City, Missouri 64141

*CASORON is a registered trademark of N. V. Philips-Duphar, The Netherlands

Application of Granular Herbicides

By MALCOLM N. DANA

*Department of Horticulture,
University of Wisconsin*

The release of dichlobenil for weed control in cranberry fields has stirred new interest in the development of equipment suitable for application of these granules. Other granular herbicides (2,4-D, simazine, CIPC), although registered for use in cranberry fields, did not find wide acceptance by the cranberry industry and, therefore, the industry was slow to devise equipment for application.

One may well ask, "Why recommend granules? Why not use sprays and eliminate the need for granular application equipment?" The simple answer is that some herbicides are more effective when applied as granules than when used as spray applications. Several factors apparently are responsible for this result in cranberry bogs. A granule will sift through the cranberry vines to the bog floor where its total activity may be exercised. The same material, applied as a spray, is partially intercepted by the vines from whence it may be absorbed by the crop foliage, washed away by subsequent floods, destroyed by ultra-violet light, or merely volatilized and thus lost to the atmosphere. A granule on the soil is shielded from ultra-violet light, is away from air currents and the sun's heat and thus is protected from volatilization, and may be absorbed onto soil particles and so be resistant to flood removal. Keeping herbicides from crop foliage is an important consideration with 2,4-D and CIPC but of less significance with simazine and dichlobenil which are only slightly absorbed through the leaves.

A grower cannot afford to be careless in his application methods. The authorization for the use of dichlobenil permits a maximum application of 4 lb/A of active herbicide. When used at this rate or lower and according to other label precautions no residue will remain in the harvested crop. There is no

allowance for errors of application above the established limit. Rates of use below the 4 lb/A will not provide the degree of weed control desired. The 4 lb/A rate presupposes a uniform application over the entire treated area. There is no allowance for alternate streaks of heavy and light applications for uneven rates where applicators turn at the end of beds. The demand for uniformity leaves no room for equipment that delivers larger amounts of granules when the hopper is full than when the hopper is nearly empty. In short, to do the job properly the grower needs reliable, maneuverable, precision equipment.

Applications with gravity flow fertilizer spreaders have not been successful. The rate of flow through the spreader was independent of the ground speed, therefore, a slow travel applied more than a fast travel over a unit area for a given spreader setting. These machines lacked a positive shutoff and were rather cumbersome to operate.

Several growers attempted to use a cyclone seeder for granule distribution. These machines were subject to the obvious criticisms that no method was available for calibration of whirlplate rotation and speed of operator travel and that the particles were distributed away from the source on the basis of particle size and weight rather than by herbicide content. There was no practical method of marking the extent of ground covered by a trip through the field and thus it was impossible to make a complete coverage.

Several years ago, the Dana Machine Co., Wisconsin Rapids, modified the Noble Chemi-Caster for use in cranberries. The basic unit, made by Noble Mfg. Co., Sac City, Iowa, consists of a hopper with three delivery holes in the bottom. Over each of these holes is located a small fluted rotor that is geared to the power supply and delivers granules to the opening. The rate of flow from the hopper is regulated by the size of the hole opening and the speed of rotation of the fluted rotor. From the hopper the granules pass through flexible tubes to an assembly fitted with

precisely arranged baffles so that one hopper (3 holes) distributes granules over a 42-inch swath. The original machines produced for growers consisted of 4 of these units mounted on a tripod, self-propelled sulky frame that was guided by a walking operator. These machines could be calibrated fairly well and provided a good pattern of granule distribution under ideal conditions. However, the 14-foot machine was too awkward for careful application, the shutoff control was not positive on all machines, there was some variability in delivery rates among holes in the same hopper and some growers, at least, felt that the granules piled up on the baffles and then were dislodged in a surge of material when the wheels were jolted by rough terrain. These "bugs" were unfortunate but not unusual with a new equipment designed for a new job.

The Chemi-Caster machine has been refined with the addition of a better shutoff assembly, the reduction from 4 to 3 units per machine and more precision in the construction of the delivery unit. Several growers report very satisfactory applications with these machines in the fall of 1964.

The Gandy Co., Owatonna, Minnesota, has developed a machine for application of granular herbicides in field crops. This machine was modified for use by cranberry growers and several are in operation in the state. This machine consists of a hopper with a series of precision holes in the bottom which are closed by a slide, all holes being controlled by the same lever. The agitator is a cadmium-plated five blade rotor bar that extends the full length and fits closely in the bottom of the hopper. As the rotor bar turns, it carries granules over the holes from whence they fall by gravity onto a splatter board and thus to the ground. The speed of the rotor bar is controlled by a chain drive connected to the "Rooster Wheel*" device that rides on and is rotated by the tractor wheel. Therefore, the speed of the rotor bar is a function of the tractor ground speed. The units sold, so far, are mounted on "doodle bug" tractors

although they could be adapted to sulky mounting if the grower preferred. This machine depends to some extent on gravity flow and thus the delivery rate is not totally dependent on tractor speed, although the rotation of the rotor bar is geared to tractor speed. It is a maneuverable unit and is worthy of careful testing by growers. Some growers have reported that the machine is very maneuverable, has a good distribution pattern, and is easy to calibrate.

The third and most unique piece of equipment to be discussed for granular herbicide application was developed by growers. It is an expansion of the principle used in the design of a small plot spreader used successfully for several years in the weed control research program of the University. The basic unit is a grass seeder manufactured by the Brillion Iron Works, Brillion, Wisconsin. This unit consists of a hopper with holes in the bottom at intervals of about 8 inches. Beneath each hole is located a small cast iron cup into which the granules flow by gravity. The herbicide is moved from this small reservoir by a fluted rotor that lifts the granules over a lip from whence they drop to a splatter board and to the ground. The quantity of material lifted over the lip is controlled by the amount of fluted rotor pushed into the cup and by the speed of rotation of the rotor. Stopping the rotor positively stops all delivery of granules.

The basic seeder unit available from Brillion was modified by placing an additional delivery unit between those on the seeder thus providing a spacing of approximately 4 inches between units. The spreader is then mounted on the front of the sulky frame built by Dana Machine and Supply and the appropriate clutches, motor, and chain drive are coupled in. The result is a maneuverable, lightweight, precise machine with positive shut off. The rate of application may be reduced to very low levels but cannot be raised much above the 100 lb/A of granules due to the limitation of cup and rotor size. Those growers who have this

machine are enthusiastic about its ease of operation and the precision of application. A commercial model of this unit is under development by Dana Machine Co.

Wisconsin cranberry growers have made great progress in the development of equipment for application of herbicide granules. Convenience and accuracy improve with each machine developed. The equipment now available will do

an acceptable job when operated properly.

*Trade mark registered by Gandy Machine Co.

Fiberneer Boxes Stand Up Well

A new packaging material called Fiberneer has been developed by the Forest Service at its Forest



Set Once and Go With GANDY

Treat one bog or a dozen.

You'll apply granular herbicide uniformly with a GANDY Cranberry Special Broadcast Granular Applicator! And you'll do it **easily**—easier than you can possibly do it any other way. **In fact, many growers say this is the only way you can treat your bogs uniformly!**

There are plenty of reasons why. There is only **one** precision cam gauge. You get the same given size for a given setting—once, twice, a thousand times or more! In addition, all openings are always **exactly alike** at any setting. (Because hopper bottom and slide are punched as a mated pair and never separated during manufacture).

You see **QUALITY** everytime you look at this rig. Patented Flo-Control five-bladed rotor shuts off flow when you stop. Patented Rooster Wheel^(R) Drive powers it. Weather tight lid on hopper has double locks. Marker attachment available.

Write Gandy Co., Box 528M, Owatonna, Minn., for information on the Cranberry Special Applicator, and name of nearest dealer.



Owatonna, Minnesota

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Products Laboratory at Madison, Wis., in cooperation with the U.S. Air Force.

It shows promise as a lightweight, moisture-resistant container material with excellent stacking strength.

The new material resembles single-wall corrugated container board. It consists of two sheets of wood veneer, each faced front and back with extensible kraft paper; these two laminations, in turn, are glued sandwichlike to a corrugated sheet.

Pilot experiments at commercial board mills indicate that the new material can be made on high-speed machinery and scored for future folding into boxes.

Fiberneer's remarkable top-to-bottom compressive strength approaches that of triple-wall material, but it is lighter and only half as thick. Performance superior to that of conventional corrugated fiberboard was obtained experimentally under conditions of high humidity.

Boxes made of Fiberneer are being evaluated for resistance to rough handling and for compressive strength after storage in a normal dry atmosphere and a highly humid one—and after immersion in water.

PUAS Countries

We had occasion last month to carefully check the mailing sheet which goes with every second-class publication postal rate which all magazines and newspapers come under. There was one line which we did not understand until it was explained to us by the Wareham postmaster. This says, "copies to Puas countries, including Mexico and Canada." It so happened we mailed 22 to these countries.

Now what are these countries, this Puas Business?

It seems the correct mailing designation of the countries is "The Postal Union of the Americas and Spain," that is countries which Spain once claimed, such as Mexico, Peru, Bolivia etc. It seems the name is derived from the fact that at one time the the fac that at one time the postage rate was the same as for the U. S. A.

State of Wisconsin Assembly Bill 4

January 19, 1965. Introduced by Messrs. KENYON and GEE, by request of Lester Gordon, Secretary of Eatmor Cranberry Assn. Referred to Committee on Agriculture.

AN ACT to amend 97.61(2) of the statutes, relating to the addition of harmless coloring to certain foods.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

97.61 (2) of the statutes is amended to read:

97.61 (2) No person shall sell, exchange, deliver, or have in his possession with intent to sell or exchange, or expose for sale, or offer for sale or exchange any canned fruits, vegetables, meats, fish or shellfish containing any artificial coloring, or any bleaching compound, or any article the sale of which as an article of food or as the constituent of an article of food is made a misdemeanor by any statute of this state. Nothing in this subsection shall prohibit the use, to improve attractiveness without concealing any inferiority of quality in apple and cherry products, or in *artificially sweetened cranberry products*, of a color additive which has been determined safe under the federal food, drug and cosmetic act (21 USC 301-392), provided, the label clearly states coloring has been added.

Notes from Vernon Goldsworthy

"Goldy" writes that he would not be surprised that close to 1,000 acres will be going under sprinkler systems in Wisconsin in 1965.

He, himself, is putting in a system at Tomahawk on a marsh which is of approximately 40 acres. He will use electricity for the pumps as a source of power and use a thermostat so that the sprinklers can go on and off automatically whenever there is danger of frost.

As of mid-January marshes in the central part of the state were still short of water and he expects

there will be some winter injury there.

He says there appears to be a lot of new plantings to be put in in Wisconsin as practically all the growers are planting or adding to their acreage.

HIGH COSTS OF A NEW INSECTICIDE

"The development costs for a new insecticide," says J. A. Field of Union Carbide, "is roughly \$3 million—only one out of 3600 experimental chemicals finally 'makes the grade' and this one must bear the cost of the 3599 others that fail." (The American Fruit Grower.)

Jackson County Has Cranberry Grower Group

The first county level association of cranberry growers in Wisconsin has just been organized in Jackson county, with about 22 members or 70% of the area's growers.

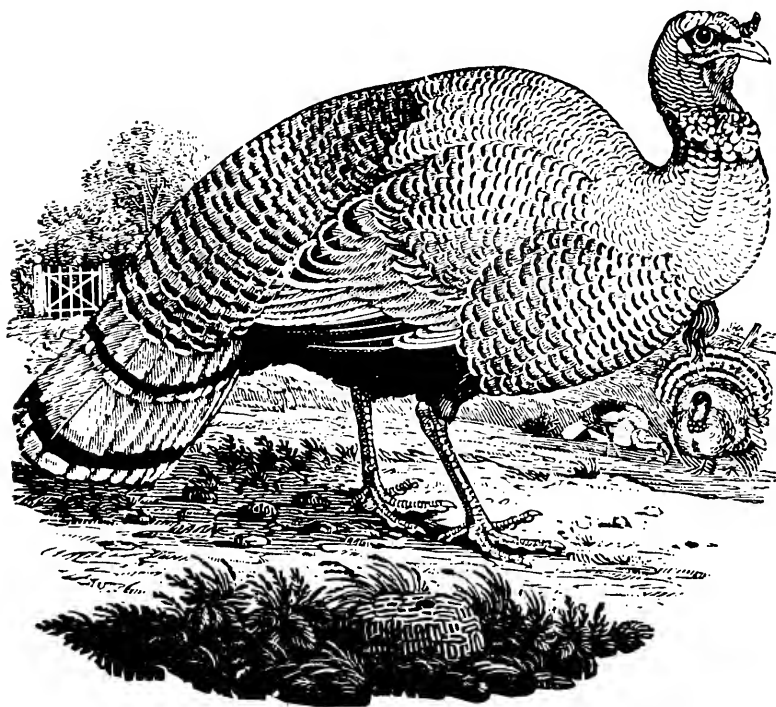
The county group, to be called the Jackson County Association of Cranberry Growers, was organized with the cooperation of County Agent Eugene Savage and it is the intention of the association to promote and further Jackson county cranberry production. The work will be closely coordinated with the various ASC programs with the concentration being on serving the special interests of Jackson county growers.

At a recent meeting the following growers were named to serve as officers: Milton Staeger, Mather; Robert Case, Fred Barber and Carl Nemitz, Warrens; John Roberts, Arthur Janke and Fredrick Gebhardt, Black River Falls.

WHAT'S THE LATEST IN FRUIT PRODUCTS?

Cranberry-orange relish, a new product by Ocean Spray Cranberries will be introduced by a million dollar national advertising program in January, 1965. (from FRUIT-O-SCOPE, the "American Fruit Grower.")

Chloro IPC: Best thing for cranberries since turkey



A treatment now with 20% Granular Chloro IPC on dormant, established cranberries can give your crop a strong start this spring. This selective weed killer from PPG Chemicals does its work against a long list of annual grasses and many broadleaved weeds, with a broad margin of tolerance to cranberry plants. Then Chloro IPC breaks down as temperatures rise, to eliminate buildup or carryover.

Chloro IPC, applied before bud break, controls: annual bluegrass • bentgrass • bluejoint grass • dodder • horsetail • looserstrife • rushes (Juncus) • sickle grass • turkeyfoot grass • velvetgrass (Massachusetts recommendations also include haircap moss, sorrel, hairy panic grass, corn grass, barnyard grass, crabgrass, tear thumb, fireweed and mud rush.)

Uniform, hard Chloro IPC granules are easy to measure and apply

with ground or air equipment. For full details, check your local extension service or write Pittsburgh Plate Glass Company, Chemical Division, One Gateway Center, Pittsburgh, Pennsylvania 15222.

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"Henry, don't lose your temper—there must be a better way
to rid the bog of weeds!"

ADVERTISE YOUR PRODUCT IN
THE NATIONAL CRANBERRY
MAGAZINE

NO SURPLUSES

Each year there are 65 million people added to the world's population. At the present time it is estimated that there are 3.3 billion people on this planet. If the economic problems of transportation and distribution could be solved there would be surpluses of food nowhere in the world, and the agriculture of every country would be pressed to its maximum trying to meet the food needs of the world. It is difficult in this land of plenty to realize that about half the world goes to bed hungry each night. But such is the case. Probing the mysteries of outer space may be of vital importance to the future. But what may prove of even greater importance is solving the problems incident to an ever-increasing population on this planet.

Actually what is happening in the world, each year we are adding enough people to populate a nation as big as West Germany or the United Kingdom. Another significant fact is that more than 56 percent of the world's population, some 1.8 billion people, live in Asia. Latin America and Africa have 16 percent. The remainder, or 28 percent, of the world's people are in North America, Europe, Oceania, and the Soviet Union. At the time of Christ, world population was only about 250 million people. It was after 1800 that the first billion mark was reached. Today, the world is growing at the rate of over two percent per year. At this rate a population doubles in only 35 years. If today's growth rate continues unchanged, the number of people on earth will double to nearly seven billion by the year 2,000.

In recent years there has been growing dis-

GUARANTEED INCOME

satisfaction with federal welfare programs. Even those people who most strongly believe that the federal government should have an increasingly important role in public welfare believe that we are currently spending too much with too little result.

For this reason, economists are looking for a new approach to public welfare. Currently,

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much attention centers on a negative income tax, or some form of guaranteed minimum annual income. For persons earning less than the minimum, the federal government would make up the difference. Instead of paying a tax, the low income person would receive a subsidy.

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Cranberries Photo

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Indian Trail Adds New Item

Indian Trail Foods, Inc., Wisconsin Rapids, Wisconsin, has recently announced the introduction of a new product—Cranberry-Apple Salad with Walnuts, which will complement their Cranberry with Orange product in the frozen food display case. This refreshing taste treat is being marketed in an attractive designed package

that can be displayed either vertical or horizontal.

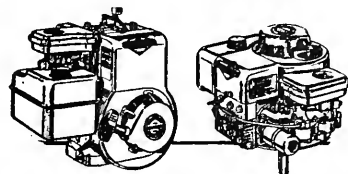
Four-color, coated cartons of Indian Trail's new Cranberry-Apple Salad with Walnuts have an end panel with perforated edges and thumb punch-out for easy opening.

Recipe suggestions are printed on the package.

This new item has an introductory offer of Indian Trail Wonder Cup and attractive point

of sale material is being supplied.

Indian Trail also markets fresh and frozen Whole Cranberries, as well as a line of Canned Cranberry Sauces, Cranberry Cocktail and Apple Cranberry Cocktail.



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Not Much Bog Work At Washington

This has been the coldest winter since 1950 with snow on the ground for a little over two weeks in January. According to the weather bureau our total snowfall was 14 inches during these two weeks, with the most on the ground at any one time being 6 inches. This doesn't seem like very much snow to people who live in the mid-west or eastern part of the country, but it is a lot for this West Coast area.

The work on the bogs is very slow at the present time, with pruning being the chief occupation. This is also a good time of the year to clean out drainage and irrigation ditches and is also a good time to overhaul machinery and other equipment and to order fertilizers and pesticides so that when the weather is right there will be no delay in getting on with the work to be done.

The February cover of the American Fruit Grower depicts an FMC, Florida division Wind Machine in a citrus grove and not on a cranberry marsh as they are in Wisconsin.

CRANBERRY CATCHUP

2½ pounds cranberries

Vinegar

2⅔ cups sugar

1 tablespoon cinnamon

1 teaspoon ground cloves

Wash and pick over the cranberries. Cover them with vinegar and cook until they burst. Force through a sieve. Add the other ingredients, return the mixture to the fire and simmer until thick. Seal in clean, hot jars. Serve as a relish with fowl or meat.

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Mass. Cranberry Station and Field Notes

by IRVING E. DEMORANVILLE

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Personals

Dr. Wes Miller and Dr. Bert Zuckerman attended a course on gas chromatography and operation and maintenance of gas chromatographs help in Union, N. J., on February 11 and 12.

Prof. Stan Norton and Dr. Cross attended the annual meeting of the Hampden Conservation District held in West Springfield, Mass., on February 24. Prof. Norton presented a paper on "Sprinkler Frost Protection."

Seminars

The third cranberry seminar was held on February 3 with Prof. William Tomlinson presenting an excellent discussion on "Life Histories and Present Controls of Destructive Insects on Cranberry Bogs." A very fine group of 35mm. insect slides were also shown.

The fourth seminar, held on

February 10, featured Mr. George Rounsville on "Weather Factors in Cranberry Production with Emphasis on Frost and Frost Protection." A very lively question and answer period followed this presentation.

The fifth of the series was held on February 24 with the writer presenting "Weeds of Cranberry Bogs: Their Propagation, Spread and Control."

The interest in these meetings is continuing with 125 to 135 persons in attendance for each one. The question and discussion period after the formal presentation has also gone on for a considerable length of time. This is fine and exactly what we had hoped for. There has also been a considerable interest in having the formal presentations printed. We are considering having some sort of

proceedings published, at the conclusion of the seminars, for distribution to the growers.

Club Meetings

The February series of cranberry club meetings were held at Kingston on February 16; Rochester, February 17, and Barnstable, February 18. Dr. Cross presented a talk on "The Outlook for 1965," discussing the weather factors influencing the potential crop and management practices that the growers should follow to promote maximum yields. Prof. Stan Norton presented data on his research dealing with water harvesting and bulk handling and storage of cranberries. Mr. Rene Bollinger of the U. S. Fish and Wildlife Service gave a very interesting talk on "Wildlife Problems on Cranberry Bogs." This covered control measures for muskrats, woodchucks and mice, repellent practices for geese, ducks and herring gulls and legal aspects connected with these practices. Prof. Laurence Rhoades of the University of Massachusetts presented information on Electronic Farm Accounting, a new service being offered to farmers.

Frost Warning

The Cape Cod Cranberry Growers Association is again sponsoring the telephone frost warning service. Applications were mailed to

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all growers in early March. If a grower has not received an application, he should notify Mrs. Ruth Beaton, treasurer of the association, Jefferson Shores Road, Buzzards Bay, Mass. There will be no change in assessments or in the frost warning system. There is a spot on this year's application for a donation to the telephone answering service which is also sponsored by the Association and is in operation during the frost season at the Cranberry Station. This is a very valuable part of the

frost warning service and is particularly helpful when a grower may have missed the warning for various reasons. There is a message on the recorder every day during the frost season, whether a frost warning is sent or not. George Rounsville wishes to remind growers using the answering service that the recorded message will not be available before 1:30 in the afternoon or 8:30 in the evening. The frost pad for writing down the message has proved very popular and will be mailed to growers sub-

scribing to the service. All applications and payments should be returned by April 2 in order that the necessary arrangements can be completed prior to the frost season. There were approximately 190 subscribers last season; let's hope there will be an increase this season.

Charts

The 1965 cranberry insect and disease and weed control charts have been printed and will be mailed to the growers in late March or early April. Growers are reminded to carefully read the notes at the top of each chart; there is much valuable information included in this section.

The insect and disease chart has a few changes from last year; 5% carbaryl dust at 50 pounds per acre has been added for cut worm control in the dormant to delayed dormant period and 10% dieldrin granules at 10 pounds per acre added for girdler larvae control in mid-bloom period. Dieldrin E. C. has been reduced to 1 pint per acre for weevil control. The ferbam treatment following a maneb application for the first fungicide spray has been deleted from the chart.

Changes in the weed chart include the addition of casoron as a spring application at 100 pounds per acre of 4% granules for the control of cut grass, manna grass, shore grass, summer grass, blue joint, aster, plantain, marsh St. John's-wort, loosestrife, wild bean, hawkweed, wild strawberry, sorrel, needle grass, nut grass, dulichium, wool grass, cotton grass, mud rush, spike rush, corn grass, crab grass, warty panic grass, pitchfork, ragweed, fireweed, haircap moss, royal fern, bracken fern, sensitive fern, horsetail and dodder. Casoron may also be used at 100 pounds per acre and Chloro-IPC at 75 pounds per acre from April 1 to 10, prior to putting back the late water flood. Alanap-3 has been added as a spring application at 4 gallons in 300 gallons of water per acre, or 80 pounds of 10% granular, for the control of nut grass, cut grass, mud rush, needle grass, spike rush and corn grass. Also

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Cranberries

THE NATIONAL CRANBERRY MAGAZINE

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FRESH FROM THE FIELDS

Compiled by C. J. H.

MASSACHUSETTS

February was the month of considerable snow, but less than normal. On the 25th there was a blizzard which began as snow and then turned to sleet. This was one of a series of storms which left Chicago and Cleveland buried. Rain for this storm was measured at the State bog as .95. The storm ended in a severe thunder and lightning storm. Precipitation for the month as recorded at the State bog was 2.36 inches, of this snow being 3.6.

Average precipitation is 4.12. This was the ninth month in a row with temperatures below normal. The mean was 2.3 below the average mean of 28.

No maximum or minimum records were established.

In spite of the precipitation, sunshine averaged a bit more than usual—59 percent of daylight—compared to 56 percent in the past.

NEW JERSEY

Weather for February

The severity of the winter moderated somewhat during February. There were four days in the month

during which the temperature reached into the 60's and seven days in the 50's. There were enough extremely cold days in the first and last weeks of the month to bring down the average to slightly below the norm. The mean average was 33.9° or about 0.8° below normal.

Rain and Snow

Precipitation during the month totaled 2.14 inches, about .63 below the average for February. There was an inch of snowfall on the 15th and a half-inch on the 22nd.

Oxygen Damage Unlikely

Early in February the maximum thickness of ice on cranberry bogs was 5 to 6 inches. Samples of the floodwater on cranberry bogs taken at this time revealed that the oxygen content ran from 5 to 6 c.c. per liter. It is quite unlikely that

the oxygen level was ever low enough to cause damage during the month.

WASHINGTON

Typical Weather

The February weather has been typical for this part of the country—wet and not very warm, but no freezing temperatures to speak of. The total rainfall for the month was 13.04 inches, which gives a daily average of .47 inch. On five days there was no measurable precipitation. On two days we had over two inches of rain, 2.50 inches on the 4th and 2.22 inches on the 15th. On three days we had over an inch of rain each day. The rest of the time it was just normally wet. On the few days when there was no rain, the weather was

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warm and spring-like—really quite a contrast to the wet days and posed a great temptation to give in to that pleasant malady known as spring fever.

Average Temperatures

The temperatures were above average; the mean high was 47.5

degrees and the actual high temperature was 56 degrees. The mean low was 38.2 degrees. On only three nights did the temperature go as low as 32° or lower. On February 1st the low temperature was 28 degrees; on the 19th, 32 degrees, and on the night of the 28th, 29

degrees was recorded.

Bog Work

Work on the bogs remains fairly slow with pruning and clean-up work being the main activities. Some new ground is being prepared for planting and sprinkler lines, and ditches and dams being repaired where necessary. Everything possible is being done to get ready for the spring rush of planting, spraying and fertilizing which will be upon us soon.

Newly revised are the 1965 Cranberry Insect and Disease Control charts and the 1965 Weed Control charts.

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WISCONSIN

Feb. Temperatures Above Normal

February started out very cold with Arctic air covering the entire state, along with a snow cover of from 7 to 12 inches. A drastic warm-up on the 5th of as much as 60 degrees melted most of the snow in the southern half of the state. Normal temperatures prevailed for the following two weeks, which was followed with above normal the last week. There was scattered snowfalls during the middle of the month, which were quite dry as to water content. At month's end there was little snow cover in the south and about two feet in the far north. Overall temperatures were about normal and precipitation about one-half inch below normal. Frost depths had increased another six inches, giving a depth of almost three feet in the open field areas. Frost depths in the cranberry beds on heavier soils were expected to be

Continued Page 20

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RALPH E. WASHBURN LONG-TIME ASSESSOR AND CRANBERRY GROWER OWNS AND OPERATES HISTORIC McFARLIN BOG

**THIS PROPERTY HAS UNUSUAL STONE FLUME
WHICH WAS BUILT WITH ANCIENT PLANK FLOOR**

By CLARENCE J. HALL

The original cranberry bog, built by Charles Dexter McFarlin, who was apparently the first to build a cranberry bog west of the Rockies and to transport the McFarlin variety, today so almost universally grown on the Pacific Coast, is still in bearing at South Carver, Massachusetts. This bog, of approximately an acre and a quarter in size, may also have been the first bog "scientifically" built. Certainly the sum of \$1,000 represented a very considerable sum to have been expended upon an acre and perhaps a little more, as early as 1874, when this bog is reputed to have been constructed.

Today the owner is Ralph E. Washburn, who has been engaged in cranberry cultivation, although on a relatively small scale, since the 1920's. In 1963 this old bog produced a crop of 130 barrels. This was the peak crop so far since Mr. Washburn has owned the bog. His average production has been 50 to 60 barrels to the acre.

The bog now, however, is no longer set to McFarlins, but has been replanted by Mr. Washburn to Early Blacks, although a few of the older, earlier vines have "come through."

Mr. Washburn in all has about eight acres of bog—about an acre and a quarter just below the McFarlin bog, three acres in the same area farther "downstream," and another piece of about two acres on the Rochester Road, not far from the Atwood property, and has an agreement with the Atwood property owners for a water supply for this.

This old bog, about a mile off the Rochester road through a wooded approach, is in an area which is known as the Indian Brook area, or in an old name has been referred to as "Dex's Meadows."

A description of the building of the bog is contained in "The History of Carver," by the late Henry S. Griffith. He wrote that Charles Dexter McFarlin expended upwards of \$1,000 in building this bog, which was only about an acre or an acre and a quarter in size, and he said McFarlin "constructed more on an experimental than on

financial grounds." Every root was dug from the ground and ditches were boarded and a spirit level used to insure proper grade. He is said to have spread white sand. The date of building is given as 1874.

The property was bought from the McFarlins by the father of Ralph — Charles F. Washburn — who bought it about 1917. He bought this from his brother, the late Harry E. Washburn, who had purchased the property earlier during the first World War and had cut timber at that time when there was much demand for lumber.

When Ralph became interested in the property in the 1920's, the little bog was pretty much run down with trees growing in it—maple trees, which grow rapidly. He said he found remains of the boarded ditches and can still find a piece now and then when cleaning a deep ditch.

The bog is still pretty much in level although it has settled somewhat, especially in the center, and bog edges at some points are higher than the center.

It is tradition that Charles Dexter also built the three-acre reservoir. At least it seems to go "way back" and the late Clayton (Huckleberry Clay) McFarlin, who lived nearby and died about a year ago at the age of nearly 90, has recalled to Mr. Washburn years ago boys and girls pulled the planks in the reservoir to flood the bog for skating before it was intended the bog be flooded for the winter.

Interesting also is a cut-stone flume at the lower end of the bog, which it is assumed was built by Dexter. This flume is about 2½ feet wide, about 5½ feet deep and



SHOWING CLEAN BOG DITCH

Cranberries Photo



RALPH E. WASHBURN

Cranberries Photo

about 10 feet long. It has a wooden floor and Mr. Washburn believes there may be the original planking, as woods can last many years under water. He believes the stone may have been laid up "dry," but he has used some cement as the stones have become loosened.

There may be a few other stone flumes in Massachusetts but, if so, they are rare.

It would seem that, indeed, Charles Dexter McFarlin was far in advance of his time in the scientific laying out of this small bog. It is roughly circular in shape. In those days many a bog in Massachusetts and especially in New Jersey was crudely and roughly

built, often with great tree stumps left in.

Charles Dexter McFarlin was of the famous McFarlin cranberry-growing family of Carver. He was born February 19, 1835. He was the brother of Thomas Huit McFarlin, who is credited with being the "developer" of the famed McFarlin — this being from wild vines he found in the famed "New Meadows" of South Carver, just to the north of the Rochester road, these being vast natural cranberry meadows a very considerable part of which was incorporated later in the property of the Ellis D. Atwood.

He was the son of Sampson McFarlin who, as a pioneer in cranberry activity, added to his income by gathering and selling the wild cranberries of the "New Meadows." Until not too many years ago the McFarlin homestead of Captain William McFarlin stood on the Rochester road, but was destroyed by fire.

Charles Dexter, his brothers Horatio and Jason, all went to the West Coast in the hopes of finding a fortune, and among other enterprises engaged in the search for gold in California. He returned to Carver and it was during this return that he built his "scientific" bog before returning to the West, this time to Oregon, engaging in lumber, eventually settling in what is now Coos County—near a community then known as Empire City—and later there was a branch postoffice with the address of "McFarlin's Marsh." He sent back East for vines, of the McFarlin variety, planted these near the present North Bend about 1885 and this bog is still bearing, now owned by Mr. and Mrs. Frank O. Zorn.

(The story of Charles Dexter was told in considerable detail in the issue of Cranberries Magazine for June, 1943.)

Mr. Washburn, born December 30, 1900, in Carver, has been engaged in this modest way in the cranberry business since the early 1920's. He does most of his own bog work, including frost control and in the harvest is assisted by his son, Erwin Keyes Washburn, who conducts a greenhouse business at South Carver. Harvest is by a Darlington, which Mr. Washburn owns. His berries are marketed through Ocean Spray. Mrs. Washburn takes an active part in the harvest and is most interested and helpful.

On the day he was seen at his bog, he was engaged in sifting and spreading sand in a resanding program. He says this bog is in a "country" with a cold bottom and hence weeds are one of his greatest problems, particularly wild bean.

He has changed the ditch layout of the bog only a very little and today it must look very much as it did when built back in 1874.

Mr. Washburn has been a Carver assessor since March of 1930 and he also served as a town auditor for four years. As Carver has more cranberry acreage than any other town in the world, the valuation of cranberry property is a chief concern of an assessor. A few years ago more than 60 percent of the town valuation came from cranberry property. Today, with a little business coming into this still rural community and the building of many dwellings, both annual and summer, the percentage of cranberry property is about 45 percent.

Carver bases its cranberry assessment on a five-year production average. Mr. Washburn has served as Carver assessor most likely longer than any other and is president of Plymouth County Assessors Association.

John F. Harju

Funeral services for John F. Harju, 87, were held on Thursday, Feb. 18, from the Cornwell Memorial Chapel. The Rev. Vaino Valkio, minister of the West Wareham Finnish Congregational Church, officiated. Mr. Harju, a former cranberry grower, died on Monday, Feb. 15, at the Roland Thatcher Nursing Home in Wareham, where he had been a patient for six months.

Born in Finland, he had resided in Wareham for 62 years, and lived most recently on Blackmore Pond Rd. He was the husband of the late Ida (Ojala) Harju, and was a member of the Finnish Congregational Church in West Wareham.

Mr. Harju is survived by three sons, John of Carver, and Vaino C. and Eino W. Harju, both of Wareham; four grandchildren, two great-grandchildren, and one great-great-grandchild.

Personal Item

Francis Sharpless, cranberry grower of Medford, New Jersey, has been elected chairman of the State ASC Committee for 1965. He is serving his third year on this committee.

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Professor Robert S. Filmer

ROBERT S. FILMER

1902 - 1964

(Taken from *Entogeny*, Department of Entomology and Economic Zoology, Rutgers University)

(Editor's Note: The following was sent to us by Philip E. Marucci, Research Specialist — Entomology Extension Specialist — Cranberries and Blueberries.)

Robert S. Filmer, research specialist in entomology and member of the department since 1929, died of a heart attack at Cottage Grove, Oregon, on October 25, 1964. He was at the time on a vacation trip with his wife Lillian, visiting his sister, Miss Catherine Filmer. Although he had been ill during the previous winter, he had worked with his usual diligence throughout the summer, and thus the news of his sudden death came to us as an especially severe shock.

"Bob" Filmer was born on May 23, 1902, in Stratford, Connecticut, the son of Sterling and Nettie

(Strickland) Filmer. He attended Stratford High School and the University of Connecticut, where he received the Bachelor of Science degree in 1926. Following his graduation he worked for the U.S.D.A., primarily on research on insecticides, in Washington, D.C. In 1929 he came to Rutgers on a fellowship and received his Master's degree in 1930. From 1936 to 1936 he held appointment as instructor in entomology, then became successively assistant professor, associate professor and finally research specialist.

His scientific contributions in published form totalled more than fifty papers, but they are only part of the story. He was an ardent collector, especially of the solitary bees, and was keenly interested in the ecology of these insects. Our museum at Rutgers contains many specimens taken by him, and he exchanged specimens with specialists throughout the country. He was very active in the New Jersey Beekeeper's Asso-

ciation. In his earlier research on bees, he was particularly interested in bee breeding, both for superior productivity and for resistance to European foulbrood. In his later years, he devoted much of his work to pollination studies with respect to orchard crops, alfalfa, blueberries and cranberries. It was especially in connection with the latter crops that his work on the solitary bees was of marked importance. During the past ten years he had also done extensive work on the life histories and control of pests that attack field crops.

For many years Professor Filmer offered a course on Apiculture as part of the undergraduate curriculum, but even more important was the guidance he gave to many graduate students, both those engaged in research under his direction, and those who simply came to him with problems. In the years before World War II he participated in the twelve week short course in Agriculture. Afterward he was a willing contributor to

the many specialty short courses, such as the Pest Control Short Course, the Turf Short Course, and others.

In his personal life, he was very active in church work, serving at the time of his death as an elder in the Highland Park Reformed Church. His chief hobby was photography, and surely many of us recall the beautiful slides he used to show at the department Christmas parties. He was also interested in golf and bowling, and particularly enjoyed travel.

In the passing of Robert S. Filmer, we lose a man, a friend, and a colleague of remarkable tolerance, genial good humor, patience and understanding. He was truly slow to anger, and was always unobtrusively ready with sage counsel and constructive suggestions. His willingness to put aside his own work to help another was a trait that never faltered. He leaves us with a sense of loss that only grows as the days pass.

Wisconsin Growers Again Seek State Marketing Order

Meeting in Port Edwards on January 20th, the Wisconsin Cranberry Growers Association presented state Department of Agriculture marketing specialist Marlon Schweir with a marketing order petition designed to provide research programs and frost warning service by assessing each grower 2¢ per barrel. Last year a similar referendum failed to win a majority of the state's registered volume. Charles Lewis and Tony Jonjak spearheaded the renewed effort, but Ben Pannuk favored voluntary research funds and an expanded 5-year program.

Richard Indermuhle succeeded Bruce Potter as association president. Also elected were: Craig Scott, vice-president; Lloyd Wolfe, secretary - treasurer (succeeding Leo Sorenson); and James Schnabel, Wayne Duckart, and Charles Goldsworthy, directors.

Progress in the agricultural field since 1940 exceeds all previous centuries, according to guest speaker Dr. Glenn S. Pound, dean

of the 2,168-student UW College of Agriculture. Resultant growing pains cited by Dean Pound include: (1) the shrinking rural population, snow merely 6% of the U. S. total; (2) rapid obsolescence of information being taught; and (3) federal support of university basic research programs which tend to ignore production and marketing problems.

A possible cut in the state's \$5.5 million Agricultural Conservation Program (ACP) budget is foreseen by John Hansen, a member of the state committee of the Agricultural Stabilization and Conservation Service. He warned that such a cut might eliminate this source of financing experimental sprinkling system installations.

Describing UW experiments, Dr. M. N. Dana recommended Casoron application from the end of harvesting to May 1st as a safe means of weed control. 2-4D is still best for controlling broadleaf annuals, he said. But creeping sedges remains the most rambunctious pest.

Dr. Donald Boone (UW) advised use of Maneb from July 10 to mid-August to inhibit rot. He also stated that keeping qualities of berries are enhanced by running them through a dryer or dry raking within a half-hour of picking.

HUBBARD-HALL ARTICLE IN NEW ENGLAND HOMESTEAD

The March 1965 issue of the New England Homestead has a lengthy article concerning the Hubbard-Hall Chemical Company of Waterbury, Conn. This concern is an advertiser in *Cranberries* and sells supplies to cranberry growers. It tells of the rapid growth of bulk custom mixing fertilizer plants, the first of these in the northeast being that of the Hubbard-Hall Company. This plant was built in 1962. The article is illustrated by several photographs.

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Nematologist Joins Experiment Station Staff

By D. PETER MCINTYRE

On January 21st the Massachusetts Cranberry Experiment Station procured the services of Robert L. Norgren, a researcher who will assist nematologist Dr. Bert M. Zuckerman in developing new means of preventing microscopic worms (Nematoda) from damaging cranberry plants both above ground and—particularly—in the root structure.

A graduate of the University of Minnesota, Mr. Norgren worked in the Department of Plant Pathology and Physiology on nematode problems involving nursery plants: an urgent matter in the Midwest, where commercial nurseries and landscaping are big business. He has completed his Ph.D. oral examination and will be collecting data

for his doctoral thesis under Dr. Zuckerman's guidance for approximately two years.

Choice of a specific project (possibly involving enzyme or biochemical exploration in co-operation with station personnel) will come later, but for the present Mr. Norgren is conducting preliminary studies designed to isolate specific effects of the parasitic worms, both separately and in conjunction with other destructive factors. The best method to date is the use of sterile culture units where nematodes may be raised and observed under aseptic conditions, free from the confusing presence of all other organisms and micro-organisms. In the photograph, Mr. Norgren is holding incubation tubes in which the tiny beasts gorge themselves on callus tissue of alfalfa roots and multiply. They then are taken from the temperature-controlled incubators and are used to inoculate germ-free host plants growing in the sterile culture units. Effects can be compared with damage wrought on similar host plants by fungi and bacteria, again in the isolation of an uncontaminated environment. When more is known about the separate and specific actions of nematodes, fungi, and bacteria, they will be studied in various combinations—far more damaging to the plant than any one disorder alone.

It is hoped that other experiments will lead to the culture of predacious cannibal nematodes, which feed on the 1,000th-inch-

long plant parasites. Large populations of cannibals will be raised in the laboratory and then unleashed in the bogs. These carnivorous predators attack the plant parasitic variety of nematodes that stunt the growth of cranberry plant roots by producing galls, lesions, and necrotic areas. Such a process might help to control the pestiferous nematodes which plague the eastern seaboard. "From 50 to 500 of the threadlike animals will wash out of a thimbleful of soil scooped up at random," Mr. Norgren observes.

A two-year hitch in the Army in Korea as radio operator and radio repair expert preceded Mr. Norgren's intensive period of study. An avid outdoorsman and sports enthusiast, he hopes—now that the classroom grind is over—to take advantage of Cape Cod's facilities for hunting, fishing, and golfing. Until the present there has been scant time for hobbies either for Mr. Norgren or his wife of five years, Leanora, an experienced secretary and graduate of North Dakota schools who enjoys sewing and looking after their 1½-year-old son, Thomas. The Norgrens make their home in a white house just a stone's throw from the Experiment Station in the woods of East Wareham . . . which makes it eminently convenient for the sportsman-scientist to hunt big game in the forest and small game under the microscope.

CRANBERRY CRUNCH

- 1 cup uncooked rolled oats
 - ½ cup all-purpose flour
 - 1 cup brown sugar
 - ½ cup butter
 - 1 pound can Ocean Spray Cranberry Sauce (Jellied or Whole Berry)
 - 1 quart vanilla ice cream
- Heat oven to 350° F. Mix oats, flour, and brown sugar. Cut in butter until crumbly. Place half of this mixture in an 8 x 8 inch greased cake dish. Cover with cranberry sauce. Top with balance of mixture. Bake 45 minutes at 350 degrees F. Serve hot in squares topped with scoops of vanilla ice cream. Serves 6 to 8.

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CLINTON MACAULEY ELECTED PRESIDENT

Annual Meeting American Cranberry Association in Jersey

The Annual Meeting of the American Cranberry Growers' Association was held at the Fireside Restaurant in Mount Holly on February 18th, with Captain John Haines presiding. A good attendance of growers heard reports from research specialists from Rutgers University.

Reports

These reports, which will be published in the Proceedings of the American Cranberry Growers' Association, were as follows:

Cranberry Fruit Rot Control—Allan Stretch, USDA and Plant Pathology Dept.

Evaluation of the Helicopter and Fixed Wing Aircraft As a Means of Applying Fungicide to Cranberries — John Springer, Plant Pathology Dept.

Cranberry Nutrition and Its Relation to Fruit Rot — Mrs. Joyce Torio, Horticultural Dept.

A Progress Report on Minor Element Studies on Cranberries—Paul Eck, Horticultural Dept.

Some Thoughts on New Sprayers for Cranberry Bogs — Martin Decker, Agricultural Engineering Dept.

Cranberry Pollination and Cranberry Insects — Philip Marucci, Cranberry and Blueberry Lab.

Resolutions

Ed Lipman and Steve Lee, the cranberry group's delegates to the

New Jersey State Agricultural Convention, reported on their success in putting forth three resolutions of interest to cranberry growers. One resolution urged that the Eminent Domain Revision Commission take action to bring about more equitable dealings with farmers in the State acquisition of farm lands. The second resolution dealt with the Green Acres Program which is chewing up New Jersey cranberry acreage at a great rate. It urged the State to desist from acquiring productive farm land unless it was absolutely necessary and recommended that payments be made to municipalities in which "Green Acres" are acquired to compensate for loss of taxes. The third resolution put the Convention on record as protesting to the decrees emanating from the United States Secretary of Labor regarding increases in minimum wages for farm labor.

The group heartily endorsed the work of the Frost Committee and, in appreciation of its efforts, voted an honorarium to the Committee members — Isaiah Haines, Joseph Palmer and Eddie Budd.

The Association went on record as declining the invitation of the New Jersey State Horticultural Society to meet with them at their Annual Meeting in January, 1966, at Cherry Hill. It was felt that local meetings were far more effective in bringing out the members.

The group spread upon the minutes their expression of sorrow at the death of Anthony R. DeMarco and William Albert Jarvis since

their last Annual Meeting.

Officers Elected

The following new slate of officers were elected:

President — Clinton Macauley, Tuckerton, N. J.

Treasurer — Paul Eck, New Brunswick, N. J.

Secretary—P. E. Marucci, Pemberton, N. J.

First Vice-President—Walter Z. Fort, New Lisbon, N. J.

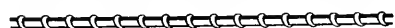
Second Vice-President — Earl Kerschner, Chatsworth, N. J.

PHILIP E. MARUCCI, *Secretary*

New Varieties To Canada By Vernon Goldsworthy

A letter from Vernon Goldsworthy, president of Cranberry Products, Inc., Eagle River, Wisconsin, states that he will be shipping vines to Nova Scotia, Quebec, Manitoba and British Columbia. These will be vines of the new varieties, such as Stevens and Pilgrim. He says that Canadian growers are very interested in the cranberry business and, in his opinion, the industry there will develop considerably. There is unlimited land.

He is also to try an acre of Casoron on the ice and then sand and see what the results are. He does not think anyone else has done this as yet, and he wants to see if it is feasible, as certainly this would be an easy way of spreading Casoron.



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Fertilizer Requirements Of Cranberries

by

Dr. Charles C. Doughty
Formerly

Director of Coastal Washington station,
Long Beach, Washington

Cranberries like all other plants require certain elements in the nutrient solutions and gases which they absorb for vigorous, and healthy growth. Sixteen or eighteen elements compose the main requirements of all plants including cranberries. They may be divided into three groups, namely those which are absorbed from the air and water, and macro-elements absorbed from the soil and the micro-elements also absorbed from the soil.

The elements oxygen, carbon and hydrogen are absorbed from the air and water. They are the principle components used in the manufacture of various types of sugars and carbohydrates within the green parts of the plant.

The micro-elements* consist of Nitrogen (N), phosphorous (P), potassium (K), calcium (Ca.), sulfur (S) and magnesium (Mg.). The term micro-element indicates those elements absorbed from the soil which the plant uses in relatively large quantities. We are the most concerned with the first three, i. e., nitrogen, phosphorous and potassium, since these are the ones used in greatest quantity by the plants. For this reason they are the principal ingredients of commercial fertilizers. The last three in this group (calcium, sulfur and magnesium) are essential for plant growth but generally are present in sufficient amounts in most soils in this area for normal growth. Although at times all or any one of these three may be deficient or below the level necessary for plant growth.

The micro-elements* are those which are used by the plant in very small amounts. These are iron (Fe), Zinc (Zn), manganese (Mn), copper (Cu), molybdenum (Mo) and boron (B). Four other elements may be found in various plants. These are chlorine (Cl), silicon (Si), aluminum (Al) and sodium (Na). These latter four are not known to play a positive roll in plant growth. There is some evidence, however, that some plant species benefit from

* macro-element = major element,
micro-element = minor element

their presence. Most plants will show various deficiency symptoms if any one or more of the first six are not present in the soil. At the same time excessive amounts, i. e., amounts exceeding the small quantities needed by the plants, become injurious to the plant. Boron for example becomes a potent herbicide if it is used in quantity.

The research in uses and effects of fertilizer elements at the Coastal Washington Experiment Station has been mainly concerned with nitrogen, phosphorous and potassium. Two series of fertilizer trials were conducted during the period 1949 to 1959. The first series concerned with various rates of N (0, 10, 20 and 40 lbs. N per acre) along with P (0 and 72 lbs. P205 per acre). The optimum rate of nitrogen application proved to be 20 lbs. N per acre on the experiment station bog. Ten pounds of N did not maintain the vine growth adequately, whereas, 40 lbs. of N induced excessive vine growth in too many cases. However, the following NPK rates per acre had the higher yields in 1954 after five years of continuous treatment.

Treatment lbs. per acre	Yield lbs. per plot.
N-P-K	
1. 40-72-0	75
2. 20-72-102	71
3. 40-0-102	70
4. 40-72-102	65
5. 20-0-0	64
6. 20-0-102	60
7. 40-0-0	57
8. 10-0-0	37
9. 0-0-0	25

The last two rates here are for comparison. Keep in mind that these yields were on an old bog. Young bogs probably would respond entirely different. According to statistical analysis the first seven yields are all significantly greater than the 10-0-0 and 0-0-0 rates. In three out of the five years, rates 1, 2, and 3 listed above were highest. Statistically there is no significance between these rates. There was, however, a significant difference between the 40-72-0 and 40-72-102.

The tests to determine which type of nitrogen fertilizer and time of application is best for cranberry production in Washington were conducted from 1955 to 1959 inclusive. These tests included four types of nitrogen

fertilizers all applied at 20 lbs. N per acre; sodium nitrate, ammonium sulfate, ammonium nitrate and urea. Four times of application were as follows (1) 20 lbs. N applied in Sept., (2) 10 lbs. N in Sept. and 10 lbs. N in Spring, (3) 20 lbs. N in spring and (4) 10 lbs. N in spring and 10 lbs. N after blossoming.

Results from these tests indicate that ammonium sulfate applied as a spring application has the greatest one half after blossoming. Ammonium nitrate plots showed no significant difference between the different times of application. Although, the one half fall and one half spring application had the highest yield, all were moderately high. Urea treated vines on the other hand had the highest yields on plots treated all in the spring or one half spring and one half after blossoming. Here the lowest yield was from the split fall-spring application. One further item that may be of interest Ammonium seemed to cause more soft berries and rots in storage than other types.

Phosphorous and potassium fertilizer trials conducted from 1955 to 1959 produced some small differences but nothing very definite. In these trials the Nitrogen was held constant at 20 lbs. N per acre in all treatments. It is possible that at higher rates of nitrogen results from this test may have been different. These rates of P205 (0, 80, 102, and 160 lbs. per acre) and K20 (0, 50, 100, and 200 lbs. per acre) were used alone and in all possible combinations.

Results indicate that there is no need to go to high rates of phosphorous and potassium unless soil tests show a very low supply of P and K in the soil. The only benefit from high rates of either the P or K or both found in these trials is that excessive vine growth on overly vigorous vines can be reduced by applications of 0-160-200 per acre. This rate would be rather costly except as spot treatments on overly vigorous vines.

Several factors should be considered when fertilizer programs are planned. The way N, P and K are applied determines to some extent the number and the rate of development of fruit buds that are obtained for the next years crop. Reports received from other experiment stations and observations made here indicate that cranberry vines tend to go more to

vegetative growth and less to fruitfulness when nitrogen is applied entirely in the spring. Some nitrogen prior to the hook stage is necessary if optimum hook, blossom development and fruit set is to be obtained. The linear growth of uprights and runner growth slows down when fruitbuds begin to form. Observations made on recent fertilizer trials indicate that applications of fertilizer soon after this time will aid in stimulating fruit-bud formation with a much reduced runner growth. All things considered, a split application of a balanced fertilizer, one half in the spring just prior to the hook stage and the other half applied in late July or early August would be most beneficial.

Preliminary information from the greenhouse nutriculture experiments indicate some further benefits that may be possible from a well planned fertilizer program. The balanced fertilizers with the higher rates of NP produced a greater number of fruiting upright although it tended to reduce the number of blossoms per upright. The higher rates of P reduced the number of runners and the dry weight of the runners while the effect of the higher rates of the combination NK and PK was to reduce the number and length of the runners. Higher rates of N alone stimulated excessive runner growth. Before these effects can be determined for sure, more research will have to be conducted.

Based on these observations and data the fertilizer applied to cranberry bogs should be a balanced one such as an NPK ratio of 6-15-10 or a 6-15-20 or a multiple of these ratios. Preferably one with the percentage of phosphorous higher than the percentage of potassium. The Massachusetts Experiment Station has recommended a 5-10-5 or an 8-16-8 ratio. There are a number of good balanced fertilizers on the market. For example 5-10-5, 8-24-8, 10-20-20, 6-10-4, 6-20-20, 6-20-10, etc. Determine the amount of a complete fertilizer need per acre by the amount of nitrogen required. Separate fertilizers of nitrogen, phosphorous and potassium can be purchased and mixed to any formulation desired.

To determine when a bog needs additional fertilizer watch the growth of the vines and fertilize accordingly.

In mid-summer the cranberry leaves begin turning a reddish-brown color at times before they normally should. Two of the things which can cause this are a shortage of moisture or nitrogen. Application of a balanced fertilizer at this time along with sufficient moisture will keep the fruit buds developing in good shape. Both phosphorous and potassium can be pur-

chased separately and applied in the spring. If this is done then urea or some other all N fertilizer may be applied in mid-summer. One note of caution should be added here. Over fertilization late in the growing season with nitrogen tends to prolong vine growth late into the fall and makes the berries soft and slow in coloring. Fertilizer needs should be



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With the holiday season at hand, a talk on cranberries was given at a recent meeting of the Ilwaco-Long Beach, Washington Kiwanis Club. It concerned the new Peninsula plant for cleaning a \$600,000 Peninsula crop. The talk was the major address of the meeting. Chairman Leonard Morris introduced J. Wilson Blair, plant manager as the speaker.

Mr. Blair emphasized the importance of the only substantial farm crop in the area, pointing out that for the 1964 crop, 33 growers, (including four from nearby Clatsop County, Oregon), brought cranberries in to the new plant built by Ocean Spray Cranberries, Inc.

Blair explained that a major problem faced by the Southwest Washington growers is the weed and trash problem.

He then went on to explain the new equipment available at the plant which includes a 15 horsepower blower which at full capacity could blow away not only all the trash but all the berries as well. A foaming agent is used in a water process to provide density so the berries which are sound will enter a proper cylinder and poor berries are discarded.

It is due to the new methods of delivery at the plant that the recent harvest was speeded up as much as 25 percent. Hand sorting depended upon the individual grower, has in the past made for varying degrees of cleaning. The machine on the other hand, means that by the centralized operation, all of the berries are cleaned with like thoroughness, according to Mr. Blair.

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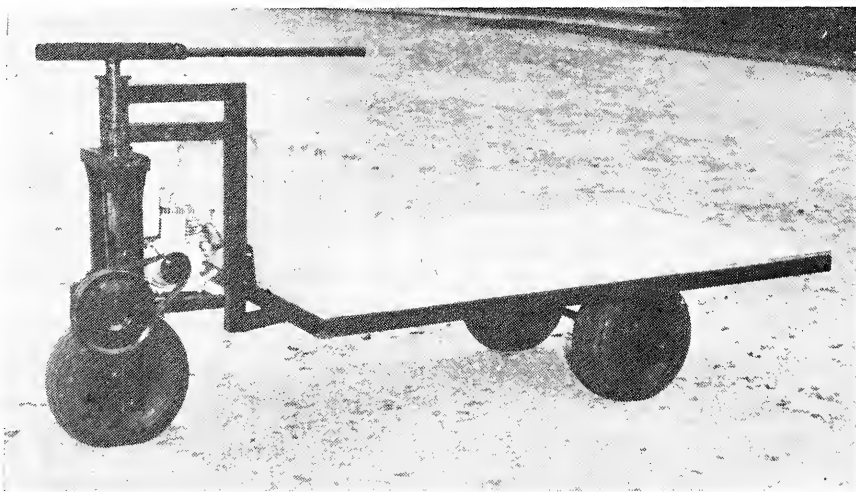
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Crabberies...

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YEAR ROUND USE OF CRANBERRIES was dramatically illustrated at a press conference recently, as a new marketing concept was put into action with introduction of new cranberry products. Introducing the new products were Ocean Spray Cranberries, Inc. alert new personnel (left to right) Pat Dudensing, Advertising Manager; Janet Taylor, Head of Home Economist Dept.; Ed Gelsthorpe, Executive Vice President; Mr. George Olsson, President of the cranberry cooperative; Ed Lewis, Vice President and Marketing Director; Lester Haines, Manager of Consumer Sales.

Photo Courtesy Registry Pictorials

Group from Cranberry Products Inc. Returns to Wisconsin from Extended West Coast Trip

Vernon Goldsworthy, president of Cranberry Products Inc., of Wisconsin, his son Charles, and Ralph Sampson, also Cranberry Products plant superintendent Bill Wollum, have returned from the Cannery Convention in San Francisco.

The group visited the cranberry areas in Washington, Oregon and

British Columbia. "Goldy" reports a very definite optimistic feeling by the growers of the West Coast that the cranberry industry is headed for a bright future.

"Goldy" says of British Columbia they are doing quite a lot of additional planting, and certainly this area has quite a potential, if the people in this area care to develop it for cranberries. Raw land itself is around \$500 an acre and I think eventually all of the growers will have to put in sprinkling systems in order to be sure of a crop every year. Most of the growers are interested in water raking, but the beds have not been laid out with this in mind, but a new development such as Norman Holmes' is being patterned after the Wisconsin method, and some of the old marshes there are putting in frost dykes so that they can water rake.

Berries on the West Coast seem to be well suited for Cocktail and in this respect are better than Wisconsin berries, as they have the deep color which comes with late harvest.

Cranberry Products, Inc., has paid \$14.75 for fresh fruit and has advanced \$12.00 on canning berries.

Almost everyone in Wisconsin is planting additional acreage and is very optimistic for the future of cranberry growing.

British To Eat Cranberries And Turkey For Easter

Cranberry Institute reports over the Easter period 1965 a special co-operative advertising campaign has been planned with the British Turkey Federation to promote Cranberries for Easter to be eaten with Turkey. Full color pages and full black-and-white pages in newspapers and magazines are scheduled and the coverage exceeds nine million readers. Planning is under way to co-operate with British Turkey Federation and turkey breeders for Christmas 1965 and it is anticipated that the twelve million turkeys sold throughout Great Britain at Christmas will carry some form of promotion for American Cranberries.

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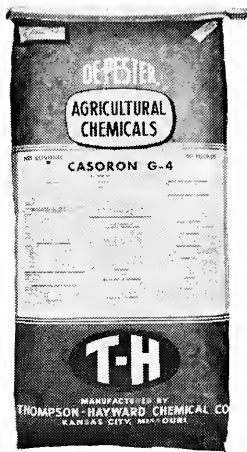
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Hair cap Moss
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(Manna grass)
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Bent Grasses
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Crabgrass
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Parkhurst Farm & Garden Supply
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In view of the fact that of all meats eaten in Great Britain more roast lamb and roast mutton are consumed than any other meat, it is envisaged that a special promotion to sell American Cranberries through butchers' shops could be implemented, thus attempting to sell Cranberries together with meat and, of course, with poultry.

GILBERT T. BEATON IN HOSPITAL FOLLOWING SURGERY

Gilbert (Gibby) Beaton, of Jefferson Shores, Buzzards Bay and General Manager of export and fresh sales for Ocean Spray Cranberries, Inc. underwent surgery at Tobey Hospital, Wareham, Mass. His condition on the 13th was reported by the hospital as "satisfactory." How long he will be hospitalized was not known at that date.

SECOND CRANBERRY HOUSE IN ORLEANS ON CAPE COD

A second Cranberry house, modeled on the original house in Onset, Mass., will be opened by Ocean Spray Cranberries, Inc., in Orleans on the Cape in time for the coming summer season in Southeastern Massachusetts. The new Cranberry House is located in the town's village shopping center.

In the luncheonette bakery visitors will be introduced, as they are at Onset, in more ways to enjoy cranberries at all seasons.

"We are happy to locate our second Cranberry House in another southeast Massachusetts community, the fast-growing enterprising town of Orleans," says Edwin T. Moffit, director of retail sales.

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Kingston, Massachusetts

Wilbur P. Jepson

City Point Wis.—Wilbur P. Jepson, 45, former operator of a cranberry marsh here, died March 4 at his home, the victim of a heart attack.

Funeral services were held at the United Church of Christ, City Point, Wisconsin with Rev. Paul Schippel officiating.

Mr. Jepson was born Feb. 3, 1920 in City Point and was educated here and at a diesel school in Minneapolis. After serving in the Army Air Corps from October, 1941 to the fall of 1945 he resided in Baltimore, Md., before returning to City Point in 1947.

His marriage to the former Mabel Sadler took place April 3, 1947, in Annapolis, Md.

Mr. Jepson is survived by his wife; a son, David, at home; two brothers, Herbert C. Jepson, City Point, and Frank C. Jepson, Arpin; and a sister, Mrs. Simon Kulinick, City Point.

FERTILIZER REQUIREMENTS OF CRANBERRIES

Continued from Page 15
determined by the linear growth of the uprights, the number of uprights per square foot as well as the amount of runner growth. Remember too many uprights per square foot will reduce yield as well as not enough uprights.

FRESH FROM THE FIELDS

Continued from Page 6
greater in the southern marshes due to the absence of heavy snow cover during the latter part of January and early February. The extended outlook for March calls for below normal precipitation and above normal temperatures.

Much Ice Sanding

Sanding operations were continuing during the month in order to get finished before the March breakups. Reservoir ice in the south built up rapidly in late January and early February, with some areas reporting over thirty inches.

Two Fires Destroy Buildings

A number of growers were taking their winter vacations during February, while a number now spend most of the winter in warmer climes.

Two storage and repair building fires have occurred recently, one on property of Vernon Goldsworthy and the other on the Badger Cranberry Company of C. L. Lewis. Much equipment and supplies were lost in both blazes. Some insurance was carried in both cases.

MASS. CRANBERRY

STATION AND FIELD NOTES

Continued from Page 4

during this period, kerosene at 600 to 800 gallons per acre for control of poverty grass. Casoron has also been added to the after harvest section at the rate of 100 pounds per acre of 4% granules for the control of cut grass, blue joint, summer grass, needle grass, nut grass, aster, marsh St. John's-wort, loosestrife, wool grass, cotton grass, mud rush, ragweed and sphagnum moss. Deletions on the weed chart included kerosene treatments for dulichium and cotton grass, iron sulfate treatments for haircap moss, sand spurry, smart weed and dodder, all fuel oil treatments, salt spray for wild bean, copper sulfate spray for nut grass, simazine treatment for manna grass and sand spurry, Chloro-IPC treatment for mud rush and horsetail, dalapon treatment after harvest for summer grass, cut grass and warty panic grass and stoddard solvent treatment after harvest for rushes and aster.

Weather

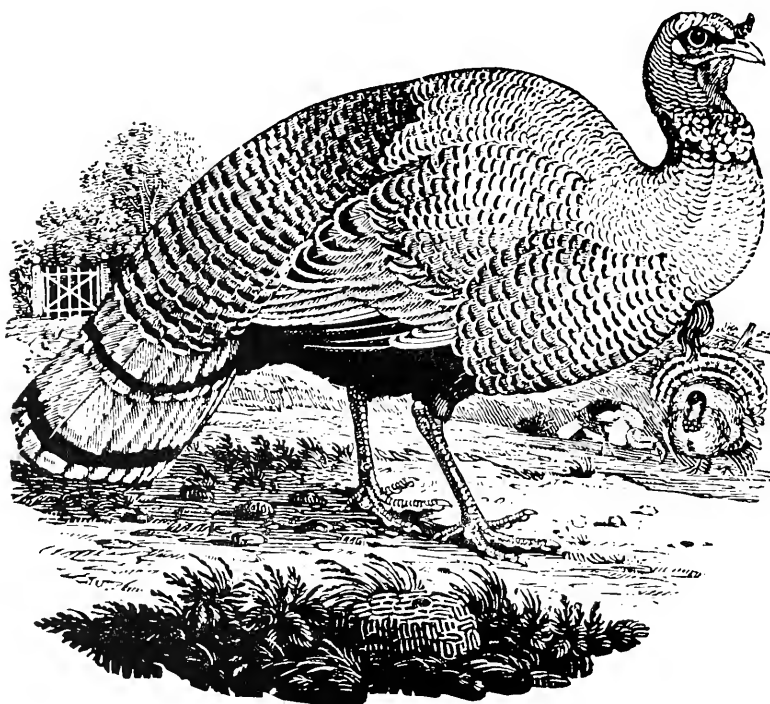
The month of February continued the pattern of cold temperatures that have now lasted for nine consecutive months, with the month ending up more than two degrees a day below normal. We approached winter killing conditions, with high continuous winds and below freezing day and nighttime temperatures, on the weekend of the 19th to the 21st and some bogs that had lost the snow and ice cover were reflooded. Precipitation for the month totalled 2.36 inches, which is one-third below the 30-year average at East Wareham. Snowfall was light, only 3.6 inches, or one-half of normal, after a record-breaking January.

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Chloro IPC, applied before bud break, controls: annual bluegrass • bentgrass • bluejoint grass • dodder • horsetail • loosestrife • rushes (Juncus) • sickle grass • turkeyfoot grass • velvetgrass (Massachusetts recommendations also include haircap moss, sorrel, hairy panic grass, corn grass, barnyard grass, crabgrass, tear thumb, fireweed and mud rush.)

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EDITOR'S NOTE

(Members of the industry have been invited to contribute articles and editorials during Mr. Hall's convalescence from a serious illness. The first of these is by George C. P. Olsson, President of Ocean Spray Cranberries, Inc.)

GUEST EDITORIAL

The improvements in the cranberry business which first became apparent less than two years ago can be attributed to several factors. The first, perhaps, was the effect of the marketing order in bringing the industry from a surplus condition to a situation of balanced supply and demand. At the same time, the purchase of approximately 265,000 barrels of cranberries by the United States Department of Agriculture over a period of three years, for the School Lunch Program, contributed much to keep the return to growers from being less than the cost of production.

New and aggressive management at Ocean Spray with the subsequent promotion of Cranberry Juice Cocktail on a national basis has been a giant step forward; this plus the introduction of new product lines has enabled the industry to use all the cranberries harvested in 1963 and 1964, without the use of the marketing order set aside or a School Lunch Program in 1964.

One of the first direct results of all of these factors has been substantial increase in return to growers. Another is the opening of the market for cranberry properties at greatly increased price per acre as compared to the prices received in the last five or ten years. There has been much activity in the cranberry real estate market in the last year and a half. Some transactions involved sizeable acreage.

As a result of the increased dollar return per barrel, growers have been investing more dollars to improve their bogs and increase the yield of existing acreage.

One of the principle steps forward in Massachusetts has been the increased acreage put under overhead sprinklers. This should eventually eliminate the losses caused by frost and drought, increase yield per acre, and thereby reduce the cost of production of cranberries per barrel. Sprinkler systems will have

CLARENCE J. HALL
Editor and Publisher

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New Jersey

P. E. MARUCCI
New Jersey Cranberry and Blueberry Station
New Lisbon, New Jersey

been installed covering approximately 1800 acres during the four years from 1962 to 1965.

We must not lose sight of the fact that we must all adopt cultural practices which tend to produce high quality fruit. The handlers and processors can only offer to the public the quality product which we as growers deliver to them.

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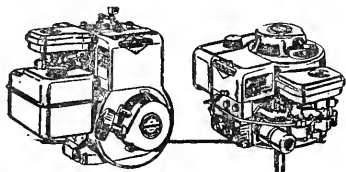
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Mass. Cranberry Station and Field Notes

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

Cranberry Seminars

The sixth in the series of cranberry seminars was held on March 3 with Dr. Bert Zuckerman and Robert Norgren speaking. The topic was "Fungus and Virus Diseases of Cranberry Vines with comments on the Ectoparasitic Nematodes of Cranberry Soils." The group present was given the opportunity to examine under microscopes some of the rot fungi and nematodes that are found in cranberries and cranberry soils.

The final seminar was held on March 10 with Dr. Cross and the Extension Specialist holding forth. In contrast to the earlier meetings where only one topic was discussed this meeting covered a number of subjects. "Cranberry Pollination, Fertilizer Practices and Cranberry

Varieties" were covered.

We are planning to have each talk written by the individual that presented it. These will then be printed and bound as a proceedings by the University of Massachusetts. We are hopeful that copies will be available in the near future.

The writer would like to take this opportunity to thank everyone who helped make this project a success. There is considerably more work involved than meets the eye in making a series such as this into something worthwhile and not a sloppy mess. First of all, the men who presented information have a great deal of pride in their work and spent considerable time and effort in organizing and preparing their subject. They will also spend more time in preparing the

material so that it is in printable form. The outlines and manuscripts had to be typed and corrected and then re-typed. In addition, questionnaires were sent out, programs prepared and mailed, a suitable hall rented and many other dull details taken care of before "the show could go on the road." This was a fine group effort and once again, thanks to each and everyone who played a part in making this project a success.

Club Meetings

The March series of cranberry club meetings were held at Kingston on March 16, Rochester on March 17 and Barnstable on March 18. Prof. William Tomlinson presented a talk on "Cranberry Insect Control," and also discussed his work with black light traps. "Bill" also presented some interesting information on the sex life of the cranberry fruit worm moth. Dr. Bert Zuckerman spoke on fungicide trials and some of his work with nematodes. Dr. "Wes" Miller, our Station biochemist discussed "Pesticide Residue Problems" and explained some of the work he would be engaged in. The writer talked on "Weed Control for Cranberries" with the major em-

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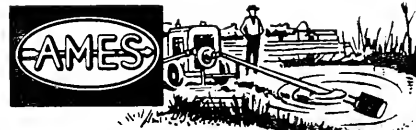
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The clubs elected officers for the new season. The South Shore Club in Kingston re-elected "Stan" Briggs president; "Larry" Cole, vice-president, and "Bob" Alberghini, secretary - treasurer. The Cape Cod Club elected Carleton Collins president; Raymond Thatcher, vice-president; Mrs. Hollidge, secretary, and Victor Adams, treasurer. The Southeastern Massachusetts Club in Rochester elected "Bob" St. Jacques president; "Dave" Mann, vice-president, and Russell Hiller, secretary-treasurer.

Weather

The month of March continued our cold pattern by being nearly 2 degrees a day below normal in temperature. This is the tenth consecutive month with below normal temperature. Precipitation totalled only 1.82 inches, or approximately 3 inches below normal. Snowfall was only 4.4 inches, which was also below normal. Back in the Decem-

ber issue of this magazine, mention was made in this column of Dr. Franklin's theory that if the months of April and November were below normal in temperature, the winter was apt to be severe. This theory was certainly borne out this winter. All four months had below normal temperatures and the total snowfall was about 70% above the 30-year average, with January recording the largest total monthly snowfall on record at the Cranberry Station.

Frost Service

The Cape Cod Cranberry Growers Association is again sponsoring the telephone frost warning service. The telephone answering service at the Cranberry Station will also be in operation again this season. The answering service number is Wareham 295-2696 and is not listed in the telephone directory, being intended only for the use of the cranberry growers. The radio stations will supplement

the above services and are listed below.

Preliminary Keeping Quality Forecast

The Preliminary Keeping Quality Forecast was issued by the Cranberry Station on April 5, it reads as follows:

"Weather records through March show three points of a possible ten in favor of good keeping quality in this year's cranberry crop. Two current weather trends, however, are established and may persist through the spring: (1) Temperatures are running below normal, and (2) precipitation is averaging subnormal. We forecast fair to good quality fruit.

Two other considerations should receive careful attention before the grower determines his management program: (1) in many areas water supplies are very short, and (2) it is increasingly profitable to raise good quality cranberries. "Late water" conserves dwindling water supplies, protects from frost as long as it is held, and it usually results in superior quality fruit."

— Dial —

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WPLM	Plymouth	1390 k.	99.1 mg.	2:30	9:30
WOCB	W. Yarmouth	1240 k.	94.3 mg.	3:00	9:30
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THE NATIONAL CRANBERRY MAGAZINE

Issue of April 1965 — Vol. 29, No. 12

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Published monthly at Wareham, Massachusetts. Subscriptions \$4.00, Foreign, \$5.00 per year.

FRESH FROM THE FIELDS

Compiled by C. J. H

MASSACHUSETTS

Early March a Plus in Temperature

The temperature to the fifth of March was a plus 21. Rain came on the fifth, and there was a plus of 31 in temperature. There was rain on the sixth amounting to .37 hundredth of an inch. By the 11th the plus had increased to 58. March to that date was more like April with the frequent showers and also not very much wind, as March normally is the month of high winds.

Turns Colder

On the 11th, the weather turned cold with a minus four degrees. But the month was still a plus 52, with the departure from normal minus 6 and departure from normal since the first of the year with departure from normal of 2.39.

Crocus in Bloom March 13

Crocus were in bloom on the 13th, attesting perhaps to an early spring.

Heavy Frost

The morning of March 16 saw a heavy white frost and a temperature of 17 degrees was reached. There would be no harm to the

vines from this as the water was just being taken off and the vines, according to Dr. "Chet" Cross, Mass. Experiment Station, the vines could have stood zero.

Water Coming Off

By the 16th the water was being drawn from most bogs and spring work had begun.

Snow March 18

On the morning of the 18th people of Southeastern Mass. (the cranberry region) awakened to find some snow on the ground, less than a half-inch, but nevertheless snow at that late date.

Heavy Snow March 20

A heavy snow with high winds developed over the cranberry area. A total of three inches fell as recorded by the Massachusetts Experiment Station. This was the first day of spring, but it certainly was

anything except spring-like in the month of March, which was very freakish. The departure from normal that day was 11 degrees minus. Still the temperature for the month to that date was a plus 45 degrees. Since January 1st, there was a minus of 178 degrees.

The temperature for the 21st was a minus 14.

More Light Snow

The night of March 23 brought rain, turning to snow enough to whiten the ground. That day was one degree colder than normal.

On the 26th there was heavy rain, which turned into thick fog at night-fall, making driving hazardous.

March was a minus 14 by the 28th.

More Snow

On the 29th there was a snow-

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fall of anywhere from an inch to four over the cranberry area, and this remained on the ground until the 30th.

March Goes Out Lion-Like

The 30th of March was cold with a departure of 11 from the norm. The last day of March was bright and sunny, but bitterly cold with a north wind. March ended more like early March or February. March came in lamb-like, but it went out like a lion, with the final day a cold minus 15 degrees.

The departure from normal for the month was minus 54, and since January 1st, 252.

Rainfall Down

The average rainfall for March is 4.39 inches, but this March as recorded at the Cranberry Station was only 1.80 inches, of which 4.40 was in the form of snow.

Cold Holds Crop Back

Dr. Cross said the cold weather was holding the crop back and thus delaying the time for frost protection. On the whole, he called

it a favorable month.

Water Supplies Not Good

He also said the water supply for the frost season fair in Barnstable County (Cape Cod); not so good in lower Plymouth County and for the inland bogs especially scanty.

April Starts Cold

April 1st fooled everybody by being a day not at all like April, but the day brought a biting wind that chilled to the bone, even though the day was sunny. Departure from normal was minus 7. April 2nd brought another chilly day with a light fall of snow in the cranberry region.

Got Warmer

On April 4th there was no departure from normal, but the departure from normal for April was a big minus 17 and since January 1st, 269. On the 4th, the weather turned warmer and it appeared spring had come to the cranberry area. Robins were being seen and

the tree toads, or "Pink Winks," were peeping.

NEW JERSEY

March Cold

March was considerably colder than normal. The temperature averaged 38.9° F., about 3° colder than normal. Five days with minimum temperatures below 20° F. more than cancelled out the two warm days when the temperature rose to above 60. The lows of 13 on March 21st and 15 on the 22nd were records for those dates.

Rainfall Up

The recent trend for drier than normal months was reversed during March. Rainfall totalled 4.26 inches, or about .58 inches more than the average for this month. This was only the second in the past 11 months during which it has not been deficient in rainfall. At the end of March the total 1965 precipitation stands at 9.37, or only .39 less than normal.

OREGON

A meeting of the Southwest Oregon Cranberry Growers was held last month in Therese Hall, Bandon. Several growers had questions regarding the use of herbicides for weed control in cranberries. Garvin Crabtree, of the OSU Department of Horticulture, discussed 1965 cranberry weed control, recommending the use of Caseron. There was also discussion as to methods of application.

The discussion on herbicides was in conjunction with a growers' association meeting and it began with a pot luck supper. Those attending brought a hot dish, salad and dessert. Meat was furnished.

The meeting was so well attended that seating space ran out, and a large hall will have to be used next time.

Temperatures

The Bandon area had wonderful weather and March had been a lamb (at least to the 13th). Temperatures were as follows: the first, 65 degrees; the second, 69; third, 65; the fourth, 64; the

Continued on Page 22



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"STAN" BRIGGS, DUXBURY, MASS., IS OLERICULTURIST, GROWING CRANBERRIES

**HE ALSO IS EMPLOYED BY THE UNITED STATES
DEPARTMENT OF AGRICULTURE—WANTS TO BE
A FULL-TIME CRANBERRY GROWER**

By CLARENCE J. HALL

College-trained in olericulture—the science of vegetable culture—and having been engaged in vegetable growing in Massachusetts, Florida and the Bahamas, R. (Ralph) Stanwood Briggs is now turned cranberry grower at Duxbury, Mass. Briggs is also employed by the United States Department of Agriculture, stationed at Boston, as a fresh fruit and vegetable inspector, his main occupation.

All of this, obviously, concerns agriculture in one phase or another and that is what young Briggs is interested in and, now with his major interest in cranberry cultivation, all his spare time goes into his cranberry venture.

"Stan" comes by his interest in agriculture very naturally. His father, Kenneth Briggs, was engaged in greenhouse and vegetable activities (and was also a part-time employee of the Massachusetts Department of Agriculture. "Stan" was born in a hospital in Cohasset, May 25th, 1930, but was actually raised and went to school in adjoining Scituate where the elder Mr. Briggs had his business. He was graduated from Scituate High in 1948. He had helped out in the greenhouse business of his father who raised, among other things, hothouse tomatoes and cucumbers.

"Stan" then entered the University of Massachusetts where he spent three years of a four-year course majoring in olericulture. At the end of that time he decided to go to Florida where he engaged in vegetable growing at Homestead and including the growing of corn and tomatoes, working for M. W. Alger of Bridgewater.

His War Service

Then Brigg's career in agriculture was temporarily interrupted by service in the U. S. Army. Briggs applied for a rating as a cook, a sort of service ordinarily scorned by the general GI. He was made a cook and, while in service from the winter of 1953 until 1956, he was stationed a large part of that time at West Point. He was discharged in January of 1956 and found his stint in the food service of the Army very satisfying. Following his discharge, he returned to agriculture in Florida.

This time the restless young

"Stan" did not stay long in Florida. He came back to Massachusetts. In the meantime, his father had bought a bog in Duxbury. That summer of 1956 he worked for his father on the Duxbury property.

After this first taste of cranberry work he decided to pull up stakes in Massachusetts again and, with four other young men, he went to Andros Island, the biggest of the Bahamas. There they engaged principally in the growing of "stake" tomatoes, which simply means the tomatoes were staked up to prevent them from lying on the ground. There was not much soil in the Bahamas, he recalls,

as both the Florida and Bahamas areas have the same general coral foundation. He was in the Bahamas from November of 1956 until the spring of 1957.

To Work for Mass. Department

He then went to work for the Massachusetts Department of Agriculture at Boston for a short time. He worked under the late Walter Piper, well-remembered in the cranberry industry and elsewhere, and under Warren Clapp. This was for a short period only. He went to Florida in the fall of 1957 and worked for the State Inspection Service.

He was married in the fall of '58 to the charming Nancy Gilley of Scituate, who today helps him and takes much interest in his cranberry work. When asked how he controlled the weeds on his bog, he looked at Mrs. Briggs and she said she often found time to help him in this work.

He bought his father's bog, which is off Congress street in the northern part of Duxbury, in 1959. He has eight acres of bog in bearing, this being part of an old property which at one time had about 35 in bearing.

Duxbury Bog Old

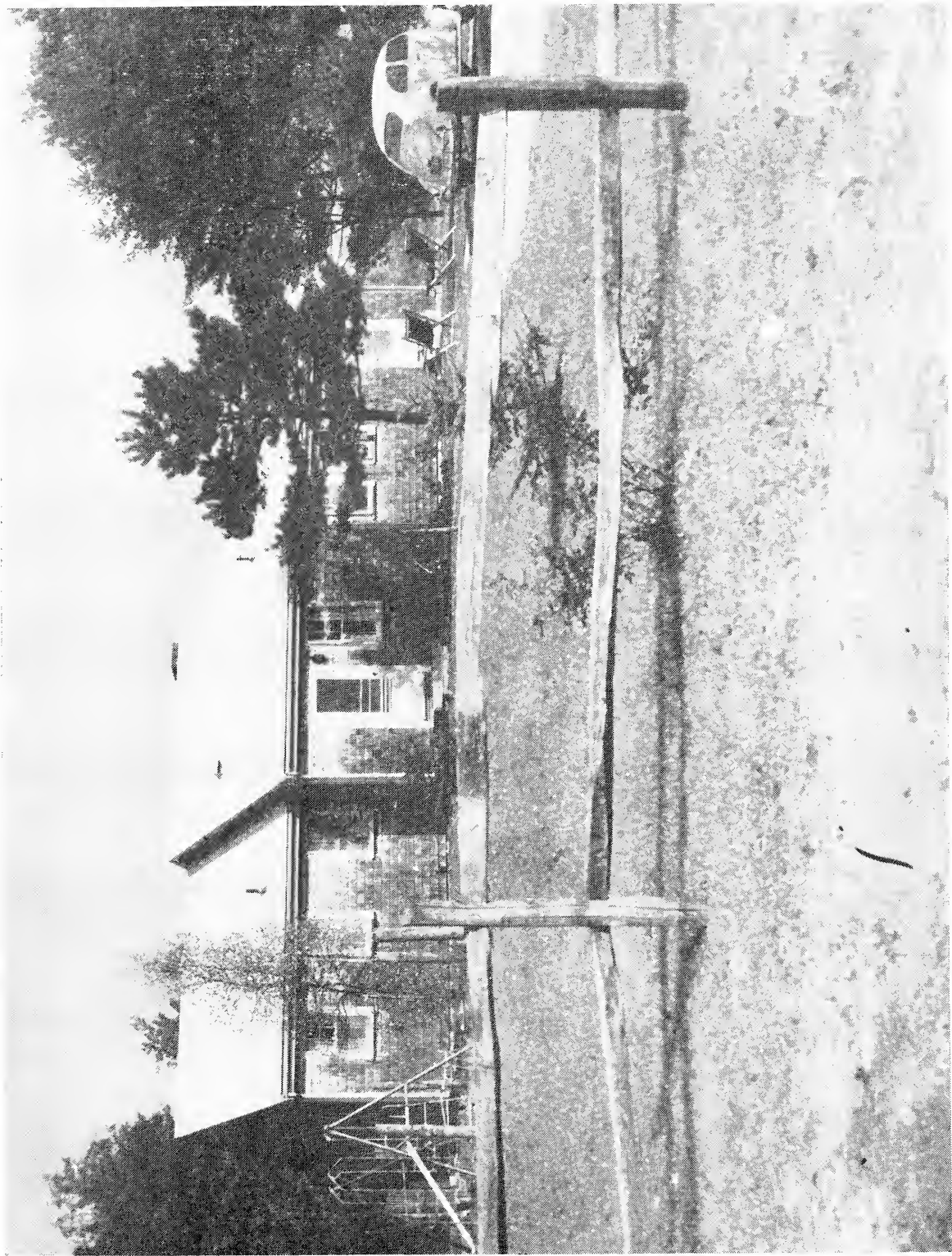
This is one of the older and perhaps better regional bogs and was built perhaps as far back as the

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The attractive home at bogside of Mr. and Mrs. Briggs at 80 Congress street, Duxbury, Mass.
Cranberries Photo

1880's or 1890's and he says has had a number of owners. He named a few who are or were well known in the Massachusetts cranberry industry. One distinct asset of this bog, he says, is that it has a "fabulous" water supply.

Built Bogside House

A year after he was married, the Briggs's built a handsome "Cape Cod" type of house on Congress street at what might be called the head of the bog. This means they live at bog-side as not too many Massachusetts growers do, although many are so situated in Wisconsin and particularly on the West Coast. This bogside house he considers one of his greatest assets, and he says he has been told by other growers that "he has it made," in this arrangement.

So he wastes no time in getting to and from his residence to his bog and can be at work, or frosting, by simply walking out of his door and down a short slope to his bogs.

He, "Stan," entered the employ of the United States Department of Agriculture in 1958, working out of the Federal office at 480 Atlantic avenue, Boston. He is in the inspection service of the USDA for fresh fruit and vegetables, this inspection not being required, but sought by many who bring produce into the Boston produce terminal. Most of his work concerns truck or carload lots of produce, which he checks and certifies as to grade and condition under the supervision of J. L. Marneess, who is in charge of the Boston office. Other parts of his work are certifying produce for export and some quality control work.

His Occupations Mesh Well

This, his main position, he considers an admirable occupation with which to pursue the growing of cranberries as a side business. For one thing, he says, he sometimes is required by his inspection work to be on the job by six o'clock in the mornings, at other times at 8. When he begins his 8-hour day at six a. m., he is free by mid-afternoon and that gives him the remainder of the daylight hours to do bog work.

He can reach the Federal office in Boston in about 45 minutes

from his home in Duxbury.

He also says the federal service is very good with vacation time allowance, being given four weeks a year. He has been able to arrange his vacation time to give him the necessary time off, for instance, to accomplish his harvesting in the fall.

His bog property is not strictly one of peat, but really one of shallow peat, and as stated there were originally some 35 acres, but much of this has been permitted to become run out. The entire property consists of some 72 acres with a long frontage on Congress and Franklin streets.

Bog Has Excellent Water

As to his water supply, this comes from a spring-fed pond of six to seven acres which lies across Congress street. He says he has been told the flow from this is as much as 1,000 gallons a minute, and this source seems to be never failing.

The property is all gravity-flowed and he does not find it necessary to re-use any of this water, but permits it to flow by gravity into the so-called South River and then into the North River and thence into Cape Cod Bay. He could, if necessary, retain a part of this by diverting it to a small reservoir, via a canal more than a mile long which runs along the north side of the bog.

He can put on a frost flow in about two hours and take it off in about the same time. At present he is one of the comparatively small number of growers who perhaps would not like to put in

sprinkler systems, as he finds his water resources so ample and well arranged that this is not especially desirable. He has no less than 24 flumes to care for when frost or winter flooding, but living on the property he does not find this task unduly arduous.

Rebuilding 4 Acres

His bearing acres are six in Late Howes and two in Early Blacks. He is now rebuilding four acres, one of which has been set to Early Blacks and the other three will be.

"I want a better balance in the varieties," he says, "than I have at present."

With the acreage now run out and the water system, he can, if he chooses in the future, and he does intend to, put in quite a bit more acreage to bring up his total.

His production on the eight acres to date has run from 330 barrels to 800. Harvest in 1963 amounted to 620 barrels, which is well above the Massachusetts average barrels per acre.

This bog property, he says, does not have good sand easily available, as it is mostly gravelly, although perhaps some good pits could be opened up. Briggs says that actually the best sand supply is where he built his home. So, he has generally found it better to buy sand.

The bogs are not especially weedy, the worst weeds being wild bean, goldenrod, bull-briar, gold thread and poison ivy, all of which are, of course, bad. For weed control he has used some Chloro IPC, and some Simazine, the results with the latter he is not too happy

TAKE ADVANTAGE

of the BETTER things of life.

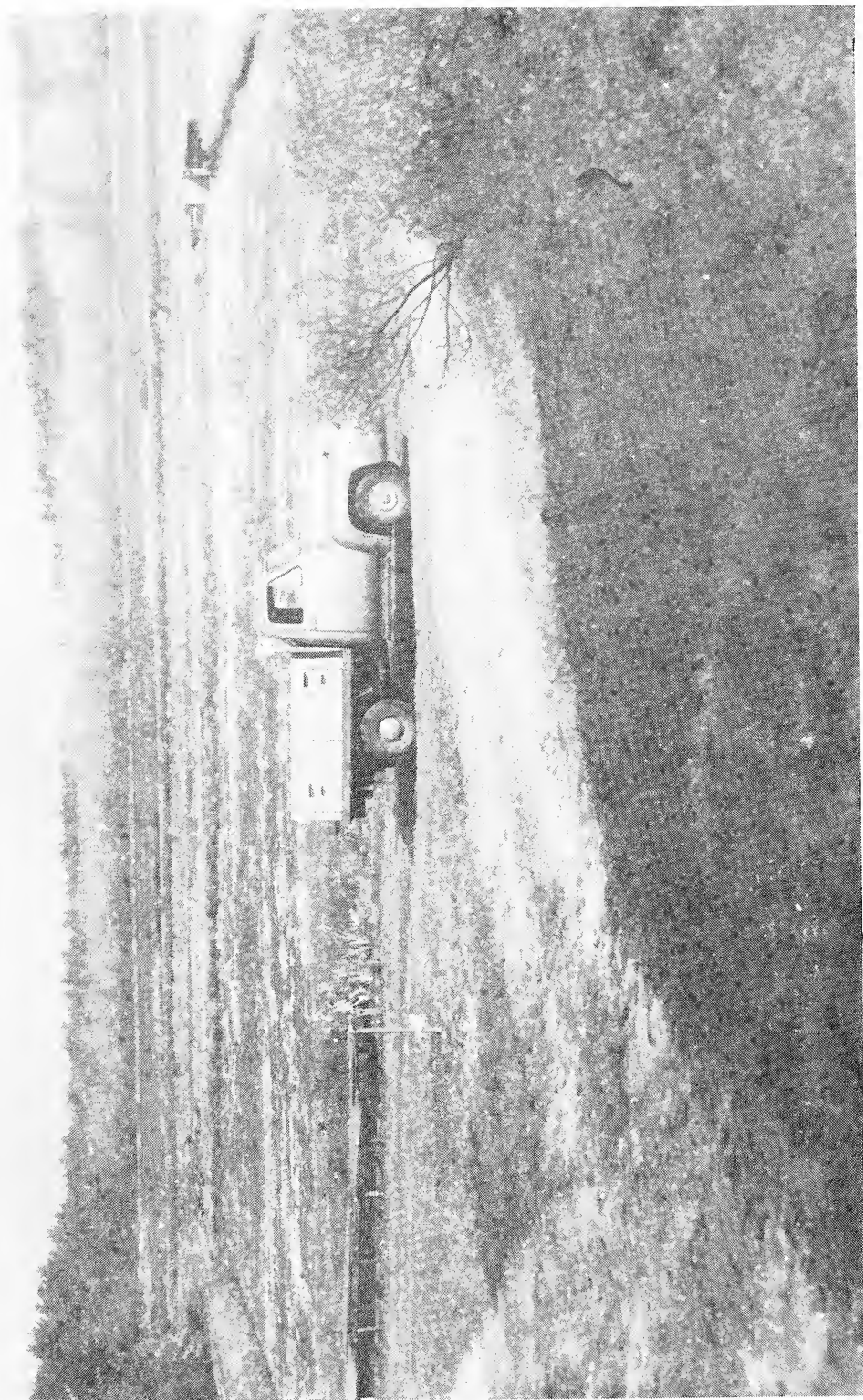
The efficient **USE OF ELECTRICITY** is one of these better things — efficient use in power for cranberry bog operations, and in the home.

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Showing the Briggs bog with his bog truck.
Cranberries Photo

about. He is very much interested in the new herbicide Casorin. Then, of course, as previously stated, there is some hand weeding done, in which Mrs. Briggs has taken part.

Uses Air Service

In the application of insecticides, Briggs depends upon Aerial Sprayers, Inc., of Marshfield, Thomas S. Weitbrecht (Whitey), president.

One thing in which "Stan" is very enthusiastic, he says, is that he is a firm believer in the theory of Dr. C. E. Cross, director of Mass. Cranberry Experiment Station, in that the drier a bog can be operated, especially in winter flowage, the better. "I put the winter flood on only when and as long as it seems absolutely necessary to prevent actual winterkill. Living right here on the bog, I can do that and except when a really bitter cold spell is expected I leave the water off. I put it on and off during the winter when it seems necessary, off most of the time."

This is because of the fact that he has such an adequate supply of water.

Briggs harvests with two Western Pickers, operating one machine himself and using the other, sometimes with the help of a woman operator and sometimes with help of several high school boys. With a Western a winnowing process is necessary and he does this with a small blower on the dikes.

Sells Through Ocean Spray

Briggs sells through Ocean Spray. He says, for one thing, the services offered a small grower like himself are very valuable.

"However," he adds, "that does not mean that I do not admire the independents. I really think there should be more competition in the cranberry industry. If there was more and harder competition, I think we would have a better cranberry business. I would like to see more real competition."

Opposed to Marketing Order

Briggs was one of those who opposed the cranberry marketing order at the hearings. He says, "I work for the United States Department of Agriculture and of course respect it, but I do not think the cranberry industry should have gone running to it to solve the

cranberry surplus problem. I think it could have been worked out in some way within the industry without government assistance. I think this was an industry problem which should have been solved within the industry by ourselves."

Briggs is a member of the Massachusetts Advisory Board of Ocean Spray, a group formed experimentally in the spring of 1963. There are two such members for each of 13 Massachusetts cooperative directors. William M. Atwood of Wareham is the head of the board. The directors in Stan's area are President George C. P. Olsson of Plymouth and Elmer E. Raymond of Bridgewater.

These are directors from the Kingston, Duxbury and Plymouth area. The members of the Board are elected by the growers of the area and serve for two years. Their job is to act as liaison men between the Ocean Spray directors and the growers, bringing growers' sugges-

tions and ideas to the directors of their district. Then the directors consider these suggestions at their own meetings. The working arrangement is very similar to that on the West Coast, where such a board with area representatives, has been in effect since Ocean Spray assumed its present proportion of cranberry tonnage there.

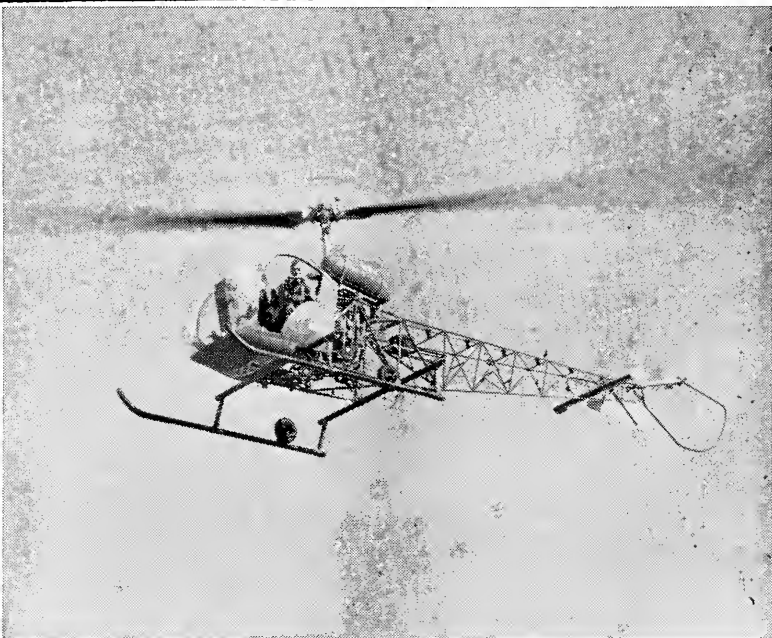
Briggs feels that this is an excellent idea both for the progress of the cooperative and for the individual grower as the grower assumes a greater importance, or more specifically his ideas do in the program of Ocean Spray.

For equipment Briggs has his truck and a Carlson Mfg. Company "carry-all" rig. As he engages in his renovation plan, he uses the "scrapings" to build up and widen his dikes, so that now he can drive around many of them.

Doesn't Mind Hard Work

Briggs is a lean, but muscular 6-footer, who does not mind doing

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hard physical work on the bogs. "Does he plan to stay in cranberry growing?"

"Yes," he says, "we do. We were not in the business when cranberry prices were high, so we do not have that to compare with. We plan to keep on growing, and we would like to be able to make a complete livelihood from our cranberry business."

"We like it very much, living on the bog. We like agriculture, and I mean it when I say I think there is nothing prettier than a well-kept cranberry bog."

The bog-side home in which the Briggs live has spacious rooms and is built into the side of a hill, sloping toward the bog. This permits on a lower level, a recreation room, bedrooms and a two-car garage, with a terrace looking out over the bog. There are three children: Kenneth 5, Beverly 4, and Robert 1.

The Briggs have also started at their bog-side home a small nursery business of evergreens, about 1600 trees in all—yews, juniper and some Christmas trees.

His USDA position and his cranberry work take up all his time, he says. The only organizations he belongs to are the South Shore Cranberry Club and Cape Cod Cranberry Growers Association. The Briggs attend the Unitarian Church. Recently he started working with Boy Scouts in Duxbury.

FOREIGN AGRICULTURAL TRADE IS BIG BUSINESS FOR U. S.

Agricultural exports and imports are a booming business in the United States, affecting the entire nation's economy. The United States is the world's largest exporter of farm products. The value of these exports is \$6.1 billion, of the fruits are \$274 million, which would include cranberries. (Foreign Agriculture, Weekly Magazine of the United States Department of Agriculture)

READ CRANBERRIES

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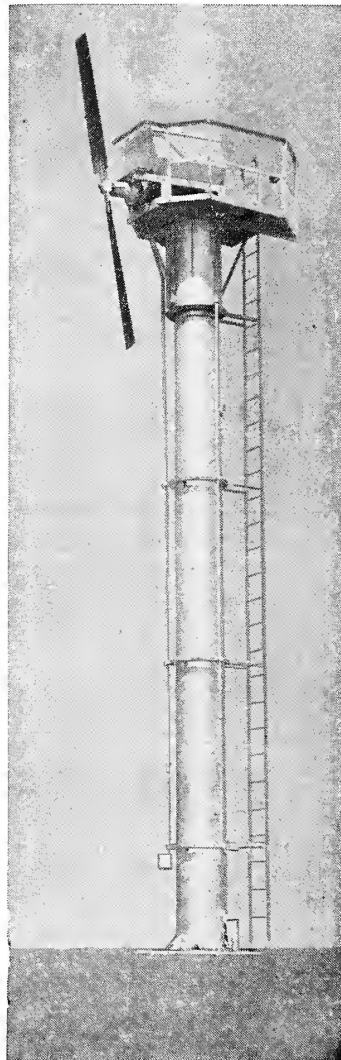
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American Cranberries featured in British exhibit in Blackpool, England.
 Eve Harlowe of Cranberry Kitchen, London tells some of the more than 28,000
 visitors how to use cranberries in new and traditional recipes.
 (Photo Courtesy British Embassy.)



Floyd Shortridge (left), retiring president of the Southwest Oregon Cranberry Club, hands records over to Mr. and Mrs. Howard Hull, new officers. Mrs. Hull will serve as secretary during 1965. Mr. Hull takes over the reins as president. (Photo provided through the courtesy of Fred Hagelstein, Coos County agricultural agent.)

Encouraging the Bumble Bee in Washington

by

CARL JOHANSEN,
Associate Entomologist
and

ROBERT HUTT,
Experimental Aide
Washington State University
Pullman, Washington

A small, golden-tipped bumble bee, *Bombus mixtus*, is the most important pollinator of cranberries in Washington. Following are suggestions for encouraging this species and other bumble bees:

(1) Provide hives for protection from weather and natural enemies. Individual units can be constructed from ¾ inch lumber and inside measurements should be about 6 x 6 x 6 inches. Six single units can be conveniently prepared from the following material:

- (a) 10 feet of 1 x 8 lumber cut into 10-inch lengths (forms tops and bottoms with ½ inch overhang)
- (b) 6½ feet of 1 x 8 lumber cut into 6½-inch lengths

(forms ends)

- (c) 7½ feet of 1 x 8 lumber cut into 7½-inch lengths (forms sides which should be nailed inside end pieces)

Several nesting units can be provided in one large box with partitions. Lengths of plastic pipe, ¾ inch inside diameter and about 18 inches long, can be attached to the entrance hole of each nest unit by means of plastic couplings (½ inch inside diameter). Pipe or hose sections with diameter as small as ½ inch are large enough for the cranberry bee and have the added value of protection from shrews. Shrews are also deterred by pipe entrances through 1 x 10 rough lumber held vertically, with or without a 6-inch square of sheet metal around the opening.

Bumble bees will accept a nest entrance formed by a 2-3 inch black tube or simply a hole drilled in rough lumber. However, it is important that the opening be well contrasted with surroundings by black paint or black pipe.

Aeration holes (screened on the inside) should be provided just under the cover. Nest boxes should

be placed on the surface of the ground and mounded with cranberry prunings or other well-drained materials. Boxes should be placed on high ground adjacent to the bogs where they will not become too wet. Small drainage holes should be provided in the bottom. Exits from the plastic pipe entrance tunnels should open through a near vertical face cut from the sod or constructed from lumber and should face away from the direction of prevailing winds. The nest is provided with upholsterer's cotton or similar soft material (enough to make a ½ inch layer halfway up the sides and across the floor). Painting the hives will help preserve them for several seasons' use.

We are currently investigating the effectiveness of hives constructed from 1½ to 3-quart metal cans. The top is entirely removed and the upper portion is flanged and attached to short sections of 1 x 10 rough lumber. A number of aeration and drainage holes are cut in the sides of the can. Metal portions are covered with cranberry prunings or sod to protect the bees from adverse temperature changes. Such hive units are cheap and easy to build and may be more practical to construct annually, rather than removal, clean-up, and storage of nest boxes.

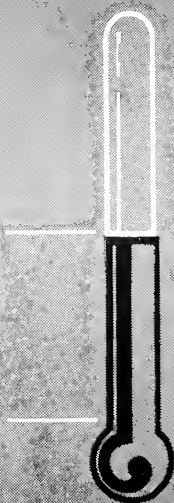
(2) Flowering plants which bloom during April or May and are frequented by bumble bees should be planted near the bogs. Spring months are a critical time for the overwintering queen bumble bees which start the new colonies. Darwin barberry, Springwood White and Marguerite Smith heathers, most fruit trees, Nanking cherry, Japanese quince, Russatum and Glomerulatum azaleas, and English laurel bloom at the right time and are attractive to bumble bees in coastal Washington.

(3) Providing small containers of honey inside the nest boxes will help sustain the queen during inclement weather and greatly increase the chances of producing a large colony. Small bottle caps ½ to ¾ inch inside diameter are useful for this purpose. Honey in larger containers should be covered

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AGRICULTURAL EQUIPMENT

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with a piece of paper and a small hole punched in the center, so the queen can feed without becoming stuck.

(4) Mirex ant bait formulated on corn cob pellets is effective in controlling ants and is non-toxic to the bees. A teaspoonful can be placed in the bottom of each nest.

(5) Hives should be placed near the cranberry bogs during March. Although we have had natural acceptance of the boxes by the bees, queen bumble bees may be captured and carefully placed in the hives. If they are fed a small amount of honey and confined to the box for one day, they may accept the nest and start a colony. For best results, hives should be collected and cleaned out after the bee colony cycle is over (after August 15) and placed out again the following spring. Can nests are simply picked up and discarded, so build-up of predators and diseases is not encouraged in the area.

(6) When spraying the bogs for insect pest control, be sure to keep away from natural or artificial nest areas. The application at *Late Hook Stage* is particularly hazardous to pollinating insects. Be sure to avoid spraying after the blossoms open. *Late Bloom* is another application time which can be hazardous to bees. Do not apply this treatment before 80% of the blossoms have dropped.

PUERTO RICAN WAGE SCALE IN GARDEN STATE

A farmer negotiating committee of New Jersey has returned from Puerto Rico with a contract for farm labor during 1965.

The new contract, which was negotiated with the Government of Puerto Rico, calls for an increase in the hourly wage of Puerto Rican farm workers to \$1.10 an hour, which began April 1st. There was also a bonus to be paid those workers who stay until Nov. 1. On Sept. 3, first pay day in September, the minimum goes to \$1.15 plus the five-cent bonus.

The increase, including the bonus, amounts to a 20% increase over last year.

PUBLIC HEARING AT WISCONSIN RAPIDS MAY 12th

Wisconsin To Have Referendum On Marketing Order

The director of the Wisconsin State Department of Agriculture has called a hearing to once more consider a proposed State marketing order for Wisconsin cranberries. This hearing will be held at the Auditorium, Court House, Wisconsin Rapids, May 12th, beginning at 10 a. m. It will be a public meeting.

If the growers vote in the marketing order there will be a director who will be the Director of the Wisconsin State Department of Agriculture, who at present is D. N. McDowell.

There will be an advisory board of five members to assist the director if the order is voted in. The board members shall be active producers engaged in the business of growing cranberries. Members shall be nominated and elected in accordance with the provisions of the Wisconsin Agricultural Act (section 96.14).

At the time of the referendum

each producer will vote for all five positions. The individuals receiving the highest number of votes will assume active membership on the advisory board. The five receiving the next highest number of votes will be the alternate members.

The assessment on each grower during the effective period of the order is to be two (2¢) cents per barrel. If a producer fails to pay the assessment, the Director may bring an action against such a person in a court of competent jurisdiction for collection of such sums.

The monies collected from the assessments may be used for applied research studies. Under this heading would be included such work as improving varieties, and also in developing new ones; protection practices such as developing quality in cranberries, improving techniques in harvesting, to make surveys to determine the best way to package, handling and market activities, etc.

There would be an educational program, and this would involve a special service of forecasting temperature, weather and other pertinent climatic conditions during the cranberry growing season.

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EFFICIENT AERIAL SPRAYING

New uses are being found for the low volume aerial spray technique developed recently by ARS for use against plant pests.

The new technique involves applying undiluted malathion in extremely small amounts. Conventional application of pesticides by aircraft involve diluting the chemical with a large amount of water, oil or other diluent.

Briefly, here are the principal advantages of the new low-volume technique.

Use of an insecticide with low-volume toxicity to warm-blooded animals greatly minimizes possible adverse effects to humans, livestock, and wild life. It's possible to apply malathion on range lands, for example, without removing wild stock from the range.

Higher flights are made practicable by the use of a non-volatile material such as malathion. It was possible to use a 100-foot swath in the boll weevil program rather than the 35-foot swath normally used. This adds to the safety of flight operations, increases the amount of work plane and pilot can do and reduces the complexity of supervision and ground support.

Uniform distribution of pesticide

on areas being treated by aerial spraying lessens the possibility of overdosing portions of the area, cuts the total quantity needed per acre, and provides better pest control at less cost. (Agricultural Research, U.S. Department of Agriculture)

BANDON, OREGON, CRANBERRY FESTIVAL SET FOR SEPT. 17, 18, 19

Dates for the Bandon, Oregon, 1965 Cranberry Festival have been set for September 17, 18, 19. These dates were set by the Bandon Cranberry Association, the officers of which are Ed Viles, president; Mrs. Ted Hultin, secretary, and C. E. Waldrop, treasurer.

A new addition to the festival will be the Jaycee crab feed. Committee heads for the festival include Bill Stewart, Cranberry Fair; Mystery King, Tom Gant; Myran Spady, cooking of meat; Roland L. Parks, coronation; Freda Lowe, stage setting; Dave Lawson, parade.

PERSONAL

Selection of Dr. J. Harold Clarke, one-time manager of Cranguyma Farms at Long Beach, Washington,

as Nurseryman of the Year, was announced recently at the Convention of the State Nurserymen's Association. Dr. Clarke was presented with a plaque.

He was also recognized for his outstanding legal and technical advice in the drafting of new by-laws as a new purpose for the Evergreen State. This organization is set up to promote highway landscaping and preserve natural areas.

Upward Trend in Blueberry Acreage Continues in New Jersey

New Jersey's 1964 blueberry crop, according to the New Jersey Crop Reporting Service, totalled 1,782,000 trays (12 pints). This is a 25% increase over the small 1963 crop and 6% more than the 1958-62 average. Blueberry output in 1964 was exceeded only by the record high crop of 1960.

Average price received by the grower for all the 1964 berries (both fresh market and processing) was \$2.95 per tray—10 cents below the preceding year, but 21% above the five-year average. Total value of the crop was \$6,275,000, up 21% from a year earlier and 15% above 1958, above the five-year average. Acres harvested were 8,100, yield per acre 220.

BETTY BUCHAN BACK ON OCEAN SPRAY POSITION

Miss Betty Buchan of Duxbury, Director of Public Relations for Ocean Spray, is back on the job. She has recovered from a lengthy illness.

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ARS is probing deeply into the pesticide residue question with a field monitoring program.

For the public at large, the result will be a scientific assessment of the role played by pesticides in environmental contamination.

CHANGES IN OCEAN SPRAY PLANT AT LONG BEACH CONSIDERED

Lagreze, a Harvard graduate, joined Ocean Spray after holding positions with Proctor and Gamble and General Foods.

Aerial mapping may prove to be an efficient and less costly way of estimating the depth and volume of snow cover in mountainous areas, thereby improving accuracy of streamline forecasts.

other scientists from the Northwest.

The researchers are also evaluating a method of measuring the water content of a snowbank by using a snow "pillow" 12 feet in diameter and filled with 300 gallons of antifreeze. The pillow activates a manometer (a new gauge that responds directly to the weight of the snow and provides a continuous measure of water content.)

The findings could benefit water users throughout the Pacific Northwest. (Agricultural Research, U. S. Department of Agriculture)

Charles V. Goldsworthy, sales manager of Cranberry Products, Inc., Eagle River, Wisc., and Ralph Sampson, treasurer of the corporation, were April visitors to the East. In Massachusetts they made several calls, including one to the Cranberry Experiment Station, and one to your editor.

From Massachusetts they went to Long Island and visited the big bog at Manorville and then to New Jersey, where they made a number of more calls.

Charles is the son of Vernon Goldsworthy president of Cranberry Products.

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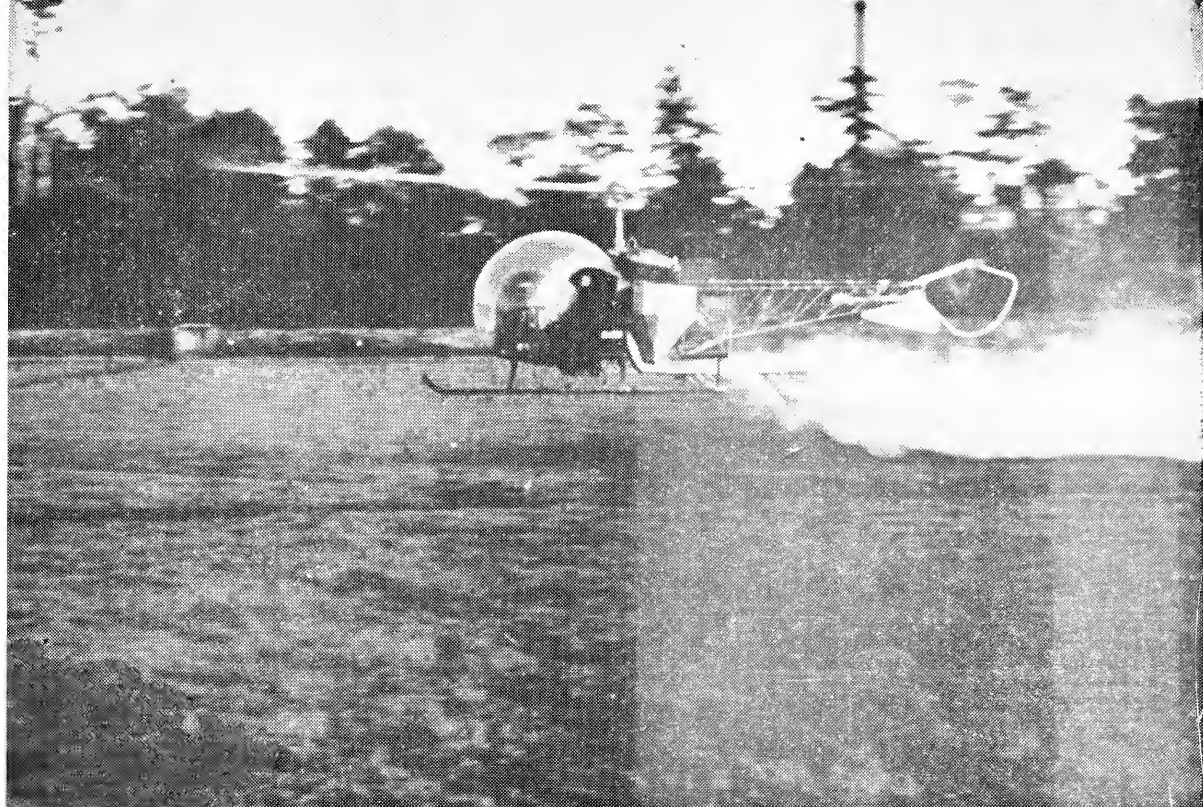
This report is a summary of reports from all canners known to have packed whole and strained cranberry sauce for the calendar year of 1964. The 1963 pack was 6,443,271.

CRANBERRIES

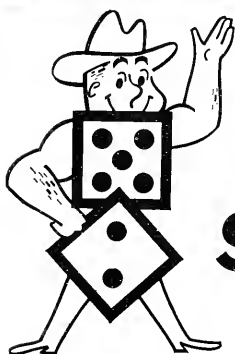
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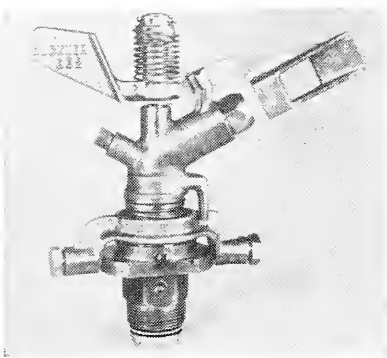
Even in the hottest weather, SEVIN residues provide long-lasting results.

Safer-to-use than many insecticides, SEVIN is low in toxicity to humans, livestock and fish. Spray or dust operators, using SEVIN, do not require special protective clothing. They only need to observe simple precautions. Workers can return to the bogs soon after application. SEVIN is effective in concentrate or dilute sprays and dusts.

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**AGRICULTURAL
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NEW BUCKNER MODEL SPRINKLER

A new model sprinkler, the 882, providing lower application rates at wide spacings, has just been introduced by Buckner Industries, Inc., of Fresno, California.

The 882 is designed for a wide variety of uses, including pasture, field crops, dust control and large wheel move systems.

A revolutionary stream straightener enables the 882 to give excellent water distribution. Different nozzle combinations make this sprinkler one of the most versatile ever designed by Buckner. Distribution is maintained by driving from main nozzle size 9/32" through 9/16" at standard angle trajectory without using low angle for wind. For low pressure conditions the sprinkler has a plug that may be removed to insert inner sweep nozzle when required.

Detailed performance tables are available together with additional information from Buckner Industries, Inc., Box 232, Fresno 8, California.

GORSE CONTROL ON WEST COAST

Gorse control methods are being studied on the West Coast in the cranberry-growing areas, where this flaming yellow bush is a menace to cranberry growers and everybody in the area. For one thing the plant, standing higher than a man's head, is extremely flammable and dangerous from the point of fires.

Faculty members of the Oregon State University School of Forestry have planted some 70 clumps of

trees in a 50-acre experimental strip on the Rose Road at Bandon, Oregon. The land has been sprayed about eight months ago by helicopter with a combination spray of 2.16 oz. of Tordon mix in extensive amounts and this does a fairly thorough job of stopping gorse for some time.

CORN PRODUCTS CHAIRMAN TO HEAD FOOD LAW INSTITUTE

Alexander N. McFarlane, chairman of Corn Products (a long time, consistent advertiser in this magazine), has been elected chairman of the Food Law Institute. The Food Law Institute provides information on food and drug laws through publication, industry-government conferences and instruction at leading university graduates, law and medical schools.

Princess Margaret Visits Cranberry Stand In England

The American Food Exhibit at London's Ideal Home Show which closed the last of March, climaxed a winter series of U. S. agricultural exhibits in the United Kingdom, second largest importer of American farm products.

At the 25-day Ideal Home Show, some one million British consumers inspected the exhibit promoting American cranberries and other U. S. agricultural products. Princess Margaret visited and was photographed at the Cranberry Stand.

A cordial reception was received at the 5th Northern Hotel and Catering Trade Exhibition in Blackpool, England (Feb. 22-27), where more than 28,000 restaurateurs, hotel chefs, caterers and consumers visited the U. S. exhibit to sample and see demonstrated cranberries, poultry, prunes, lard, raisins, rice and soya oil.

Opening the same week of the Blackpool Exhibition was a U. S. Fruit and Vegetable Exhibit at the London Trade Center (Feb. 23-March 5) held especially for the British food trade and featuring some 200 American processed fruit and vegetable items, as well as a variety of convenience foods.

The exhibit of 51 U. S. firms' fruit and vegetable products drew some 2,000 tradesmen from all parts of the United Kingdom.

Ruel S. Gibbs

Ruel S. Gibbs, Wareham, Mass., a life-long cranberry grower and well known in the industry, passed away at the Tobey Hospital, Wareham, after a long illness. He was the son of the late Samuel and Mrs. Gibbs of South Carver. He was a member of the prominent Gibbs family in cranberry growing.

He was a graduate of Tabor Academy of Marion, Mass., and of Dartmouth College. He entered the cranberry business immediately after his schooling. He operated the Slocum-Gibbs Cranberry Company.

He has been a president of the now-defunct New England Cranberry Sales Company and of the American (Eatmor) Cranberry Exchange.

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HEARING IN WISCONSIN FOR COLORING IN CRANBERRIES

The safety of artificial coloring in foods was the main topic discussed at a public hearing on a bill to permit artificial coloring in sweetened cranberry sauce. This hearing was held at Madison, Wisconsin, April 4th.

Assemblyman Gee (Republican), Wisconsin Rapids, said the proposed color additive had been approved as safe by the Federal Food and Drug Administration (FDA).

Mrs. Elizabeth Nelson, Madison, representing the American Association of University Women, contended that color termed safe was not necessarily safe at all. She said some color additives had been termed safe by the Federal government and then later found to be unsafe and were withdrawn.

Rep. Gee said Wisconsin is the second largest cranberry growing state in the country and produced 40% of the nation's cranberries. He said Wisconsin is the only state that does not permit color to be added to artificially sweetened cranberries.

Most cranberry products don't need coloring, Gee said. But added that the artificial sweeteners used for dietary purposes turn the sauce brown.

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BANDON, ORE. WATER SUPPLY

Ray Bates of Bandon, Oregon, was one of a group studying the water supply for the Bandon area. Howard Hull, president of the South Western Cranberry Club, was another.

Quinten Bowman, of the Oregon Water Resources Board, acted as chairman at a meeting in the City Hall at Bandon. The meeting has a representative from the various groups. Attending also were representatives of other state and Federal agencies working in the field of water source development.

BIG MASS. BOG PROPERTIES CHANGE HANDS

The Three M. Bogs in East Middleboro, Mass., owned by Marcus M. Urann, Mina Urann, Maxine Urann, children of Mrs. and the late Carl Urann have been sold. The purchaser is the Edgewood Bogs, Division of Edgewood Trust, Willard A. Rhodes, Trustee.

This is the same Trust that owns the Edgewood Bogs in Rochester, Mass., formerly the Cowen properties, and also the old Three M Bogs on Wenham Pond in North Carver, Mass., recently owned by Zagorski.

The Edgewood Trust is a separate enterprise with its office in the Pierce Building in Middleboro. the Three M. bogs are of 27 acres in a 200-acre tract of land.

FRESH FROM THE FIELDS

Continued from Page 6

fifth, 64; sixth, 62; seventh, 57; eighth, 55; ninth, 65. Night-time temperatures were often below freezing on several occasions.

Sprinklers Started

Sprinklers were started because of the spring-like weather.

Bog Work

Growers have been taking advantage of the spring weather to clean ditches, prune and other spring work.

Crop Prospects Good

Everything points to a good

crop in 1965, according to Ray Bates, who sent in these notes.

WASHINGTON

March Amazing Month

Weatherwise March was an amazing month. The first 15 days had no measureable precipitation, but the weather was warm, dry, sunny with clear, cold nights, all most unusual for the Long Beach area. The last two weeks of the month were somewhat rainy, but even so not as wet as is normal for March. Total rainfall for March was 2.14 inches.

Temperature Out of Character

The temperature was also out of character. There were 22 days with a recorded high of more than 50 degrees, and an actual high temperature of 72 on one day. The mean high was 56.4 degrees. The mean low was 35.5 degrees with an actual low temperature of 15 degrees being recorded on the Experiment Station bog the night of the 18th.

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Sprinklers Used

These conditions, of course, necessitated much sprinkling for frost protection. This, coupled with the two dry weeks the first part of March, caused the water table to drop sharply and a few of the growers were worrying about a possible shortage of water with which to sprinkle, when the rains came back and night temperatures warmed up.

Pruning Completed

By the first of April practically all the pruning was completed. Growers were in the process of planting and applying herbicides.

WISCONSIN

Spring Late in Wisconsin

Spring was coming late to Wisconsin. March saw average temperatures drop from four to six degrees below normal, with precipitation about the normal of 2.5 (2½) inches mostly in the form of snow. The month began with a snow cover and ended with a snow cover. The high reading for the month was 44 on the ninth and the lowest was minus twelve on the 21st. There was a total of six days with below zero readings with the coldest readings during the 18th to 27th. During this period, temperatures varied from 9 to 24 degrees below normal. Further for the record, there were 19 days of below normal temperatures and 12 days of normal or above. All in all, it was a

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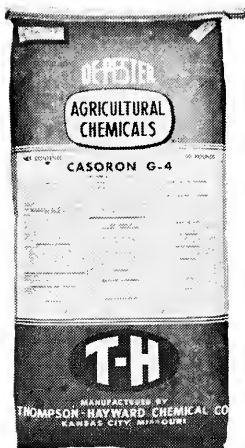
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good month to put behind and into the record books. The outlook for April calls for temperatures to be slightly below normal and about normal precipitation.

Work Delayed

The cold weather and snow cover curtailed early spring work on the marshes. Winter flood removal dates would probably be delayed pending warmer weather as frost depths were expected to be quite deep in the beds and growers were urged to watch out for spring killing. Last year most

of the southern marshes had removed winter floods by April 9. The heavy snow cover would probably slow the melting process down. All areas were receiving the snow cover, which was hoped to build up the depleted reservoirs. There was some early thawing in March, accompanied by some washouts of reservoir bulkheads. Washouts could be a problem on the heavier soils due to the deep frost. Deep frost will probably delay the melted snow in seeping into the ground.

NOTES FROM GRAYLAND, WASH.

The first 18 days of March brought beautiful weather to the Grayland area in Washington. The days were sunny and warm. Temperatures ran from the 50's to 73 with corresponding cold nights, mostly in the 20's.

Only .06 of an inch of rain on the 17th.

Several of the younger growers were putting in one to three acres of new bog. A good deal of re-

sanding and pruning went on. Improvements were made to sprinkler systems. All of which shows the optimistic spirit at Grayland. With a little good weather at the right time there should be a good crop this year.

(Editor's Note: The above came from Dave Pryde at Grayland.)

MARCH COLD AND SNOWY IN WISC.

The night of March 24 brought a low of 32 degrees below zero to Eagle River in Wisconsin, and temperatures were almost as low for the preceding week.

Growers were still sanding on the ice.

There has been some snow in the central part of Wisconsin, which meant a lot to the growers there as they were extremely short of water, and this helped to alleviate the situation.

(Editor's Note: The above was sent in by Vernon Goldsworthy, President of Cranberry Products, Inc., of Eagle River, and a large cranberry grower himself.)

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WOODLAND FIRE IN NEW JERSEY

Sixty acres of woodland were burned over in Pemberton, New

Jersey, April 5th. No bogs were damaged in this heart of the Jersey cranberry region. The woods blazed for hours before the blaze was extinguished.

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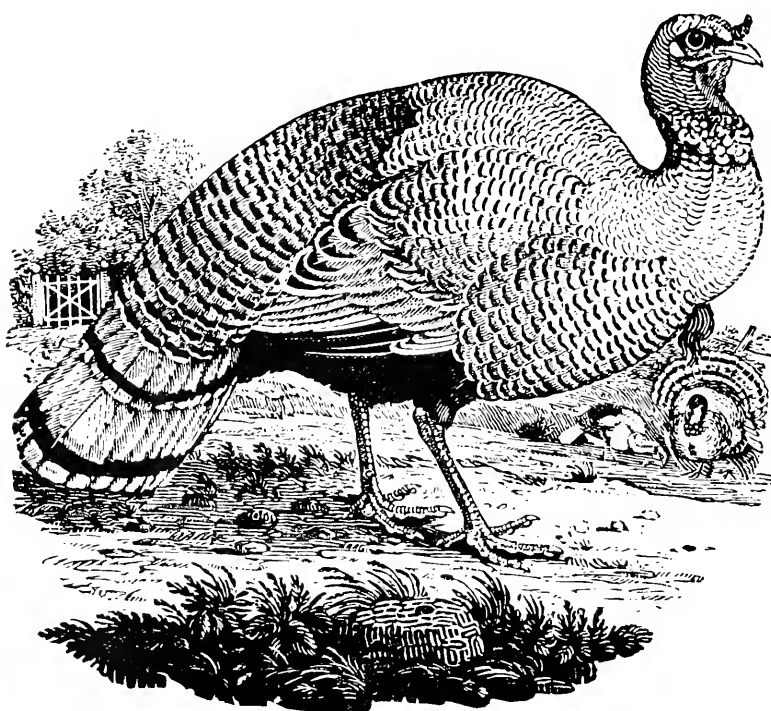
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GUEST EDITORIAL

NEW JERSEY YIELDS SHARPLY UP

In the August, 1964 issue of CRANBERRIES, Josh Hall "joshed" New Jersey in an editorial entitled, "Wake Up New Jersey on Cranberries."

The final statistics are not yet in but it is believed that in 1964 close to 150,000 barrels were produced in New Jersey on about 2600 acres. This is a respectable average of about 57 barrels per acre. We have searched the records and can find no year in which the yield per acre was greater in this state.

There are several serious disadvantages to growing cranberries in New Jersey. We are probably on the extreme southern range of cranberry growing, almost at a point where it is a marginal crop. False blossom disease spreads much more rapidly here than in any of the other cranberry regions. Moreover weather conditions favor the fruit rots and several destructive insects.

These are not excuses for the fact that bog management practices on most New Jersey bogs have not been as good as in other areas. However there is good evidence that yields per acre are climbing sharply and will continue to do so.

PHILIP E. MARUCCI
*New Jersey Cranberry and
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THE TACTICAL AND THE STRATEGIC IN FRUIT GROWING

The military terms tactical and strategic differentiate between the immediate and the long range plan. Tactical implies cleverness and skill in maneuvering forces in action against the enemy — the battle. Strategic refers to managing and planning and arranging large forces into the most advantageous position prior to actual engagement. They point up the differences between battle and a war. Many a battle has been won and a war lost; conversely many a battle has been lost but the war won.

So with the fruit business, we have tactical problems of immediacy and we have

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the strategic problems of long range. We have the long-range planning and maneuvering to outwit the attack before it comes.

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*Editorial based on
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