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## ew Mass. Highway akes Some Bog and eservoir

The new Massachusetts super-hway, Route 25, running from the Boston area and points north to connect with a new highway from Providence and the south and west, has taken some bog and reservoir from cranberry growers. The taking was a land strip of 140 feet from Walpole near Boston to the Cape.

Those effected included Nathaniel Wing bogs, Crandon & Pierce, the former Beaton bogs, the Gurner Star bog, Tweedy & Barnes.

Although exact lines have not been drawn yet, the new highway

will come through the property of the Massachusetts Cranberry Experiment Station, close to the station building and taking part of a field, it is expected. Considerable woodland along the route was also taken and some buildings had to be moved.

## EARTHQUAKE IN COAST CRANBERRY AREA

An earthquake struck the Pacific Coast cranberry area April 29th at 8:30 a. m. The quake lasted 45 seconds.

The quake was felt as far south as Coquille, Oregon, near the heart of the Bandon area cranberry center, and into Canada to the north. The Washington State Capitol was closed to undergo inspection after the quake. In Seattle, Washington, two were killed and others injured.

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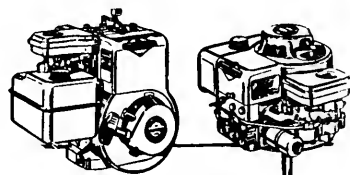
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# Mass. Cranberry Station and Field Notes

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

## Personals

Dr. Karl Deubert is the newest member of our Station group, starting work on April 5th. Dr. Deubert is a native of Germany and also worked in Honduras for approximately two years before coming here. He will be working on nematode problems under Dr. Bert Zuckerman for the next two years. Karl and his wife are living in New Bedford. The staff of the Cranberry Experiment Station extends a warm welcome to the Deuberts and wish them a pleasant and successful stay.

Two of our Wisconsin friends, "Chuck" Goldsworthy and Ralph Sampson, visited the Station recently. Several of our staff, including the writer, had a chance to chat with them during the visit. We are always most happy to talk with cranberry people from the

other producing areas and hope that whenever any of you are in our vicinity that you will reserve a few minutes in your schedule to stop by and visit with us.

We are very pleased to note that our old friend "Josh" Hall (Cranberry Magazine) is up and around again, after being quite ill during the late winter. "Josh" is a frequent visitor at the Station and we all missed him while he was laid up.

## Frost Warning Service

We are pleased to report an increase in the number of subscribers to the frost warning service which is sponsored by the Cape Cod Cranberry Growers Association. We have 105 subscribers to date compared to approximately 190 a year ago. The donations to the telephone answering service have also shown a healthy increase

over last year. A second piece of answering equipment has been installed at the station this spring. The two answering devices are hooked up on the same line so that when one is in use the other will take over and give the message. This saves time and in some cases several re-dialings. Up until May 4th no frost warnings had been issued.

## Tips for Late Spring and Early Summer

(1) The early spring pests are, or soon will be, showing up on bogs. These include cutworms, spanworms, leafhoppers, fireworms, sparganthis fruitworm and weevils. The sparganthis fruitworm can be detected by careful examination of loosestrife or the new cranberry tips for webbing. Weevils over-winter as adults and are active whenever temperatures reach 70° or above. If these pests are controlled in May or June, particularly those that have a new or second brood, they very seldom create a problem later in the season.

(2) This is a good time to treat brush, poison ivy and brambles on the uplands using one of the brush killers, silvex or 2,4,5-T. These

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should be mixed with water rather than oil at this time of year because of the damage to turf.

(3) Stoddard solvent or stoddard-kerosene treatments following late water should be completed within 5 days after the flood has been withdrawn or within 8 days if kerosene is used alone.

Less damage will occur to the vines if temperatures are below 65° when these oils are applied.

(4) Casoron, alanap-3, Chloro-IPC and simazine should not be applied after withdrawal of the late water flood as vine and crop injury will result.

(5) Many bogs will benefit from an application of fertilizer, especially where heavy crops were harvested. Some bogs that have had casoron treatments either last fall or this spring may look "hungry" and should be fertilized. Don't forget to touch up the thin or weak spots by going around with a bucket of fertilizer and using it.

(6) Get out and walk your bogs; you will be surprised at the number of little things, both good and bad, that you will notice on your inspection trips.

#### Weather

The temperature for the month of April averaged out approximately 3½ degrees below normal. By the end of the month the Early Blacks were just starting to "green up" and we estimate that the bogs are about 10 days to two weeks behind their normal development. Rainfall totalled 3.55 inches which is about ¾ inch below the average at the Cranberry Station. The situation in regard to water supplies for frost protection is very spotty, some areas have abundant water, while others are extremely short. Vines seem to have come through the winter in excellent shape. Winter injury is practically nil and the bud is excellent.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of May, 1965 — Vol. 30, No. 1

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## FRESH FROM THE FIELDS

Compiled by C. J. H.

### MASSACHUSETTS

#### April Starts Cold

April started out cold and dry. The departure from normal for the first seven days was a minus 14 for the month.

Growers were worrying about water supplies for the frost season then approaching. They wanted substantial rain. There was a drizzle and fog on the 8th, and this continued on into the 9th. There was just enough rain to make the weather unpleasant, but not enough to be of any real good in adding to water supplies.

#### Weather Warms Up

The tenth of April was 4 degrees above normal, but for the month the average was a minus 16.

The minus temperatures for the month continued. On the 12th it was four for the day and 23 for the month to date.

#### Half Inch of Welcome Rain

On the 12th there was a welcome .54 inches of rain as recorded at the East Wareham Station. This helped some but it was not enough with the spring frost just ahead. There was rain again on the night of the 17th.

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#### April Turns Chilly Again

By the 18th of April the month was 4 minus for the day and a 37 minus for the month.

#### Snow on April 9th

The Massachusetts legal holiday of Patriots' Day, April 19th, was a chilly day with snow on the ground in the cranberry area. The snow was preceded by rain and in Wareham and other parts of the cranberry area. Boston had an inch and a half of snow for the observance of the holiday, so that holiday events were carried on with snow on the ground. These events included the famous B.A.A. marathon beginning at Hopkinton and ending in Boston.

The 19th was called the snowiest April 19 in 85 years. The night of April 19 was definitely a cold one, with heat needed in the homes.

#### Precipitation Slight

Precipitation over the holiday of snow mixed with rain was only .08 as recorded at the State Bog.

The April 19th holiday showed a minus of 10, bringing the minus of the month to that date of 55.

#### Heavy Frost

The night of April 20th brought a heavy, white frost, and the temperature reached 20 degrees. No warning was sent out as it was estimated the bogs could withstand that with no danger.

#### Month Continued Cold

April remained reluctant to bring real spring weather permanently. The 21st was 9 degrees colder than normal and the minus for the month to that date was 76 degrees.

April 23 was another belated

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spring day with cold winds and a light drizzle in the cranberry area. The precipitation was in the form of snow as far south as Worcester, Mass., and more snow and good skiing in the Mountains of Vermont and New Hampshire.

#### Some Rain

On the 26th there was a fairly good rain in the cranberry area, .84 inch as recorded at the Mass. Cranberry Station. This was not enough, however, to break the long drought conditions.

The temperature that day was a minus 11 and for the month the minus had reached a huge 104 degrees.

The last two days of April were pleasant, with some warmth. But the morning of the 30th there was frost with a 21 in South Carver.

#### Springless April

The month of April ended with a day of 4 degrees plus but the temperature for the month was a

huge 111 degrees, and a temperature deficiency since Jan. 1 of 362. Bogs had not greened up much and the herring which generally start to run up the streams to spawn in early March were just beginning to run in sizeable schools as the month of April ended.

#### Precipitation Good

Precipitation for the month of April as recorded at Massachusetts Cranberry Experiment Station was 3.55, with the average normal 3.85.

#### May Starts Warm

The first days of May were on the plus side, with temperatures well up, 60's and 70's.

## NEW JERSEY

#### April Very Cold

The maximum average temperature during the month of April was 60°; the minimum was 36.3°; and the mean average was 48.2°, 3.7° less than normal. There have

been only four Aprils colder than last month during the history of this weather station (1961—47.8°; 1956—48.1°; 1943—48.1°; and 1940—47.5°). In 1950 the mean average for April was the same as for April this year—48.2°.

#### Precipitation

Precipitation during the month was 2.5 inches, .91 inch below normal. The total for the first 4 months of this year amounted to 11.87 inches, which is 1.30 inches less than normal. During the night of April 1st, 2 inches of snow fell. This is the first snow in any April in the 36 years of weather recording here.

#### Freak Frost

A "freak" frost on the morning of April 25th caused a little damage to cranberry bogs from which the winter flood was drawn around April 1st to April 10th. Temperatures plunged as low as 16° when skies suddenly cleared in contrast to the forecast of cloudiness and probable rain. The following weekend the reverse occurred; clearing skies were forecast but rain developed. Growers have grown wary of Weather Bureau forecasts and are planning to sit up all night on questionable nights rather than depending on the forecasts.

## WISCONSIN

#### April Cold

April continued the cold winter with temperatures averaging five degrees below normal. The first week of the month again brought record breaking low readings with a minus eleven at Gordon. All areas had from 15 to 20 degree below normal readings during the period. The second week was warmer with 3 degrees above normal followed with colder and a pronounced warmup at the end of the month. On the plus side was the above normal amounts of precipitation with almost double the 2½ inches in most areas. April Fools Day brought an 8 inch snowfall in the upper one-half of the state and two inches also fell in the central area on the 26th. In between there were several good rain showers with severe weather

Continued on Page 25



# Hubbard Hall

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# THE HARJUS OF CARVER, MASSACHUSETTS, ARE GOOD EXAMPLE OF CRANBERRY GROWERS, OF FINNISH DESCENT

## Wilho and Eino Harju Operate About 70 Acres in All, Contributing 8,000 Barrels to Massachusetts Crop—These Brothers Own 31-Acre Wenatuxet Bog — Hard-Working People.

By CLARENCE J. HALL

Among the growers who can get along in the cranberry business are Eino F. and brother Wilho. The brothers are of the Harju cranberry-growing family, originating in Carver, Massachusetts. The Harjus in all operate about 70 acres of bog. The Harjus as a family estimate their crops as between 6,000 and 8,000 barrels of cranberries, which makes a sizeable contribution to the Massachusetts industry.

Eino and Wilho, operating as equal partners in a 31-acre bog, are the largest growers of the family. The production of this partnership goes independent in marketing, but that of some other bog units of the Harjus are sold through Ocean Spray. So the Harjus are mainly independents in marketing—but at one time Eino sold all his own berries through the big co-op.

The Harjus are today much encouraged concerning the outlook for the cranberry industry.

### Hard-Working Brothers

The Harjus are hard-working cranberry men. Both men are big and husky. "We Finnish people have always been used to hard work," quoting Eino. "We and our parents started out with not much money and have had to work hard.

"We are the owners. We are our own superintendents. We are our own laborers. We are our own mechanics in all our mechanical equipment. We have been brought up in cranberries all our lives." Wilho says he was taken out on the bog by his mother when he was six months old, while she weeded. "There isn't much about the business that we don't know how to do. We are on the bog all the time to see that everything is done right."

And the Harjus might have added that they mostly have a pretty good bog.

The Harjus have been growing cranberries in Massachusetts since 1911. The start was made by Fillus, now 84, who still owns a bog. He was born in Finland and came to this country in 1902. He worked for about eight years at Worcester in the American Steel and Wire Company. He then went to Carver and worked on the cranberry bogs. In 1912 he bought a place on Meadow street in South Carver, which was a farm and had a little cranberry bog of about two acres. He increased that to about five acres.

He still owns this bog, and it is known as the family bog. The Harju boys learned cranberries there. Today Eino and Wilho do most of the hard work on the bogs for their father. There is a screen-house on the property. This crop is sold through Ocean Spray.

### Other Harjus

Besides Eino and Wilho there is Reino, known by his family as Ray, who has a bog of his own in Lakeville and one in Middle-

boro. These total about seven or eight acres. He lives in Middleboro and is not a full-time grower.

Then there was Toiva, who died Dec. 21, 1961. He lived in West Yarmouth, and owned a bog of eight acres in Barnstable. A sister, Gertrude, and her husband, Oiva Rinne, own a small bog of about one acre in Carver. While the boys were in service, Gertrude had to be very active in the care of the bogs and still does today at harvest time.

Eino and Wilho each own bogs individually besides the 31-acre bog. Eino has 11 acres on France street in Middleboro and on Sampson's Pond in South Carver. The bog on France street was the old "Shurtleff Bog," a piece of six acres that Eino bought in 1937. This bog has an 85 barrel an acre average. The Sampson Pond bog is the "Winberg Bog," which has a 45 barrel per acre average and has been partly rebuilt. The fruit from these bogs Eino sells as an independent.

### 100-110 Barrel Average

Wilho, too, owns a bog on France street, just across the Carver town line in Middleboro,

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of about five and one-half acres. Of these bogs, he bought three in 1947 and then added two and a half acres more. Wilho says his average production there is 100 to 110 barrels per acre. He sells this fruit through Ocean Spray.

#### **Wenatuxet Bog**

The main interest of Eino and Wilho is the so-called Plympton or "Wenatuxet Bog" on Cedar street in Plympton. This is near East Middleboro. This beautiful 31-acre bog was formerly owned by the late Paul L. Thompson of Middleboro, a widely known grower who died in the winter of 1961-62. There was a house on the property, which was occupied by Mr. Thompson. This residence was sold by the Harjus. The "Wenatuxet Bog" dates from about 1910.

#### **Attractive Bog**

"Wenatuxet" is in seven pieces, the largest of which is 10 acres; however, they make up a single cranberry unit. The land about there is slightly hilly and the bogs sit in a depression. The bogs are overlooked from bluffs, making an exceedingly attractive bog setting. The bogs are very nearly level, and almost weed free. The shores are well cleared back.

The "Wenatuxet Bog" is flowed from the Wenatuxet River. There is at all times an ample supply of water. There are also a few rather

small springs on the upper end of the bog, and there is a natural rainshed to help cut. There is a small reservoir, which is now used but was not before.

For winter, insect or frost flooding, the Harju brothers pump on by two gasoline pumps and drain off by gravity back into the river. The pumps are 20- and 22-inch pumps. This is not a particularly cold spot, although temperatures on frost nights generally run lower than at the State Bog at East Wareham.

The Harjus have not lost berries by frost there, not even in that ill-remembered night of May 30, 1960, when so many Massachusetts growers lost heavily. They began putting the water on at 5:30 in the afternoon and by 2:30 in the morning they were safely covered.

#### **Interesting Experiment**

They tried an interesting experiment on one of the automobile gas pumps which flood the bog. They had a speedometer on the engine. They kept track of how far it had run in one year from November to November. They found that if the engine had been driving a car, the car would have travelled some 2,000 miles.

They are satisfied, or nearly so, with their water system, but do plan to install sprinklers on some acreage, this being in accordance

with the strong trend everywhere towards more sprinkler systems. They do not plan to cut the bog into smaller units for water raking, even though they understand as much as up to 20 percent of the crop is lost on most dry bogs. Although the Wenatuxet bog appears to be level, it actually is not entirely so.

The bog was built on a cedar bottom swamp, one of the best bottoms in Massachusetts. It is set to 14 acres of Early Blacks and 17 of late Howes. They figure they average about 75 barrels to the acre. Their biggest crop picked was 3700 barrels in 1960, but that was the year when the market was "shot," and they suffered severe shrinkage.

#### **Do Own Frost Work**

They bought the bog in 1959. They both put in their full time at this and their other bogs. During the growing season they have some help, but they are at the property working along with the men and supervising. The bog is harvested by two Darlingtones and three Western Pickers. They do their own frost work.

Since owning the Wenatuxet Bog they have completely resanded the 31 acres twice. They have cleaned up all the shore ditches and the cross ditches. They have changed the pumping system. They rebuilt some bogs and have put in three new flumes, of steel construction. There is good sand on the property, once it is screened.

They have a fertilizing program and use granular products. They have ground fertilizer rigs which they can use on rather windy days. They have a concentrate sprayer, power sprayer, and a couple of dusters. However, they do most of their insect and weed work from the air and have used both helicopters and straight-wing service. They have trucks and half a dozen jalopies for sanding; also a power shovel and tractors. They like to sand on the ice as much as possible. They have used the new weedicides, Simazine, Casoron and Chloro IPC.

On the property there is a well-kept screenhouse. This screenhouse is really one of three story, with a basement. This basement pro-

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Showing the attractive Wenatuxet bog of the Harjn Brothers. Note shores well cleared back and sand pit in the distance.  
(Cranberries Photo

vides excellent storage facilities. The building is 55 by 60 feet.

### Screen Own Fruit

They are among the few Massachusetts growers who still screen their own fruit. They have two Bailey separators.

Eino used to sell fresh fruit, operating under the brand name of "Pride of Carver."

At one time much of the Harju family berries were sold through the late New England Cranberry Sales Company. They lament the death of this organization, saying "that outfit knew how to sell fresh cranberries."

Eino, who is the elder brother, was born in South Carver in 1914. He attended Carver schools and Wareham High School. Wilho was born in 1918, attended Carver schools and went to high school in Middleboro.

Wilho Harju for a time was in the cranberry vine setting business, contracting to set vines. He had a crew of 14 which set the vines with the old hand dibble.

Both were employed in construction as carpenters, and Reino still is in construction work. Wilho was fireman on big construction jobs; he worked on bridge construction and building construction. His jobs took him all over eastern Massachusetts, on the Cape, and elsewhere. He has worked in Virginia, Rhode Island and in Maryland. Eino was also on construction jobs in Massachusetts and in Virginia, Maryland and Rhode Island.

### Both in War Service

Then came the war and both were in service, both in the Air Forces. Eino was in three years and one month; Wilho three years and a half. Wilho had the rank of staff sergeant. Wilho, it happened, was in the South Pacific for 30 months. He was in the Solomons, Fijis, Netherlands East Indies and in the Philippines. He was under bomb fire for night after night while he was in the East Indies. He was trained at the Goldsboro Air Force base in North Carolina, Airplane Mechanic School, and was sent to a factory school at Nashville, Tennessee.

Eino did not get overseas, but he served widely in this country. He was sent to the New England Aircraft School at Boston. He was at Republic Aviation School at Farmingdale, Long Island; Bell Aircraft School at Niagara Falls, New York. He took his basic training at Miami Beach, as did Wilho, also. Eino was then stationed at Drew Field, Tampa, Florida, and at Harding Field, Baton Rouge, Louisiana. He was also at Brownsville Air Force Base, Texas, and at Lajunta Air Force Base in Colorado. The last six months of his service was in recruiting. He had a choice of location and picked Rice Lake in Wisconsin. There, and in other parts of northern Wisconsin, he saw the Wisconsin cranberry marshes at Rice Lake, Spocner and Hayward. He had the rank of sergeant. Reino served three years and two months in the 88th Infantry Division in North Africa and Italy. Received his training at Camp Gruber, Oklahoma. Attained the rank of corporal.

This training made them excellent mechanics. Both can repair or devise any sort of cranberry equipment. So they do not have to hire any mechanical work done.

### Third Generation Grower

Wilho is married to the former Lillian Langevin of Fairhaven, and has four children. The oldest is Lawrence, 17, who already is on the way of becoming a bog man. He works at many bog jobs; he drives trucks on the property and

is particularly useful in jalopie work in ice sanding. There is Elaine, 16; Paul, 12, and Richard, 5.

Eino is unmarried and lives with his father and sister at the "family place." Both are members of Cape Cod Cranberry Association. Both attend meetings, especially the clinics on insects, weeds, frost and other matters held each year under the auspices of the Cranberry Experiment Station. They both like to hunt and fish, but both say their almost constant cranberry work doesn't give them much time for these sports. Now and then Eino still goes hunting and deep-sea fishing.

### Favored Marketing Order

Eino was a member of the original Massachusetts marketing order committee. He testified in favor of the order at the Massachusetts cranberry hearings. Both were in favor of this order, very strongly. "What would the industry do if and when we come up with a million and a half barrels?" They felt marketing agreements and an order were the only solution to combat such big crops, at least at the present. Both believe Ocean Spray is beginning to do a good job for the industry.

In conclusion, both Harju brothers say they are tremendously interested in the cranberry business. "We like it. We like working for ourselves, as we can do in the cranberry business."

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# Indian Trail Companies of Wisconsin Rapids Sold to Chicago Dairy Company

**Buyer Has Relatively Large Assets and Operates in Eight States; Ben Pannkuk, Indian Trail President and Other Officials to Operate as A Division of the Dairy Firm**

Indian Trail, Inc., the Wisconsin Rapids cranberry marketing firm, and three related companies, have been sold for cash to Dean Foods Company, Chicago. The sale was announced late last month. Officials of the two corporations announced the sale April 22 in a joint announcement by Ben Pannkuk, president of Indian Trail, and Samuel Dean, president of Dean Foods.

The Indian Trail companies had combined sales of \$1,250,000 in 1964, while the Dean Company sales were \$72,999,748. The Chicago firm, which has offered its stock to the public since 1962, reported net earnings of \$1,466,487, or \$2.01 per share of common stock.

## Purchase Price Was Not Disclosed

Indian Trail companies are distributors of fresh cranberries and manufacturers of canned, frozen and juice cranberry products. The sales offices are in the Wisconsin Rapids headquarters and the processed lines are manufactured in Waupun and Ripon plants.

Distribution of the Indian Trail lines is throughout the Midwest and in the South and West. There are 24 associated cranberry growers located mostly in the Wisconsin Rapids and Warrens-Mather areas. There are eight full-time employees in the Wisconsin Rapids office.

"Indian Trail and its associated cranberry growers as well as other Wisconsin cranberry growers are fortunate that Dean Foods with its resources and management skills has entered our field," Pannkuk said in announcing the sale.

"Dean Foods is an expanding firm already relatively large, and can be expected to sell throughout many regions of the country, manufactured and fresh cranberries obtained from associated members.

"The new owners will continue and expand upon the successful Indian Trail operations."

## Same Management

In its statement, the Dean company asserts the Indian Trail companies will operate under the present management as a division of the Chicago firm. Included in the purchase is the Indian Trail brand name.

The Indian Trail companies are Indian Trail, Inc., established in 1948 to market fresh cranberries; Indian Trail Foods, Inc., formed in 1956 to manufacture and sell frozen cranberry products; Indian Trail Finer Products, Inc., formed in 1959 to manufacture and sell frozen cranberry products; and Indian Trail Produce Shippers, Inc., formed in 1959 to sell prod-

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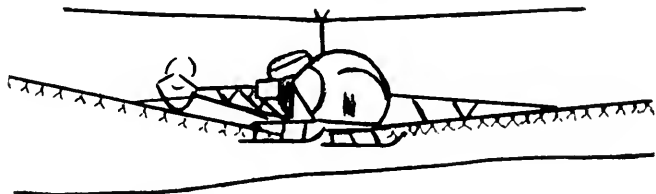
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ucts other than cranberries in "off season."

Pannkuk is president of each of the companies; vice-president and secretary-treasurer of the companies respectively are: William Huffman and Richard Brazeau, all of Wisconsin Rapids.

#### In 8 States

Founded in Rockford, Illinois, in 1925 as a local dairy plant under the name Dean Milk Company, the Chicago firm began offering stock to the public in 1961 and changed its name to Dean Foods Company in 1962.

The company now has 1,400 employees in 21 plants and collecting stations in Illinois, Wisconsin, Michigan, Kentucky, Indiana, Arkansas, Louisiana and Tennessee.

Dean food lines are fresh dairy products, ice cream, cheese, evaporated and powdered milk, pickles, relishes and prepared foods, such as salads and meats.

Joe Hoelting will continue as sales manager and grower contact man on fresh cranberries, and his assistant, Les Mixdorf; Al Vambor, sales manager in charge of processed products, and Andy Basso in charge of the office and accounting.

### Indian Trail Growers Meet Dean Foods Representatives

Cranberry growers associated with the Indian Trail cranberry marketing company met with officers of the Dean Foods Company of Chicago at the Mead Inn, Wisconsin Rapids, April 28. Samuel Dean, chairman of the board of the Chicago firm, said the acquisition is a continuation of the Dean Foods program of diversifying its operations from the company's original dairy business into additional food products.

A recently-completed \$400,000 food research and development laboratory at its Rockford, Illinois, plant, Dean said, will assist in the company's aim to produce a wide variety of quality foods for year-round use.

"We are looking forward with a great deal of confidence to participating in the cranberry busi-

ness," Dean declared. "Certainly the cranberry is a glamorous product with many uses."

Ben Pannkuk, Indian Trail president, introduced Dean. There was a total of 105 growers, foremen and their wives attending.

### FORMER EATMOR HEAD SUBJECT OF ARTICLE

Harold Bryant, one-time manager of the American Cranberry Exchange (Eatmor), was the subject for the lead (April) article in "The American Vegetable Grower. The article was by R. T. Meister, editor of the magazine. The magazine article, which was sent to CRANBERRIES, through the courtesy of Vernon Goldsworthy, president of Cranberry Products, Inc., of Eagle River, Wisconsin, went on to say:

"Potatoes are to Maine what oranges are to Florida or apples to Washington. While Washington and Florida have been cresting on a wave of prosperity, until this year Maine has been foundering in a sea of low prices. When Harold Bryant was called back to Presque Isle in March, 1962, it was to

change this alarming turn of events which had taken place."

The article went on to say that Mr. Bryant is a native of Aroostook County (the No. 1 potato-growing county) and that after three years with Eatmor Mr. Bryant went to California to join Blue Goose Growers, Inc., where after one year he was named vice-president of operations.

#### ARTICLE IN NEW ENGLAND HOMESTEAD

David G. Hanson, assistant advertising manager of Niagara Chemical Division, FMC, Middleport, N. Y., has an article in the April "New England Homestead" headed, "Keep Bees Healthy By Spraying Orchards Carefully." "Dave" is a personal acquaintance of the editor of CRANBERRIES, and the supplier of Niagara Chemical ads for this magazine.

#### FIREWORM AT BANDON, OREGON

Fireworm was found on some of the Bandon, Oregon, bogs in late April, according to Fred Hagelstein, county agent, Coos County. Crop losses due to this insect can be severe, he said. Recommendations for its control have been sent

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## Mass. Cranberry Station Adds New Scientist To Its Staff -- To Work On Nematodes



**Dr. Karl H. Deubert at the Cranberry Station, East Wareham, Mass.,  
New Nematologist**

The Massachusetts Cranberry Experiment Station at East Wareham has acquired a new member to its staff. He is Dr. Karl H. Deubert. He will assist Dr. Bert M. Zuckerman in his work in nematology, that microscopic organism which eats the roots of cranberry and other plants.

Dr. Deubert is a native of East Germany, having been born at Wessene February 1, 1929. He was one of the last to leave that party of Germany under Commu-

nistic control. He was able to leave just before the Berlin wall was built. He left his relatives in East Germany and came to the Free World with two trunks as his sole possessions.

His early schooling was at the city of Halle. Following that he entered the University of Halle, studying there from 1953 to 1955. He was interested in agriculture. English is compulsory in the German schools for pupils between the ages of 10 and 18. He chose

Latin as another language, knowing this would be very helpful in his future in agriculture.

At the University he trained as an entomologist. He studied zoology also. He took a post graduate course and received his Ph.D. degree.

Following his studies he was, first, assistant professor and then associate professor at the University. After that he taught for one year at the Central Biological Institute in Berlin.

He then entered the business world and worked for a time for a private chemical company at Nurenberg; this was in the capacity of entomologist.

He then came to the Western Hemisphere and lived at Tegucigalpa, the capitol city of Honduras, high up in the mountains. He was employed at the University there as full professor of biology.

He had been married in Halle, his wife being Eleanor Stephan. She accompanied him to the new world. Dr. Deubert now speaks fluent Spanish.

From that Central American country he went directly to the Cranberry Station in April. Dr. and Mrs. Deubert are making their home in New Bedford. The couple have no children.

One of the doctor's regrets is that he cannot always write freely to his relatives back in East Germany. His letters to them are all censored, and some get through and some do not.

Dr. Deubert says he plans to remain in this country permanently. "I have no plans to go back to Europe," he says. "I think I will be very happy in my work at East Wareham."

He added that he is engaged in the sort of work he likes and was trained for. He said he found the rest of the Cranberry Station staff very congenial.

"I like living in a free country very much," he concluded.

---

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CRANBERRIES  
MAGAZINE**

# Current Research And Major Problems In Weed Control For Cranberries-Wis.

By MALCOLM N. DANA<sup>1</sup>

Cranberries are grown on about 25,000 acres in the United States of which about 5,000 acres are found in the North Central Region (Wisconsin). This crop grows on a broadleaf evergreen plant native to highly acid marsh soils. The mature planting is a complete cover of vines that allows no opportunity for cultivation or other mechanical manipulation of the soil and thus, weed destruction.

Weed control is obtained by hand weeding and by applications of herbicides. Petroleum derivatives (Stoddard solvent and kerosene) and inorganic salts such as iron sulfate, sodium chloride, and copper sulfate have, in recent years, been supplemented with dalapon, 2, 2-dichloropropionic acid; 2, 4-D, 2, 4-dichlorophenoxyacetic acid; CIPC, isopropyl N-(3-chlorophenyl), carbamate; si-

mazine, 2-chloro-4, 6-bis (ethylamino) - s - triazine; NPA, N-1-naphthyl phthalamic acid; and dichlobenil, 2, 6-dichlorobenzonitrile. Dichlobenil is the most recent addition to the list and promises to find extensive use for a wide range of weed species, including sedges, perennial broadleaf types and annual grasses (1). Nearly one-third of the Wisconsin acreage will be treated in the first year of label clearance.

Weed control in cranberry marshes cannot be considered separately from other management practices. Flooding for frost protection supplies a means of bringing in a quantity of new seeds each year with high seed counts in early spring and again in the fall. Clean ditches and a weed-free reservoir coupled with a minimal use of water reduces the potential seed deposition. The rapid acceptance of sprinkler irrigation in place of flooding for frost protection will restrict seed movement onto the beds for it is practical to screen a pump inlet for water volumes needed for sprinkling and the ditch contamination found in flooding will not be a problem where irrigation pipe directs the water to the point of application.

Weeds thrive under conditions

of little competition from the cranberry vines and conversely are most easily subdued in the presence of a vigorous cranberry stand. Therefore, fertilization, soil drainage, disease and insect control, sanding, and rodent control must all be considered in relation to the influence they have on vine vigor and thus weed control. For instance, an area of cranberry vines weakened by root grub damage offers little competition to an invasion of barnyard grass, beggarticks, and rice cutgrass. A new layer of sand on the soil surface in a thin stand of vines provides a most acceptable seed bed for willows and poplars. Cranberry fields allowed to become low in fertility or to suffer from drought soon show open spots ripe for weed invasion. Such spots may serve as nuclei for the development of larger areas of monotypic weed colonies. Any practice designed to improve the vine stand and productivity of the marsh is important to weed control.

Plantings maintained free of weeds through the first four years are relatively easy to maintain weed free because in these early years vine competition is established. A recently completed study (2) showed that new beds could be maintained nearly weed free by proper soil preparation before planting, washing of the planting stock, and removal of weed seeds from the irrigation (flooding) water. This program was demonstrated in field plots but little headway has been made in development of practical means to implement these findings at the grower level. Should the developers of the rapidly expanding acreage take advantage of this knowledge and use their ingenuity to develop practical barriers to weed invasion, the control problem for later years would be minimized.

A study now in progress seeks means to speed the rooting and early growth of cranberry cuttings in new plantings. The philosophy behind this investigation of rooting stimulants, propagation media, and soil moisture tensions is that an early cover of cranberry vines would discourage germination and establishment of perennial weeds.

<sup>1</sup>Associate Professor, Department of Horticulture, University of Wisconsin, Madison, Wis.

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Vigorous vines for planting and careful water management after planting contribute to vigorous growth. Early results suggest that phosphorous nutrition may also be heavily involved in early vine growth.

The herbicide research program screens new products that offer any possibility of success under the conditions peculiar to cranberry bogs. The first year test is a preliminary evaluation to determine broad limits of toxicity to the cranberry plant. If the cranberry plant shows an acceptable degree of tolerance, the herbicide is then tested against a number of weed species. Any promising chemicals are placed in replicated yield tests and careful records of vine response are maintained to provide data for later recommendations.

The weed control problems of the cranberry grower are many. Only a few of the most difficult problems will be discussed here. Creeping sedge, *Carex chordorhiza*, is the species causing growers the most concern at this time. The

species occurs in sand as well as peat soils and both in highly and moderately acid conditions. Its occurrences as a major competitor are becoming more widespread for reasons which are not well understood. It is known to be carried both as seed and as vegetative propagules in vines and thus, is moved from one property to another as a contaminant in nursery stock. Quite possibly its seeds and runners are moved by mechanical harvesters and are dispersed over any given property by this means. There is some evidence to suggest that the practice of maintaining cranberry marshes in a drier state than was the case 20 years ago has contributed to the gradual spread of this pest. Present research for control is directed toward testing combinations of contact and residual herbicides (petroleum derivatives and diquat, 6, 7-dihydrodipyrido (1, 2-a:2', 1'-c)pyrazidinium dibromide, with dichlobenil and dalapon) in conjunction with flooding regimes. At the same time observations on the ecology of the

species continues from year to year with the hope that a weak point in its life cycle may be found where management practices might be adjusted to suppress the growth of the weed. Water levels over the soil surface for several months have not successfully controlled the species. There is no known practice to eradicate this *Carex* although heavy applications of petroleum materials in the spring will suppress its development and spread.

A second major problem is the eradication of woody species. Willows, *Salix* sp.; brambles, *Rubus* sp.; leatherleaf, *Chamaedaphne calyculata*; bog rosemary, *Andromeda polifolia*; hardhack, *Spiraea tomentosa*; and meadowsweet, *S. alba* not only compete with cranberries for light, space and nutrients; but also interfere seriously with the orderly operation of mechanical pickers. Herbicides are also highly toxic to the cranberry vines. Treatment of individual plants with carefully selective agents is effective against the above species

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controlled sprays of systemic materials, is the only reasonable approach to this problem in substantial stands of weedy brush although hand pulling is economical and effective in sparse stands. A selective herbicide toxic to the above species but harmless to cranberries would, of course, be a welcomed product.

The third problem on which the research program will concentrate in the immediate future is the control of annual grasses. Included in this group are barnyard grass, *Echinochloa crusgalli*; pungent barnyard grass, *E. pungens*; several species in the genus *Panicum*; and tufted lovegrass, *Eragrostis pectinacea*. These species germinate in the spring and become troublesome from mid-summer onward. They shade the blossoming vines and thus interfere with pollination and also interfere with harvest. CIPC and dichlobenil suppress these species early in the summer but under Wisconsin conditions, neither herbicide has provided full season control at rates of use safe to the cranberries. Other herbicides have not received extensive testing for this specific purpose.

Other weed species that offer major problems to individual producers but do not occur in damaging populations on many properties include common arrowhead, *Sagittaria latifolia*; Canada anemone, *Anemone canadensis*; sweet joe-pye-weed, *Eupatorium purpureum*; water smartweed, *Polygonum amphibium* and swamp smartweed, *P. coccineum*; water hemlock, *Cicuta bulbifera*; marsh five finger, *Potentilla palustris*, and swamp dodder, *Cuscuta gronovii*. A post emergence herbicide with the selectivity of amitrole, 3-amino-1, 2, 4-triazole, would be useful against these weeds. Any material that has safety on vines is tested against one or more of these species.

The weed control research program for cranberry production evaluates new herbicides for specific weed problems and continues to explore management practices as they influence weed populations. The development of maximum vine competition through good

management is essential if the herbicides are to exert their full potential of effectiveness. Research on any production problem will influence the weed problem and is, therefore, a portion of the weed control program.

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Editor's Note: The foregoing article was reprinted from the Proceedings of the 20th Annual Meeting of the North Central Weed Control Conference.)

## INDIAN TRAIL GROWERS MEET FOR SPRING SESSION

The spring meeting of cranberry growers affiliated with Indian Trail, Inc., was held recently at Wisconsin Rapids. The gathering was held at the Mead Inn with about 75 cranberry growers and wives attending.

Guest speaker was William Hanson of Clintonville, widely known for his humorous presentation in the role of the "Norwegian Philosopher."

Also speaking at the meeting during the after-dinner program were Ben G. Pannkuk, Indian Trail president, and Joe P. Hoelting, sales manager. Mr. Pannkuk outlined marketing plans for fresh, frozen and processed cranberries during the coming year. He discussed expansion of Indian Trail's line of products for increasing cranberry juice production.

Hoelting spoke about ASCS projects for soil conservation and irrigation.

Final payments were presented to the growers for the 1964 crop.

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Ocean Spray Cranberry Growers are living proof that advertising and bold new developments pay

off. With growers and processors working together, they increased sales last year by \$5 million while returning 24% more in payments to cranberry producers. (From Fruit-O-Scope, the American Fruit Grower.)

## Oregon Prospects Good -- Spring Was Early

The Bandon, Oregon, cranberry area had an early spring. The weather was favorable for a good crop year. March nights were cold, but day-time temperatures started early growth. Many days were warm and balmy.

A few growers started sprinkling for frost early in March. April was warmer than usual. There were fewer frosts than average, resulting in early growth. By May 4th some bogs were in the rough-neck stage. Young vines—5, 6 and 7 years old—were in the dangle stage by the same date.

Casoron-treated bogs for weed control look very good.

(These notes from Ray Bates of Bandon)

## WISCONSIN RIVER AT HIGHEST EVER FLOOD IN MID-APRIL

The middle of April there was much precipitation in the form of rain and snow in the Wisconsin Rapids area, the principal cranberry-growing section. Dr. George L. Peltier, cranberry consultant, reported that for a change the Wisconsin River reached its highest peak in recorded history. The past three years has been short of water for the Wisconsin growers.

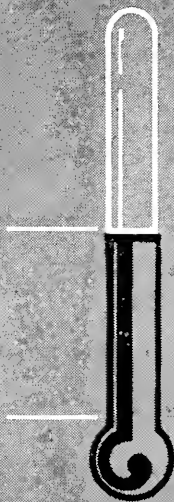
Most of the ice had gone out in the Wisconsin Rapids area, but the winter frost had penetrated to a depth of from 50 to 60 inches. Spring was at least two to three weeks late in the area, according to Dr. Peltier.

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HRH (Her Royal Highness) Princess Royal visiting the United States cranberry Exhibit at London recently. The Princess (Center) is watching cranberry pancakes being made.

(Photo CRANBERRY KITCHEN, London,  
and Cranberry Institute, South Duxbury, Mass.)

# A Brief History of Cranberry Entomologists

Also a Brief History of  
Entomology as Concerns  
Cranberries

by

WILLIAM E. TOMLINSON, JR.

(Entomologist at the Massachusetts  
Cranberry Experiment Station)

Because it was a native plant, the cranberry had a regular insect fauna even before it was introduced to cultivation in the first half of the eighteen hundreds. Their depredations were probably annoying in the days before cultivation in years of abundance when they destroyed whole crops, but little if anything was done to control these "acts of God."

This viewpoint no doubt changed very soon after bogs were first cared for when the grower saw his efforts and profits being consumed by fireworms or fruitworms or some other insect pest. By the year 1856, when the Reverend B. Eastwood wrote his book "Cranberry Culture," the fruitworm was a well recognized pest, and this and another insect known only as "the worm" were discussed in it. "The worm" was more than likely the black-headed fireworm, though possibly yellow-headed fireworm was also involved. Certainly the insect mentioned in the letter of Augustus Leland on page 114 of this book was the black-headed fireworm, and its ravages were known to Leland at least as early as 1840 at Sherborn, Mass.

In 1870, a book also entitled "Cranberry Culture" was written by Joseph J. White of New Jersey. It is in this book that we first encounter the name of William C. Fish of Orleans, Mass. Included as an Appendix in White's book is a report that Mr. Fish made to the Cape Cod Cranberry Growers Association in 1869 on "Insects Injurious to the Cranberry." He has the distinction of being the first professional cranberry entomologist, antedating J. B. Smith in this respect by a dozen years and H. J.

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Franklin by almost 40 years, for he was hired to study cranberry insects on Cape Cod by the Cape Cod Cranberry Growers Association and was paid the sum of \$150 for this study made in the summer of 1869.

Fish made his study with considerable care and understanding, as his report attests. In it he discussed the black-headed fireworm and its control with 10-hour reflows, fruitworm and its control by late holding, as well as descriptions of tipworm and its injury, and a spanworm that may have been the brown cranberry spanworm or the cranberry spanworm of J. B. Smith (cotton spanworm of Franklin).

A. S. Packard, the foremost American entomological writer in the period following the Civil War, described several cranberry insects in his writings, most of which were credited to this same W. C. Fish for collection, life history data, and control recommendations. These are found in the reports of the Massachusetts State Entomologist for 1871, 1872, and 1873, or

in "Guide of the Study of Insects" by A. S. Packard which was first published in 1869.

In 1883 and 1884, John B. Smith studied cranberry insects in Massachusetts and New Jersey for the U.S.D.A. The results are published in Bul. #4 of the Division of Entomology for 1883 and in the report of the Entomologist for 1884.

In 1890, Smith wrote Special Bulletin K of the New Jersey Agricultural College Experiment Station entitled "The Insects Injurious Affecting Cranberries." Though it applies particularly to New Jersey conditions, most of the same problems were known in Massachusetts also. In 1930, the U.S.D.A. published Farmers Bul. 178 "Insects Injurious in Cranberry Culture" also by J. B. Smith. This too was aimed at New Jersey conditions more than those of Massachusetts.

In the early 1900's, C. B. Hardenberg studied the insects attacking cranberries in Wisconsin, and Wisconsin Bul. #159 "The Cranberry Insects of Wisconsin" was published in 1908 as a result of these

studies.

Through the efforts of the Cape Cod Cranberry Growers Association, H. J. Franklin first entered the cranberry scene as a special investigator of Cape Cod cranberry insect problems in the summers of 1906 and 1907. In 1909, this same organization spearheaded the establishment of the Massachusetts Cranberry Experiment Station at East Wareham of which Dr. Franklin was in charge from 1909 until his retirement in the fall of 1952.

Cranberry insect control methods may change but the knowledge that he gathered and the excellent descriptions he published on cranberry insects, their life histories and habits will always be of value as long as cranberries are grown. His cranberry bulletins have aptly been called the cranberry growers "Bible."

In the decade from 1910 to 1920, H. B. Scammell worked on cranberry insects in New Jersey for the U.S.D.A., publishing on the life history, habits and control of the cranberry girdler and the

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cranberry rootworm. Also a revision of Farmers Bulletin #178 was prepared by him as Farmers Bulletin #860 entitled "Cranberry Insect Problems and Suggestions for Solving Them" in 1917.

In 1918, the New Jersey Agricultural Experiment Station established a cranberry substation with an entomologist, Charles S. Beckwith, in charge at Whitesbog, N. J. He actively investigated New Jersey cranberry insect problems until his untimely death in 1944. He was first to publish that the vector of cranberry false blossom was the blunt-nosed cranberry leafhopper, and he did much pioneer work with the developing cultivated blueberry industry and its problems, particularly blueberry maggot and the cranberry fruitworm.

Donald S. Lacroix worked several summers in the early 1920's as an assistant at the Cranberry Station. In 1926, he published the first

detailed report on the biology and control of the cranberry weevil from work done at the Cranberry Station in 1923, 1924 and 1925.

In 1932, '33 and '34, A. E. Richmond worked at East Wareham on cranberry insect control with Pyrethrum dusts in cooperation with the Crop Protection Institute.

In New Jersey, Dr. Byrley Driggers worked as an assistant to C. S. Beckwith in the 1920's. In 1930, Charles E. Dcehlert became Beckwith's assistant and worked on insect and cultural problems of both cranberries and blueberries from 1930 until his retirement in 1959. From 1945 through 1950, W. E. Tomlinson, Jr., was engaged by the New Jersey Experiment Station to work on cranberry and blueberry insect problems. From 1947 to 1949, and from 1951 to date, P. E. Marucci has investigated New Jersey cranberry and blueberry insect problems, espe-

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cially vectors of blueberry stunt disease, cranberry tipworm, and *Sparganothis sulfurana*. Martin T. Hutchinson also worked on cranberry and blueberry insects at the New Jersey Station from 1949 through 1952.

The exact role of many persons associated with cranberry entomology in Wisconsin has been difficult to ascertain. However, names that I have found associated more or less in their order of appearance are W. Postiff and C. W. Hooker who worked on fireworms and fruitworms at the Wisconsin Experimental Bog in 1910. O. G. Malde was in charge of the Wisconsin Experimental Bog until it was discontinued in 1918 and was also Deputy State Entomologist on cranberry insect control until some time after 1922. S. B. Fracker in the 1920's, and later E. L. Chambers, as State Entomologist were in charge of the cranberry insect survey program.

From 1926 to 1928, H. F. Bain was State Cranberry Specialist with at least some entomological duties. L. M. Rogers held that position for several years after Bain left in 1928. Vernon Goldsworthy worked on cranberry false blossom vectors in the late 1920's and beginning in the early 1930's, as manager of the Wisconsin Cranberry Sales Company, included among his duties was insect control. From 1944 to 1958, H. F. Bain was employed by a group of Wisconsin growers to work on cultural problems including insects and G. L. Peltier worked as a consultant to Indian Trail Cranberries, Inc., beginning in 1951.

On the West Coast, H. K. Plank was a scientific investigator for the U.S.D.A., appointed to study the black-headed fireworms in Washington and Oregon in 1918 and 1919. D. J. Crowley headed up the Washington State Cranberry Station from its beginning in 1923 until his retirement in 1953. He worked on all phases of cranberry and blueberry culture, including insects that affected West Coast plantings.

Since 1952, W. E. Tomlinson, Jr., has worked on Massachusetts cranberry insects problems, particularly root grub control, cran-

berry fruitworm control, and methods of insecticide applications on cranberry bogs.

In Canada, C. W. Maxwell and G. T. Morgan worked on cranberry fruitworm life history and control in the province of New Brunswick in the early 1950's.

That there have been others engaged professionally in the entomology of cranberries is very probable. The omission of their names is due to lack of knowledge on the author's part. Records are often fragmentary and widely scattered.

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## May Opens With A Rash of Mass. Fires, One Bad

May began—in fact, May 1st—with a rash of forest fires in the tinder-dry woodlands. The worst fire was a blaze in the Sandwich-Bourne area on the Cape.

In this fire about 2,000 acres were destroyed, the blaze on a ten-mile front, roaring over the wide Mid-Cape highway, a major artery. The fire was fought by hundreds. Hundreds of people were evacuated in the towns of Sandwich and Bourne and the village of Buzzards Bay.

A part of the Shawm State Forest at Sandwich was burned over. The clouds of smoke were seen from 60 miles away at Provincetown, tip of the Cape. This was termed by officials as the worst fire in a number of years on the Cape.

No houses were burned, however, but there were two injuries.

Other fires included one in the Long Pond area of Plymouth woods in Plymouth county. There was a total of 383 wood fires over the May 1st weekend, according to Commissioner of Natural Resources Charles W. Foster.

By the 5th there were 101 new wood fires reported in drought-ridden Massachusetts.

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## READ CRANBERRIES

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## CHANGES AT LONG BEACH, WN., ARE ANNOUNCED

Officials of the Washington State University have completed arrangements involving personnel at the Coastal Washington Experiment Station at Long Beach. Dr. Mark T. Buchanan, director of the Washington State University, stated that Dr. Charles C. Doughty will leave his post as superintendent of the Long Beach Station July 1st in order to move to the Western Experiment Station at Puyallup.

Dr. Doughty has been superintendent of the Station at Long Beach since 1957 and was acting superintendent for three years prior to this. His duties at Puyallup will include working half-time on cranberry research and half-time in other small fruits.

Also involved in the change will be Azmi Shawa, senior horticulturist at Long Beach since 1960. He will remain on at Long Beach as horticulturist and will also handle duties for WSU's experiment station.

Irma Anderson, secretary at Long Beach, will continue in her present role.

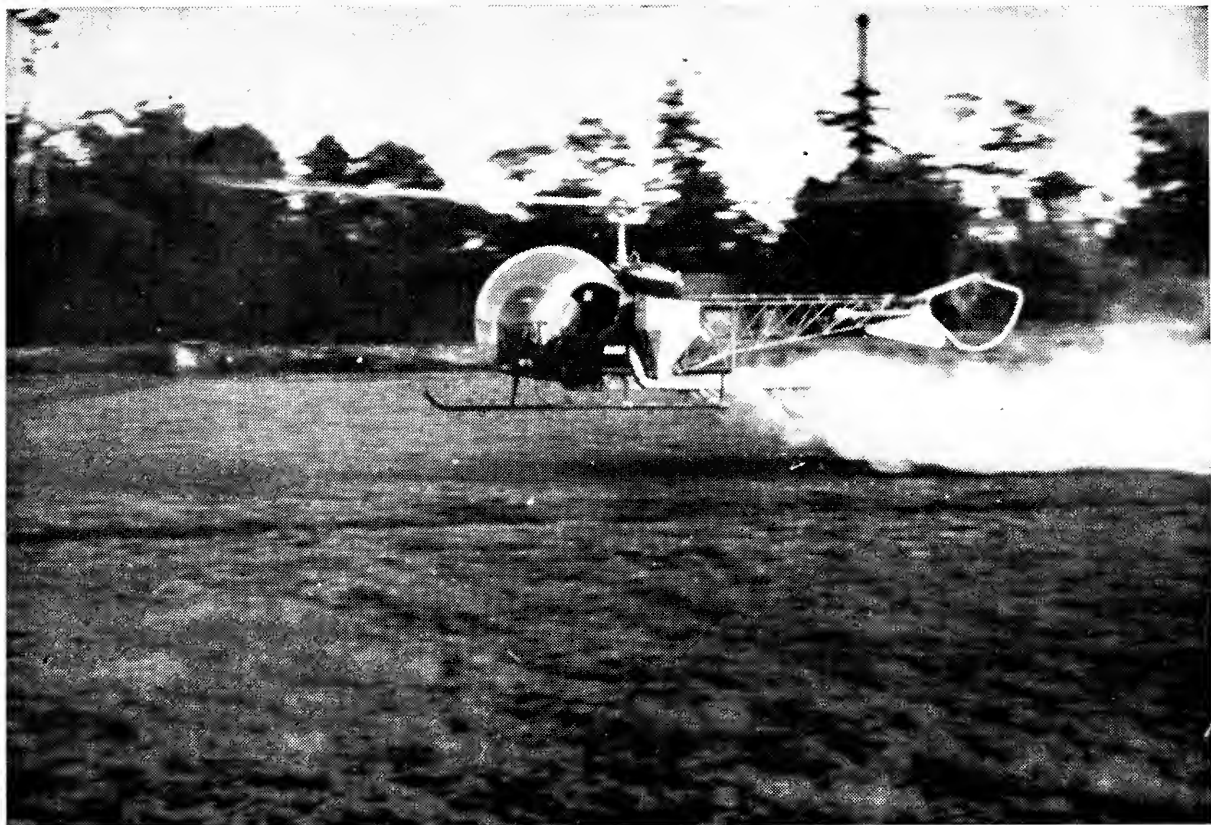
Dr. Buchanan stated in connection with the changes it was WSU's continuing plan to provide strong investigation where cranberries are concerned and to give desired service to cranberry growers.

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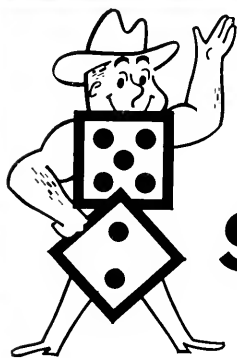
## N. J. WEATHER QUOTE

Allison Scammell, veteran cranberry grower of Pemberton, New Jersey, and the subject of a previous article, is quoted in a recent issue of the *Pemberton Times-Advertiser* in its "Cackles from the Starling" column. The item is:

Allison Scammell quotes the weatherman as saying it is going to be milder . . . applied to weather the word mild indicates neither hot nor cold—a sort of in between state. Allison wants to know how the weather can be more in between.



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farm groups and rural communities can go to one office and find what "help" is available. (From the Farm Journal.)

Maurice Makepeace of the A. D. Makepeace Company of Wareham, Mass., and Mrs. Makepeace, have returned from an extended vacation to the West Coast and Hawaii. In going cross country they went by train, via the Burlington Route to San Francisco, and then on to Hawaii, and returning by train via the Great Northern.

### MRS. CARL URANN

Mrs. Carl Urann, widow of Carl Urann, who was president of United Cape Cod Cranberry Company, Hanson, Mass., and a director of Ocean Spray, died May 12th at her home in Duxbury, Mass. She was 73.

Born in Alexandria, Va., she spent her early years in Nantucket, Mass. A resident of Middleboro for 20 years, she moved to Duxbury about two months ago. She was a member of Nantucket Historical Society and the Attleboro and Nantucket Archaeological Societies. Her late husband was a brother of Marcus L. Urann, first president of the present Ocean Spray Cranberries, Inc.

She leaves a son, Marcus M., president of the United Cape Cod, and two daughters Mrs. Maxine M. Baldry of Sussex, England, and Mrs. Mina B. Manner of Duxbury.

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## FRESH FROM THE FIELDS

Continued from Page 6

including tornadoes in southern Wisconsin on Palm Sunday. The extended forecast for May calls for temperatures to be about normal and precipitation above normal.

### Water Drawn Late

The extended cold weather and accompanying snow delayed the removal of the winter floods from the second week normal in the south to the end of the month in the far north. This was about ten days later than normal, and two weeks later than last year. Reservoirs still had ice in the south at month's end and in the far north they were still ice fishing the last week of the month.

### High Water Supplies

Frost depths were still three feet deep in some areas by the end of the month and the heavier cranberry soils had hard frost at the depth of four inches. Reservoirs were filling up and water was being wasted at the end of the month. All areas reported the highest spring water levels in years. Flooding was not a serious problem although there were numerous washouts and heaving of bulkheads. Ground water tables were building up, which showed the first gains in many months.

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As far as acreage increase is concerned, most of it will come in Wisconsin, and I do not believe there will be very much acreage increase in Massachusetts, New Jersey, or Washington and Oregon. Wisconsin will definitely be increasing its acreage from 300 to 500 acres a year if potential plans go through. A good part of this acreage will be planted with new varieties such as Stevens, Pilgrims, Beckwith, and others, as planting stock becomes available. These new varieties will outyield the present varieties of cranberries being grown and in addition most of them will be better for processing than any of the other varieties that are now being grown, particularly the Searles Jumbo, which is a heavy yielder but not a particularly good processing berry.

We predict Canada will also increase its cranberry production and the main limiting factor would be capital and management, but if these are overcome we can look for Canada to soon grow all the berries it will need for its own use, and will not need to import any from the United States. The big increase may be in British Columbia where raw land costs \$500 an acre compared to approximately \$5 an acre in Wisconsin.

We predict that the use of sprinkling systems will grow more and more in producing areas, and quite rapidly.

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Editor and Publisher

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### JOHN CHANDLER

John Chandler of Sterling, Mass., passed away recently. He had been an apple grower since 1913 and he was named Massachusetts Com-

missioner of Agriculture in 1947. He served in that capacity until 1950.

Mr. Chandler was well known to Massachusetts cranberry growers and attended meetings of the Cape Cod Cranberry Growers Association.

He held many offices in fruit organizations; in 1924 he was president of the Massachusetts Fruit Growers Association.

He was an officer of the American Pomological Society. He was 75 years of age.

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CLINTON MACAULEY, President of American Cranberry Growers' Association (Photo Peskin Goldman Studios, Inc., Toms River, N.J.)

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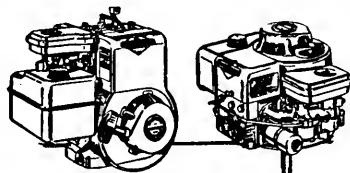
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# Mass. Cranberry Station and Field Notes

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

## Weather

The month of May was warmer and drier than usual. Temperatures averaged slightly more than  $\frac{1}{2}$  degree a day above normal and this is the first month in the past twelve that had above average temperatures. Rainfall for the month totalled 2.35 inches, or about 1 inch below average. This is the 5th consecutive month with below normal precipitation and leaves us about  $7\frac{1}{2}$  inches below normal for the year at the Station. Even so, we are much better off than some other areas, Plymouth and Middleboro for example, had only 1.3 inches of rain in May and Boston recorded less than 1 inch for the month. While on the subject of weather, there was a statement made in last month's column that "winter injury is practically nil,"

this needs modification. There is a little winterkill around, but the total acreage involved is small; however, there is a fair amount of vine injury from picking and fall sanding, probably due to the extremely dry conditions that prevailed last season.

## Keeping Quality

The final keeping quality forecast was released June 3 and reads as follows:

"Weather conditions to date give us 7 points out of a possible 16 which favor good keeping quality fruit. Based on the point system, the prospects are for good to very good keeping quality in the 1965 Massachusetts crop. Bogs that tend to produce weak fruit or that have excessive vine growth would benefit from fungicide treatments. *Maneb* or *Ferbam* are recom-

mended fungicides. For details, see the 1965 Insect and Disease Control Chart. New owners of sprinkler systems are cautioned against excessive use of the system for irrigation during the blooming period."

## Frost

The spring frost season has been fairly active so far, with 15 warnings released during May. The first warning was on May 6. There were 11 warnings for the same period in 1964. These figures include both afternoon and evening warnings. Frost damage this spring has been light and mostly in the Upper Cape area. The damage is believed to have occurred on the nights of the 14th and 21st when temperatures ranged from  $23^{\circ}$  to  $27^{\circ}$  and  $23^{\circ}$  to  $28^{\circ}$  respectively. Total frost damage is in the neighborhood of 1 percent.

## Insects

Insect activity has been about average to date. Reports indicate that blossomworms and cut worms are more abundant than usual this spring. Weevil, *Sparganothis* fruitworm and spanworms are appearing in average numbers and fireworm infestations are on the light side. Gypsy moth caterpillars are an increasing menace espe-

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cially in the Cape Cod area, but a few have been found on the State Bog and scattered ones reported as far as Middleboro. A flash card was sent out in late May advising the growers to be on the lookout for this pest. The first fruitworm miller was caught in Prof. Tcmllinson's black light trap

on May 28; this is the earliest date that these have been caught by this method.

## **Ocean Spray Names Director of Operations**

Richard Lagreze has been appointed Director of Operations

for Ocean Spray Cranberries, Inc., according to an announcement from Edward Gelsthorpe, Executive Vice-President and General Manager.

Mr. Lagreze has spent the last 25 years in key production and operation positions with major industries. Before coming to Ocean Spray, he was Manager of Corporation Engineering Economics for General Foods Corporation. He has also been associated with Proctor and Gamble as Group Production Manager and with the Commander Company as General Manager.

In his new post with Ocean Spray, he will direct the over-all operations of its plants in Hanson and Onset, Mass.; Bordentown, N. J.; North Chicago, Ill., and Markham, Wash., and Canada. The Purchasing and Grower Relations Departments will also report to Mr. Lagreze.

Mr. Lagreze is a graduate of Harvard College and of the Harvard Graduate School of Business Administration. He is a member of the Society for Advancement of Management and the American Institute of Industrial Engineers.

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## **HAIL DAMAGE IN WISCONSIN**

There was quite a lot of hail, wide-spread in Wisconsin just before the middle of May, according to Vernon Goldsworthy of Eagle River, Wisconsin. He has found also there was quite a lot of fall injury to marshes around the state before the winter floods were put on.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of June, 1965—Vol. 30, No. 2

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FRESH FROM THE FIELDS

Compiled by C. J. H.

## MASSACHUSETTS

### May Starts Warm

The first four days of May brought a plus of 15 degrees for the month to that date. On the night of the fourth there was a heavy thunderstorm, with a house struck by lightning at South Wareham.

### Night of 4th Cold

Although no frost warning was issued, the State Bog report was that the temperature would go to 21. At the State Bog a low of 25½ was reached and there were lower spots than that—one 20 and one 19 degrees. No warning was issued because the buds had not started to swell. Early Blacks had a tolerance of 20.

However, early May failed to be very springlike, as at least along the coast in the cranberry areas there were brisk on-shore winds, which really felt chilly. On the 9th the plus was 11 degrees.

### Temperatures Go Up

The weather began to warm up towards the middle of May and the temperature by the 13th was a plus 49. There was a very helpful downpour of rain on the 11th.

Another rain, accompanied by thunder, came on the afternoon of the 13th, but precipitation did not amount to much.

### Frost Warning

The weather turned colder and a frost warning was sent out from the State Bog for a low of 24 and that the tolerance of Early Blacks was 25. Growers flooded or sprinkled and temperatures ranging from 19 to 29 were reported.

On the following night another warning went out for a probable frost, 24-25, with tolerance of Early Blacks, early-water at the State Bog 25.

Growers flooded or sprinkled both nights and Dr. Cross, Director of the Mass. Experiment Station, said if there was damage it was very slight and confined to edges of bogs.

### Rain on the 17th

There was substantial rain, thunder and lightning most of the day of the 17th. This made a welcome addition to the scarce water supply in a number of areas. The storm was a violent one both as to lightning and thunder and a downpour of rain. Total as recorded at State Bog was 1.03 inches.

There followed several days of cloudy, cool weather, so that by the 22nd the plus temperature for the month had dropped to 20 degrees.

### Frost Again

On the morning of the 22nd there was frost again, and growers sprinkled or flooded. Tolerance of Early Black early-water was given at 29, and temperatures from 23½ to 29 were reported.

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### Frost Water Supplies Low

Dr. "Chet" Cross said on May 24th that water supplies in many instances were getting dangerously low, and in fact some growers had already used up their supply. He said the situation was "rough."

Frost occurred on the morning of the 24th, the forecast being for 24-25 degrees, and temperatures of 24, 25 and 26 were reached.

There was another warning issued for the night of the 25th with the tolerance for Early Blacks given as 29½, the minimums forecast being 25 and 26 degrees. While there was plenty of frost around, the wind continued to blow in a number of locations and the lows reported were around 27 degrees.

Light rain occurred on the night of the 27th, and the 28th brought a substantial rain, which not only helped the bogs, but also eased the wood fire danger. Substantial rain occurred again on the 29th.

### More Frost

A warning was issued for Memorial Day morning of possible frost, minimum 28, 29; tolerance of Early Blacks 29. Memorial Day brought a minus of 7 degrees, making the plus to that day 22. Still another warning went out for a possible frost in cold spots on the morning of June 1st, but the temperature only dropped to 30 degrees.

### Spring Frost Loss

Dr. Chester Cross estimated the May frost loss as not more than 1%.

### May as a Cranberry Month

Dr. Cross said he considered May a relatively good month for the coming cranberry crop. The month was sunny and, although May had a chilly ending, the bogs had almost, but not quite, caught up from their late start. Precipitation as recorded at the State Bog was 2.35; average for May, 3.18. The month as a whole was a plus 19

degrees, while the year since January 1st has been definitely colder than normal with a figure of minus 34 on May 1st.

### June Starts Cold

There were warnings for possible frosts on the morning of the 3rd and the 4th of June. Tolerance of Early Blacks at the State Bog was 29½. On the 4th, 29 was reached at several points and some growers protected their bogs. There was little or no loss.

### Substantial Rain

There was a very substantial soaking rain on the 2nd.

## NEW JERSEY

### May Warm-Dry

The month of May was hot and dry. The average temperature was 65.3°, which is 2.5° higher than normal. This was the warmest May in 20 years and one of the driest on record, with a total of 1.02 inches of precipitation. We have had drier Mays only twice—last year, when only .36 of an inch of rainfall occurred, and in 1957 when there was only .74 of an inch of precipitation.

### Desperate Water Situation

We are now actually in a more desperate situation for water than we were last year, which went into the records as an extremely severe drought. As of the end of May we have had only 12.89 inches this year, which is more than 4 inches

Continued on Page 21



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# Clinton Macauley, New Jersey, President of American Cranberry Growers' Association, Is a Man Who "Wears Many Hats"

**He is a Cranberry Grower of Ocean County—  
a Bishop's Man and conducts Church Services—  
conducts a rural Retreat for Guests—His Wife,  
Betty, an unusual Person, like her Husband**

By CLARENCE J. HALL

Clinton Macauley, as they say, is a man of "many hats." This resident of Deerfield Park, Tuckerton, N. J., is a cranberry grower, present president of the American Cranberry Growers' Association, that long-established group of cranberry men of the Garden State; he is also a director of the Growers' Cranberry Company. He is president of the Board of Trustees of the Mental Health Clinic of Ocean County, at the southern tip of Jersey. He is a Bishop's Man in charge of the (Episcopal) Church of the Holy Spirit. He conducts weekly services for a small local congregation—he operates a quiet, peaceful rest resort at Pilgrim Lake Farm, which is in the township of New Gretna, and more.

His wife, Betty, is closely associated with him in his various activities. As he puts it, he is on "a quest to discover the ultimate meaning and purpose of life."

But, here let him tell his own story in his own words, the title of this being "You Don't Have to be Crazy to be a Cranberry Grower," and later to tell of his wife, who has had a most interesting career and seems to be a remarkable person like her husband.

## His Own Story

As we labored long hours, sweating blood, swatting green-heads and mosquitos, choking on gnats, and netting few cranberries for our pains, one of our boys commented wryly: "You don't have to be crazy to be a cranberry grower, but it sure helps!"

If that be true, I am ideally suited to this addiction. After a career in journalism I entered the field of public relations and advertising. I founded my own agency, Macauley-Adams and Associates, in 1944, and numbered among my clients Standard Oil, Bendix Radio, Aeronautical Products, Ercoupe, Macy's and other leading department stores in the U. S. and Canada.

In one of my promotions, I had a helicopter on display in the shoe department of Bonwit Teller's Fifth Avenue store. Clifton Fadiman brought his young son in to see this new kind of mechanical whirly-bird, interviewed me and read my book. Subsequently, the

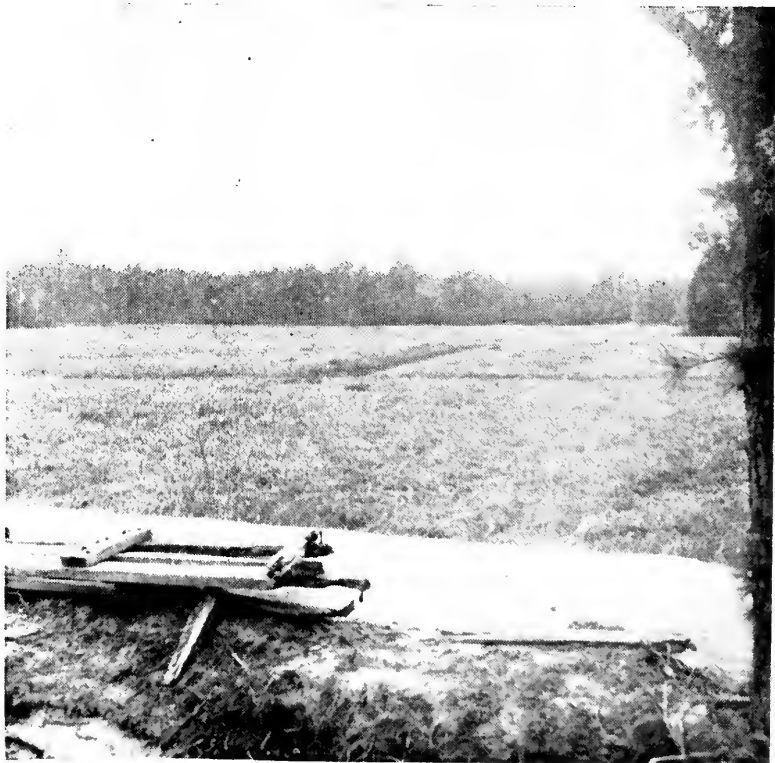
book and the promotion got a splendid write-up in the *New Yorker's* "Talk of the Town" feature.

However, Mr. Fadiman questioned the young author's implied thesis that "felicity through ma-

chinery" would cure the ills of mankind. Thus, at the height of success, lecturing to academic, business and professional groups from coast to coast, appearing as guest on radio networks and TV, enjoying a delightful popularity, I began to question the validity of values and goals of modern society.

Shortly thereafter I embarked on a deliberate quest to discover the ultimate meaning and purpose of life. As a consequence, I wound up my professional affairs in Manhattan, vacated my penthouse on Park Avenue, and settled in rural South Jersey near the Great Pine Barrens, resolved to lead the simplest kind of life, work with my hands, use my muscles as well as my brains, and endeavor to find dignity and balance and to establish a firmly grounded inner confidence.

I began by learning carpentry, and after building my own house



A View of the Macauley Bog

got drawn into general contracting in a local building boom. My land on Little Egg Harbor Bay became desirable as a shore development, so I founded Deerfield Park and soon splashed over into real estate development.

One of the properties I showed frequently to prospects was an old run-down cranberry bog astride Bass River dating back to the last century. Each time I showed it I was baffled by the client's indifference, but I was drawn more and more to return now and then with my wife for a couple of hours of quiet peace, away from the hurly-burly of building and development and sales. It was here that I suddenly realized that I was "trapped" again by commerce. Betty and I laughed at ourselves over hot dogs and potato salad, and took stock.

We sold Deerfield Park and decided to go to college to get the necessary degrees for teaching and preaching the eternal verities which we were discovering and learning to practice. We bought our beloved bogs, having no yen to be cranberry farmers at the outset. However, we had settlement on September 9, 1958. There was a lush crop on the bogs. I thought what a fine lark it would be to harvest it. I got a truck, picking machines and scoops, a few helpers, and away we went!

That did it. I'll probably work myself to death. But what a nice way to die! We have labored round the clock through the season over the years and have lost money with fatiguing regularity. And we love it. Some day we may even make a profit. But we'll undoubtedly pour it all back in machinery, fertilizer, pesticides, labor, barns, etc.

But we've escaped the deadly octopus of commerce and the modern plagues of anxiety and insecurity. Betty will graduate from Douglas College this June and receive her B.S. in Home Economics. She will continue in her education of teaching, with special emphasis on helping young women to value their femininity and to become wholesome mothers and happy wives. My job as Fire Observer in the Bass River Tower



**Mrs. Betty Macauley**

is a blessed retreat away from the inane pursuits of a society far gone in organized economic chaos and the planned insanity of social welfare programs. I have a wonderful crew of conservationists and guardians of natural beauty and resources to work with, and daily opportunities to witness the glorious displays of sunrise and set, weather changes, frosts in the moon glow and the procession of seasons.

Also, I serve on the executive committee of the board of trustees of the Ocean County Mental Health Clinic, and this is a challenging and exciting opportunity to serve in the front line of America's answer to the gravest threat to our society: mental illness. The community mental health clinic serves as the spearhead to educate and to heal the rank and file of men, women, and children who must be helped towards a

dynamic reaching for mental health and emotional integration if we are not to fall into mass disorders which are even now destroying our cultural heritage.

Since, ultimately, most mental and emotional disorders stem from moral confusion, spiritual apathy, and evasion of mature responsibilities, I plan to enter the ministry after I have completed further schooling. If modern psychology is to serve mankind in its search for wholeness and health, psychologists must of necessity orient their professional disciplines in harmony with the valid, enduring truths of all religions, ancient and modern. Organized religion will endure, willy-nilly, but if it is to liberate mankind into a higher world of understanding and ability, and not enslave men in superstition and fear, more and more ministers will have to learn that there is no conflict of facts or goals

scriptures, rightly understood, and the contemporary theories and professional techniques of the behavioral sciences, even including the work of Freud and the practice of psychoanalysis.

Undeniably, certain systems of religious symbols frequently become a substitute reality completely shutting out the facts. Unhappily, the same thing happens in medicine, law, politics, education and even in the physical sciences.

What possible conflict can there be betwixt the religious principle which is so clearly stated in John 8:32:—"Ye shall know the truth, and the truth shall make you free," and the "scientific method" which purports to be the foundation stone on which all science rests?

So we need religionists to put the "psyche" back into psychology, and more psychologists to remind the religious communities that mental health is inseparable from moral rectitude and a disciplined life of dynamic self-expression and creative concern for the well-being of others!

In this connection, I am a lay leader serving as Bishop's Man-in-Charge of the Chapel of the Holy Spirit, a new Episcopal Mission which I organized in Deerfield Park. We have a small year-'round congregation, but communicate to a lively influx of shore visitors in the summer.

Finally, I still accept an occasional interesting client who wishes to consult with me in the science and art of life management. And certainly cranberry growers are among the most interesting and delightful people in the whole world!

**Outline of Mr. Macauley's life and Career as furnished by himself**

#### Resumé

Born Phila., Pa., Feb. 1, 1911. Rutgers U. Married to Elizabeth A. Hanson, formerly of Angola, N. Y., and Manhattan. Two adopted nephews in high school.

Bishop's Man-in-Charge, Church of the Holy Spirit, Tuckerton, N. J.

V.P. Board of Trustees, Mental Health Clinic of Ocean Co., Toms

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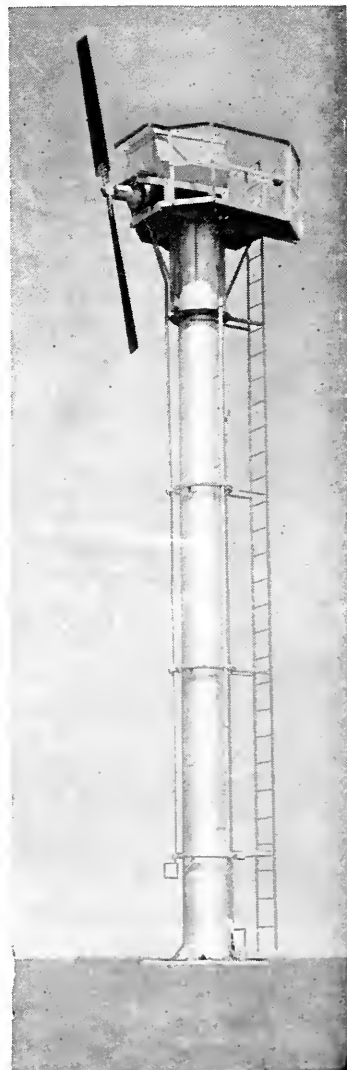
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Fire Tower Observer, Bass River State Forest, New Gretna, N. J.

Management Consultant in the area of personality difficulties.

Tuckerton Lodge No. 4, F. & A. M.

Author, journalist and lecturer: book, *The Helicopters Are Coming*, published by McGraw-Hill, 1944, former contributor to *Encyclopedia Britannica* and national periodicals.

About 46 acres of bogs consisting of Jersey, Early Richards and Woolman varieties, located in a tract of 147 acres in Bass River State Forest, Burlington County, near Atlantic Coast line a few miles north of Atlantic City. Market berries through Growers Cranberry Co., Pemberton, N. J. Equipment includes two Darlington pickers, mowers and small trucks. I need a tractor, mill and separator and earth-moving equipment to operate efficiently. I write

to Santa Claus about this every Christmas.

#### Mrs. Macauley

Betty, he says, is really a remarkable member of this family. The former Elizabeth Alice Hanson, she was born in Angola, N. Y., and received her high school education in Boston.

Her family returned to the Buffalo area, and she joined the staff of H. N. Adam Department Store and worked her way up to assistant to the director of advertising and publicity. That is where Mr. Macauley met her when his firm did the helicopter show in 1946.

The following year she was invited to join the staff of Mutual Buying Syndicate in New York as promotion manager. "By long arm of coincidence, they had their office located in Salmon Towers, just two floors below my headquarters," Mr. Macauley says. He added: "I was winding up my affairs in New York and planning to search for a 'Walden Pond' in South Jersey. We announced our engagement early the following year and were married December 7th, 1948, in historic old Barnegat, New Jersey.

Mrs. Macauley has been in 4-H work and taught home economics in the local school. She assisted in the bringing up of four foster sons in their teens, who were nephews of Mr. Macauley.

Mr. Macauley says that one of the happiest moments of his life was on June, 1963, when his wife, a mature woman, donned her cap and gown and marched along with her young classmates to receive from the Rutgers president her degree of Bachelor of Science in Home Economics upon her graduation from Douglas College for Women.

Within a week, she was invited to join the faculty at Rutgers as cooperative extension specialist in 4-H. Since then she has served as Ocean County 4-H agent with her office in Toms River. Mr. Macauley is a 4-H leader for the Ocean County Public Speaking project.

Mr. Macauley told CRANBERRIES. "As you know, we found our Walden," where in leisure time the couple became "watchers

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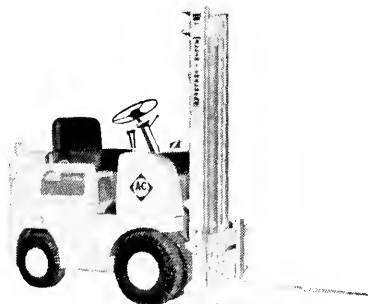
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at the pond." He says some years ago they conceived the idea of finding some means of sharing with other like-minded folks their bogs and environs. In 1964, they embarked on a recreational program with the Farmers Home Administration and other agencies of the Agricultural Department. There has been completed miles of beautiful trails through the woods and streams, with rest and picnic areas spotted along the way.

Mr. Macauley says that in June of 1965 they will open the area for day visitors only, with no overnight camping. He says the area is surrounded by Bass River and state forests. There is good overnight camping places not far away.

"Under this program we have rebuilt and enlarged a 1,000-foot reservoir, provided new canals and installed new trunks for water control," Mr. Macauley says. Last year Mr. Macauley, being a flying enthusiast and helicopter booster, embarked on a program for pest control, fungicide applications, and in December of 1964 he treated 40 acres with Casoron applied by helicopter. This was done by N. J. Helicopter Airways, Inc., out of Trenton.

The Macauleys began the improvement of an old cranberry shed and hope eventually to make it their permanent home.

#### Storage and Equipment

There is an old cranberry storage barn, 22x30 feet, with generous attic. The walls are 16 to 18 inches thick of local stone and mortar, and the floor is sunk a couple of feet into the earth. These features keep the building comfortably cool even in extremely hot weather. In 1964, Macauley built an addition on the far end, 24x50 feet, which is used for a mill, machinery storage and work area.

The mill consists of a conveyor to lift the harvested berries, then to fall in front of a blower into a Hayden separator. A conveyor beneath the separator carries the bots outside and returns the culls for re-running continuously. A final elevator lifts the clean berries to a hopper with a release gate over platform scales. The berries



Showing one of the Canals dug in the Improvement Program



Old Cranberry Shed with Walls 16" to 18" wide keeps cranberries cool even in hot weather.

are released manually into 50-pound paper bags and shipped by truck to the processors.

Four Darlington pickers are currently in use. The plan is to go to water raking as soon as the bogs can be broken up into smaller beds.

Machinery includes a Case 310 front-end loader on crawler tracks, Ford 9N tractor with a 5-foot

brush hog rotary cutter, Farmall cub with various attachments, 6-foot bog mower, rigged up by Macauley, a couple of shoulder slung brush cutters with saw blades, rotary cutter and sickle bar cutting attachments. The latter devices are the handiest of all for working in and around the bogs, Macauley says, trimming along ditches, mulching leather leaf

grass hammocks, cleaning dams, etc. There are also a couple of dump trucks, Econoline pickup and a Jeep with oversize dual wheels and flat bed; a low trailer completes the line-up.

### To Try Water-Raking

Macauley hopes to get started with a water reel picker on a couple of the smaller bogs this coming fall. He has not yet decided what method will be used for cleaning and drying the berries.

Last summer Macauley dug a 500-foot canal to extend and enlarge the reservoir storage.

His middle bog is about 10 acres and the lower bog 20.

### Digging Canals

"I hate to flood unless absolutely necessary because it takes too long to get the water off large areas, and sometimes I think (like many other growers) we lose more fruit from water damage than we might have from frost. The purpose of the new canals and dikes is to try and get more protection from running water and shallow flooding, as well as to improve irrigation and drainage. We are fortunate in having an ample supply of flowing streams in all seasons."

He says that for frost protection there is an excellent frost warning committee consisting of Isaiah Haines, Joe Palmer and Ed Budd.

Aside from the upper bog, the bogs are all set to native Jersey berries. "We don't talk about production yet; it only makes us shudder."

There is also an old foreman's cottage which has already been modernized inside and a nephew of Mr. Macauley, R. Scott Hazard and his wife Helen, have made this their permanent home for several years. Mr. Hazard is an electronics technician with A. T. & T., and presently works at the New Jersey terminal station for the Trans-Atlantic cables at nearby Manahawkin. Both of these buildings date from around the turn of the century.

One of Mr. Macauley's hobbies is an H-gauge model railroad called the Celestial and South Jersey R. R. with irregular schedules. This serves Saint Hill, Hog Wal-



Mr. Macauley is shown spotting smoke for the State Fire Service

low, Polecat Junction, Gum Spung and other interesting places. This is a four-cab action and eight cars can be operated. The altitude of this railroad is only five or eight feet.

Mr. Macauley concludes by saying that it is one of his ambitions to visit the Cape Cod bogs. "One of these days I will make it."

## Dr. Klingbeil On Weeds In Wisconsin Marshes

Dr. George C. Klingbeil of the Horticultural Department at the University of Wisconsin, in a letter to Wisconsin growers last month said that "Spring was just around the corner," and growers would be starting another season of activity to bring to maturity another good crop of fruit. Plans for the weed control in the spring loom large in the grower's mind.

Dichlobenil (Casoron) may be used, he said, on marsh areas that were not treated last fall.

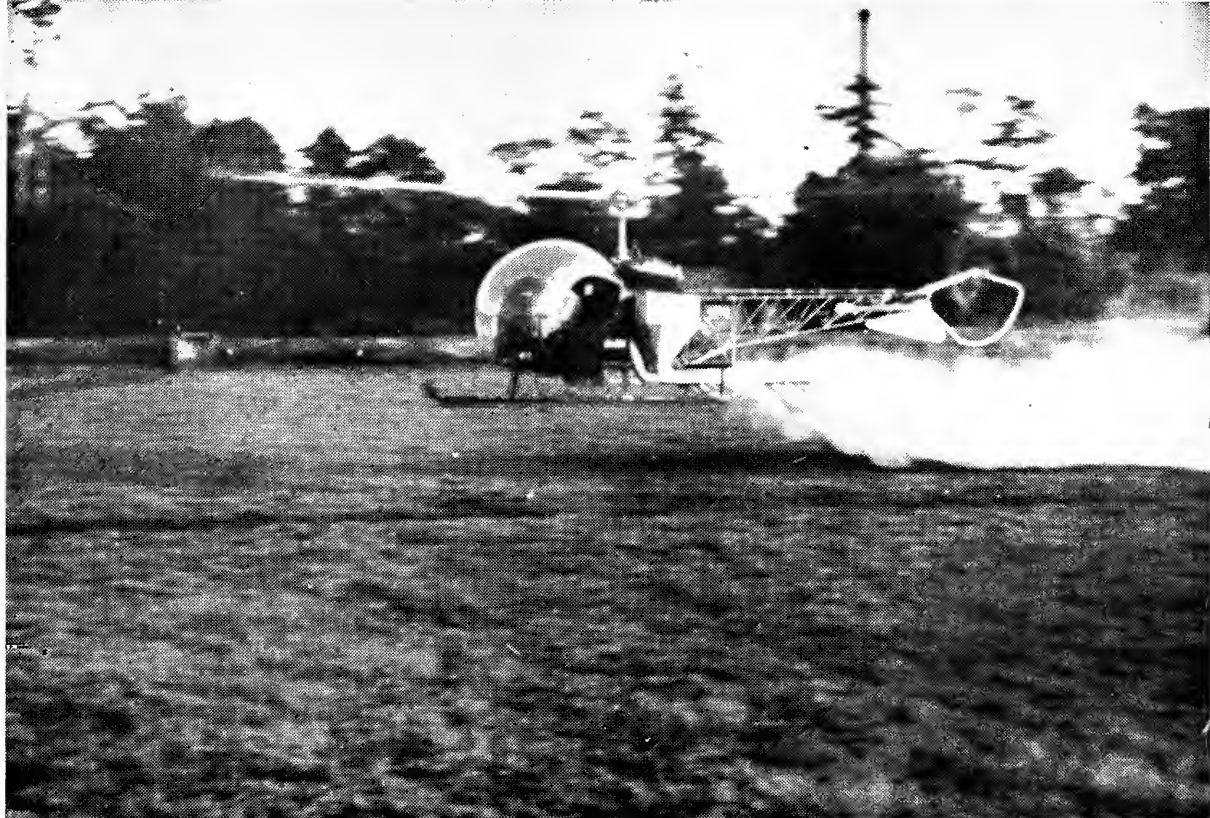
He urged treatment for this material on bogs before May 1st, although later applications are

authorized on the label. Application after May 1 may result, he said, in injury in excess of acceptable levels.

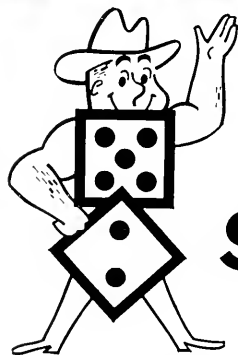
Dr. Klingbeil suggests the use of Chloro IPC for those Wisconsin growers who have a problem with annual grass, such as barnyard grass, ticklegrass and crab grass. He contends that Chloro IPC has a wider safety range than Casoron.

The use of petroleum products, such as Stoddard Solvent, kerosene, mineral spirits should be continued, especially as a spot spray. It would seem, he said in this letter, effective control may be obtained by Casoron followed by spot spraying with the oils. He said this would make an excellent weed control program in many instances.

The work of Walter Skroch showed the importance of keeping weeds out of new beds. He said that many seeds come in with the cranberry vines—many more come in with the flooding water, and still others are in the soil at the time of planting.



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# Cranberry insects?

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"There is little you can do about seeds already in the soil at the time of planting, except the scalping of all the top layers of soils." The reconstruction of old beds complicates the problem due to the greater growth of seeds and the greater depths of seeds and the greater kinds of weeds as compared to the situation in virgin areas.

The careful handling and washing of vines for planting would be beneficial in reducing the weed seed population in new plantings. A high-pressure stream of water through a thin layer of vines, travelling over a wire mesh floor would drive much of the loose weeds and propagules from the wire mesh.

Certainly, such a procedure is worthy of trial, he said.

## TESTIMONIAL GIVEN LOUIS A. WEBSTER, RETIRED MASS. DIV. OF MARKETS

A testimonial for "Mr. Agriculture," Louis A. Webster, who retired as director Mass. Division of Markets, Mass. Department of Agriculture in March, was given June 14th at the Beacon Terrace, Mass. Turnpike, Framingham.

Mr. Webster is well known to most agriculturists in the State, including cranberry growers. He has attended many meetings of the Cape Cod Cranberry Growers' Association at East Wareham. He was present last year.

There was a social hour preceding the dinner at 7:00 p. m. Master of Ceremonies was Tom Russell and guest speaker George Moore, editor of "Food Marketing in New England," a publication of First National Stores.

"Lou" was born Sept. 26, 1894,

in Blackstone, Mass. He was graduated from Massachusetts Agricultural College in 1914. He was a farmer, chiefly apple growing from 1914 to 1952. He was a representative of the Mass. Legislature from 1929 to 1933. He was director of markets in 1939 to 1942 and from 1943 to 1965.

This summer he plans an extended trip to California.

## Final Mass. Keeping Quality Forecast Good for '65 Crop

Weather conditions to June 2 had given Massachusetts 7 points out of a possible 16 which favor good keeping quality fruit. Based on the point system, the prospects are for good to very good keeping quality of the 1965 crop.

Bogs that tend to produce weak fruit, or that have extensive vine growth, would benefit from fungicide treatment, Irving E. Demoranville, Extension Cranberry specialist, announced. Maneb or Ferbam are recommended fungicides. Bog owners of sprinkler systems were cautioned against excessive use of the system for irrigation during the blooming period.

## WARNING TO CRANBERRY AND BLUEBERRY GROWERS

Burlington New Jersey County Agent D. L. Kensler warned growers of blueberries in mid-May that pollination activity by bees was at its peak and not to use insecticides on the blues. He said a few plum curculio were active in Cabots and Weymouth varieties but they could be controlled after pollination was over.

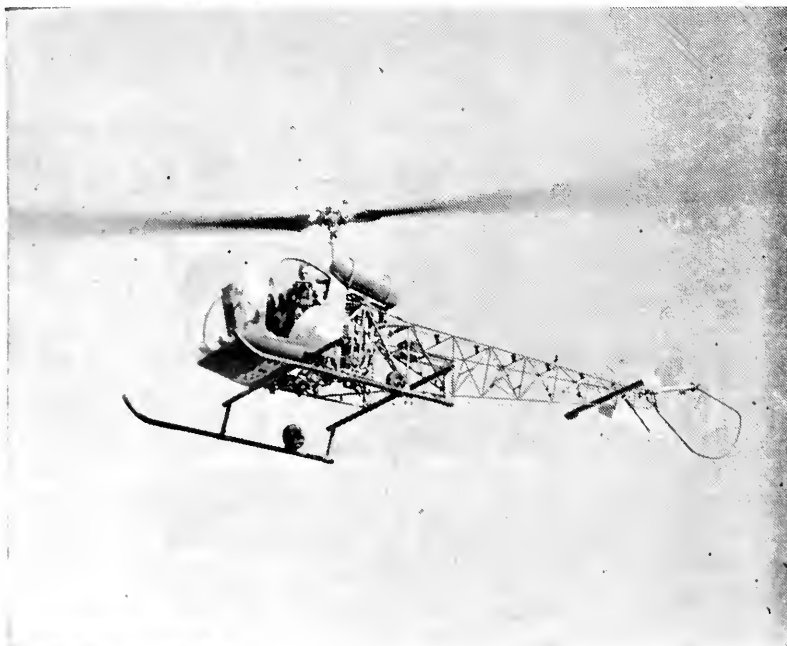
As for cranberries, he said, it was still too early for the sparganothis tipworm treatment, but warned to be on the lookout for blackheaded fireworm and blossom worm on early drown water.

## MRS. CHARLES DEMPZE

Mrs. Charles Dempze, 68, of Cranmoor, Wisconsin, died recently at the Riverside Hospital. Death followed a stroke.

Mrs. Dempze, the former Mary

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Prusynski, daughter of Mr. and Mrs. Steven Prusynski, was born at Stevens Point. She married Charles Dempze in November of 1917 at Wisconsin Rapids.

In addition to her husband, she is survived by a son, Gordon C., of Biron; two daughters, Mrs. Edmund Heller, Sparta, and Mrs. Alfred Arendt, Nekosos; two brothers, Michael Prusynski, Arpin, and Steven Prusynski, Biron; and a sister, Mrs. John Kobza, Wisconsin Rapids; 13 grandchildren and two great grandchildren.

## Cape Cod Cranberry Co-Op Elects

The members of the Cape Cod Cranberry Ccooperative, Inc., re-elected the same officers and directors and heard a review of the 1964 crop season operations at the Cooperative's annual meeting held May 11.

Announcement was made that the 1964 Crop Season Pool earned \$13.31 per barrel, an increase of 18% over the previous season.

"Strong demand is indicated for the 1965 crop," Orrin Colley, treasurer, reported. "We have reason for confidence since carry over supplies will be minimal, the general strength of the economy is expected to continue and a third is the industry's success in developing additional market outlets for its products."

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## NEW BOOK ON SOUTH JERSEY, THE JERSEY CRANBERRY AREA

Rutgers University, New Brunswick, New Jersey, announces that a new book "Family Empire in Jersey Iron; The Richards Enterprise in the Pine Barrens." This area is included in the Jersey cranberry-growing area.

The book is written by Arthur D. Pierce, and the book is the third dealing with South Jersey history. South Jersey is where all Jersey bogs are. The book is published by the Rutgers University Press.

## Dr. Chandler of Mass. Working on Washington Project

Dr. F. B. Chandler, Marion, former pathologist at the Massachusetts Experiment Station, East Wareham, Massachusetts, left in the early part of June for Washington State. There he will engage in cross-breeding experiments.

He went as a Visiting Professor and a part of the expense will be paid by the University of Washington. He will work at the Coastal Washington Experiment Station at Long Beach, and will engage in his research when the bogs are in blossom.

Some work was done there a number of years ago in a project by the University of Wisconsin, one cross which seemed especially promising being No. 108.

Dr. Chandler expects to be in Washington about a month. He retired from his work at the Mass. Station last August.

## CONSTRUCT POWER LINES TO WISCONSIN CRANBERRY MARSHES

A \$20,000 project to bring high line electricity to the Thunder Lake and Ralph Sampson Cranberry Marsh west of Three Lakes, Wisconsin, is now underway.

The new power line will make it possible for the marsh owners to electrify the pumping stations located at Thunder Lake.

The change-over from gasoline engines to electric motors has been brought about by the installation of sprinkler systems.

## Wisc. Marketing Order Being Again Considered

### All But One Representative of 18 Cranberry Producing Companies Favor

Representatives from 18 cranberry producing companies appeared at a hearing May 12th at the Courthouse, Wisconsin Rapids, to determine whether there is sufficient interest to hold a referendum on a proposed state cranberry marketing order. All but one of those present indicated they favored such a marketing order. It would result in an annual assessment of two cents per barrel on all cranberries sold. The money would be used for research and the state warning service.

Douglas Milsap, an attorney for

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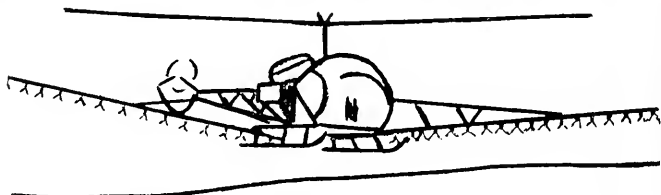
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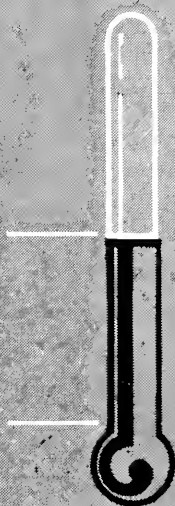
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the Wisconsin State Department of Agriculture, conducted the hearing.

Ben Pannkuk urged that the necessary funds be provided "on a local basis by the growers first, and then, if they are not willing to do it, their respective sales agencies should underwrite the research and frost warning program."

Tony Jonjak, Hayyard, spoke in

favor of the marketing order. He said it will provide means "whereby you can be assured of a fairly definite program for the industry as well as expanding the research program now in operation." He said that all growers benefit from the frost warning service and should be required to assume a share of its cost.

There were general objections to one clause in the marketing

order which would require disclosure to the state director of agriculture of the price per barrel of all cranberries sold and the gross dollar value of cranberries.

A similar marketing order failed to win the necessary support in a referendum last year.

## Large Federal Bog In Mass. Bought By Maryland Man

Another large bog deal has taken place in Massachusetts in the purchase of the Federal Cranberry Company bog on "Shoe String" road in Carver. This piece of about 154 acres was purchased by John G. Talcott, Jr., of 5316 Bradley Boulevard, Bethesda, Maryland. This is one of the older and better known bog properties in the Bay State.

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Mr. Talcott also owns the Cataumet bog on the Cape, one of about 22 acres, and the big Ware bog of 53 acres in Plymouth.

Mr. Talcott has been in the woolen business and has developed his own real estate properties. He was born in a small community in Connecticut and told the Cranberry Magazine he was used to small towns and farming and felt that cranberry growing was now a "good field to go into."

Eldon Sherman of Plymouth will be bog manager for Mr. Talcott. Mr. Sherman formerly was employed by the Cape Cod Cranberry Company, George Crowell president, until 1952. He then went into construction work on a large scale but now he is going back into cranberries and will devote his time to this industry.

George Paulding, who was manager of the Federal, will now give his entire time to his own bog property on Cranberry Road in Carver.

## THOMAS DREVER

Mr. Thomas Drever, 83, former chairman of American Steel Foundries, Chicago, Illinois and a former trustee of the Illinois Institute of Technology died May 8, 1965 at the Holy Cross Hospital, Fort Lauderdale, Florida. Funeral services were held at Pompano Beach, Florida where Mr. Drever maintained a winter home.

Mr. Drever owned and operated the Drever Cranberry Company near Three Lakes, Wisconsin. He started the marsh with Arthur Nelson in 1950. One of the first in the state to go ahead with sprinkler frost protection he installed sprinklers on thirty acres in 1962 and added an additional ten acres in 1963. The marsh was incorporated in 1960. Last summer the Wisconsin State Cranberry Growers Assn. held its summer meeting at his marsh near Three Lakes. His marsh produced one of the

largest crops in history last year and was recognized as one of the better marshes in the state, turning out high quality fruit. Mr. Drever had visited the Three Lakes area in the early 30's and in 1932 he and others formed the Three Lakes Rod & Gun Club. Since his retirement from ASF in 1949 Mr. Drever had spent his entire summers at Three Lakes.

A native of Edinburgh, Scotland, Mr. Drever arrived in this country with 30 dollars in his pocket and educated as a C.P.A. He started his career with American Steel Foundries in 1910 and became president of the firm in 1939. He was appointed chairman in 1949. As one of Chicago's leading industries his company during peak employment during World War II had as many as 30,000 workers.

Surviving are his widow, Edith; three sons, J. Bruce, Max and Ross and one daughter Mrs. Donald Curless.

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## **T. H. Budd, 76, of Jersey, "Too Busy to Retire"**

Theodore (Ted) H. Budd, Pemberton, New Jersey, recently observed his 76th birthday, still going strong at various enterprises, and was quoted in the *Pemberton Times-Advertiser* as saying, "I just don't have time to think about retiring." Mr. Budd is senior partner of T. H. Budd and Sons, which organization has extensive cranberry holdings in New Jersey. He was president of the old American Cranberry Exchange, with offices in New York for 12 years.

He is currently chairman of the Board of Directors of the Merchants National Bank of Burlington County. Mr. Budd has also been president of the Pemberton Building and Loan Association for more than 50 years. He served two terms as a councilman of Pemberton Borough.

He is a member of the New Jersey Society of Pennsylvania; also

a member of the Pennsylvania Society for the Promotion of Agriculture. He was one of the original organizers of Cranberry Products, Inc., in New Jersey, which was merged to become part of the present Ocean Spray Cranberries, Inc.

Mr. Budd is married to the former Helen Brewar of Bar Harbor, Maine, and the couple has four children and 11 grandchildren.

---

### **CRANBERRY PRODUCTS TO OPEN GIFT SHOP AT EAGLE RIVER, WISC.**

Cranberry Products, Inc., of Eagle River, Wisconsin, Vernon Goldsworthy, president, plans this summer to open a gift shop, featuring cranberry products. This will be completed in time for the summer vacationists. The shop will be located near the plant on the west side of Eagle River.

If the shop proves successful, this may be the first of a chain in Wisconsin.

## **BANDON CRANBERRY FESTIVAL PLANS PROGRESSING**

Plans for the Bandon (Ore.) Cranberry Festival in September are progressing. There is a contest for the festival theme. "The theme need not stress cranberries," says Mrs. Leola Hultin, association secretary.

The festival chaperone is to be Mrs. Dick Wood, and the five cranberry princesses are to be named shortly. The festival band has been hired.

---

### **COOPERATIVES TO MEET IN MISSOURI**

The University of Missouri and Missouri cooperative organization will be hosts for the annual meeting of the American Institute of Cooperatives, of which Ocean Spray is a member. The gathering will be held on the University campus August 8 to 11.

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## FRESH FROM THE FIELDS

Continued from Page 6

less than normal. In 1964 at this time, we had had 15.70 inches, or about 3 inches more than in 1965.

### Some Frost Losses

The hot weather accelerates evaporation and accentuates the conditions of drought. During May we had several record-breaking hot days. These were: May 10th, when the high for the day was 89°, and May 26th, when it reached 93°. On May 27th the high was 94° which tied with the high on that date in 1941. There was also a record-breaking cold night. This was the 37° minimum recorded on May 31st (for Sunday night, May 30th). On that night temperatures dropped to as low as 25° on cranberry bogs. Most cranberry growers got by without damage but there were a few along the shore that did not have sufficient water to flood and, consequently, suffered some frost damage. There has been no damage observable in blueberries.

## WASHINGTON

### Weather Medium

The weather during May was about down the middle of the road in all ways. The total rainfall for the month was 3.50 inches. The mean high temperature was 55.19 degrees; the mean low was 44.52 degrees. The lowest bog temperature was 26 degrees, recorded on the first of May and also on the 5th. On the night of the 4th there was a low temperature of 34 degrees and the rest of the low temperatures were in the high thirties and the high forties. Of the high temperatures the highest was 63 degrees on the 18th. The rest of the high temperatures were in the 50's except for one or two days when the high was 49.

### Bog Work

May was a good month for weeding and the application of fungicides, also spraying with insecticides for control of the tip-worm.

## WISCONSIN

### Spring Weather

May finally brought spring to the state with numerous spring showers and the first eighty degree reading. The first 3 weeks of the month brought temperatures averaging above normal during the daylight hours, but below normal during the night time hours. Rain fell on 15 days of the month, with the heaviest the latter part of the month. Record cold temperatures followed the rains and a very cold nineteen degrees was recorded the morning of the 30th. Temperatures were as low as 26 degrees in the cities. Warmest was 88 degrees on the 8th. There was frost in the heavier soils until the middle of the month, with many marshes reflowing to pull out the frost. The outlook for June calls for temperatures to be above normal and also precipitation, which is expected to exceed 4". Incidental snow showers were common over the cranberry areas the latter part of the month, with three inches reported on the ground north of Manitowish Waters on the 28th.

However this was not a record as they have recorded snow as late as June 7.

### 200 New Acres

The rain and cool night time temperatures the early part of the month hindered marsh work, such as in late April. Growers were busy applying fertilizer and trying to catch up on other delayed work. New plantings were going in, with about 200 acres expected to be planted in the state. Many marshes were adding additional sprinklers for frost protection with an estimated 200 acres expected to be under including last year's installations. Very little solvent was being used as growers were waiting to see the results of the past fall's Casoron applications, which appeared to be very promising. Most of the solvent was being spot sprayed.

### Insects and Frost

The first broods of blackheaded fireworm and sparganothis fruit worm along with spotted fireworm were appearing prior to Memorial day following above normal day time temperatures the latter part of the month.

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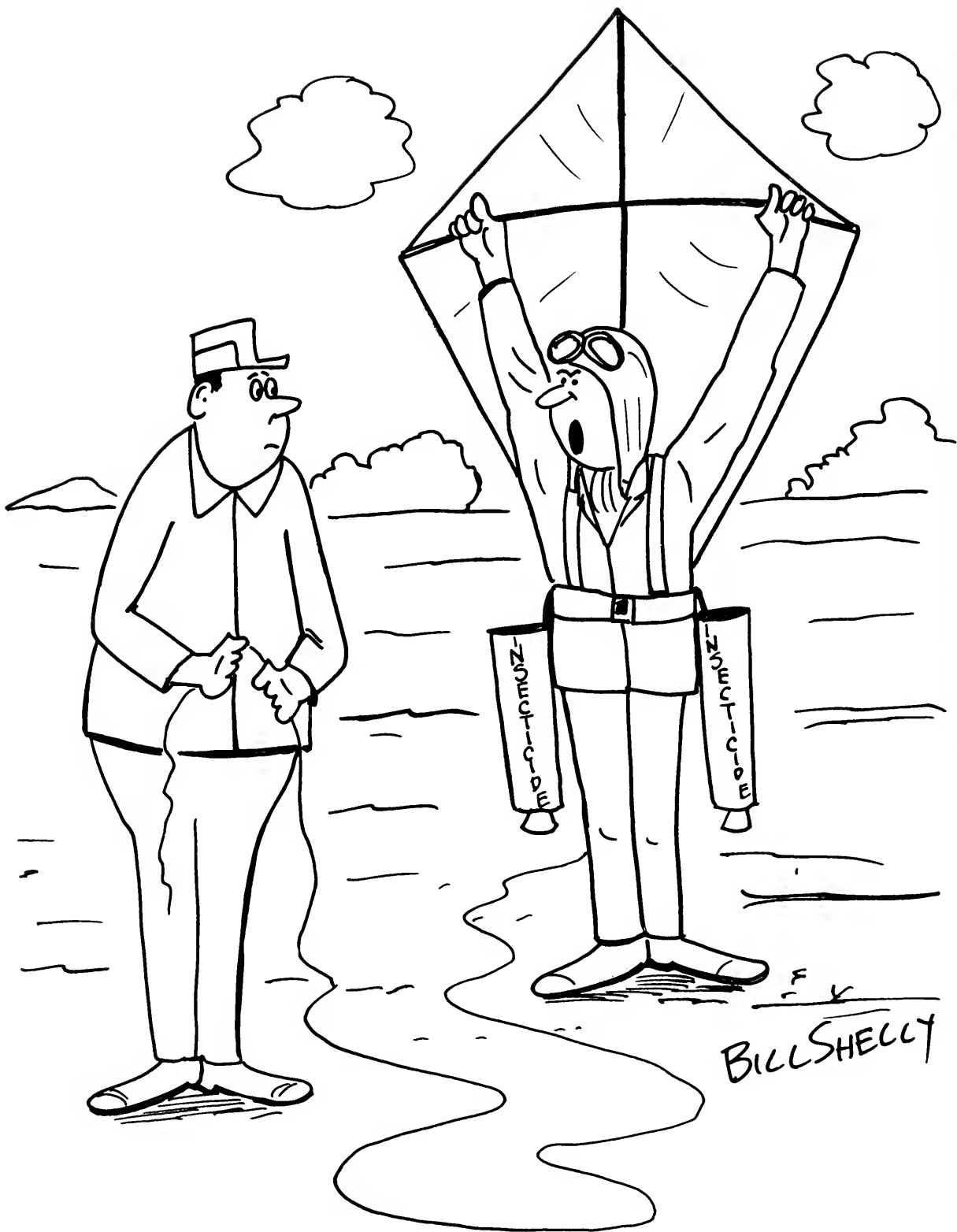
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## GUEST EDITORIAL

### THE WESTERN EUROPE CRANBERRIES MARKET

On a trip to Europe three years ago, a European tradesman we contacted was insisting that cranberry products would never go over. "People's tastes are different over here, consumers don't go for new foods," he said.

Earlier this year, I had occasion to again talk with him. "If a product is good to begin with, is reasonable priced and adequately promoted, it can be sold anywhere," he volunteered.

Such generalizations, however, cannot be used as a basis for prejudging the export marketability of our product. A program cannot be developed without knowledge of the significant facts, defining the problems and opportunities and learning by use of pilot operations and test campaigns.

The cranberry export program is now in what might be termed the third stage of development. The first and initial stage began in 1961 with laying of a foundation for analysis of overseas opportunities. Then came the second stage 1963 and 1964, the period of developing a program of action which has included the type of product to be sold, the appeal to be made to customers, selling and promotion methods, channels of distribution and an overall method for evaluating progress. And now the third stage—a determined and sustained selling effort mainly concentrated in the United Kingdom.

Though the current dimensions of cranberry trade overseas are only a token of what the future could hold, it is an exciting and challenging market offering new and rewarding opportunities for U. S. suppliers prepared to make the necessary effort.

ORRIN G. COLLEY  
*President, The  
Cranberry Institute  
South Duxbury, Mass.*

### MORE ON EXPORT

The fact (as reported in April) that some one million British consumers inspected the exhibit promoting cranberries and other U. S. agricultural products is a strong indication that a sound export business of American cranberries can be built up in the United

CLARENCE J. HALL

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Director Mass. Cranberry Experiment Station  
East Wareham, Mass.

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P. E. MARUCCI  
New Jersey Cranberry and Blueberry Station  
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Kingdom and other Western European countries.

A similar exhibit also in England drew more than 28,000 restaurateurs, hotel chefs, caterers and consumers is also encouraging.

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"Cranberry Fantasy" will be the theme of the 19th annual Bandon (Ore.) Cranberry Festival, September 17, 18 and 19, it has been decided by the Festival Association. Mrs. Kenneth Whitney submitted the prize-winning theme.

The second prizetitle was submitted by Bonnie Berry and it was "Alice in Cranberryland." Third was by Ruth Michele and the title was "There Is No Land Like Oregon."

The association has voted to donate \$300 to the Bandon Community Scholarship Fund, and to present the queen of last year, Alyson Anthony, with a \$250 scholarship. In the future the queen will get a \$250 scholarship from the Festival Association.

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Ocean Spray Cranberies, Inc. has a promotion drive this summer which features cranberry juice and vodka. Color ads are running in July and August in the national magazines, *Holiday*, *Time* and the *New Yorker*. Placards have been placed in Cape and other cocktail lounges with a design fashioned after an old-fashioned tavern or inn outdoor sign. The message says "Drink Dif-

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## LONG BEACH, WASHINGTON CRANBERRIES FEATURED IN VACATION GUIDE

The Ilwaco (Washington) Tribune in its annual 20-page vacation supplement, features Long Beach Peninsula cranberries. It briefly traces the history of cranberry growing in Washington state from the time, it says, Indians were harvesting the crop in 1895 when Lewis and Clarke made the first overland journey to the Coast, to the present time. Ocean Spray contributed a half-page advertisement using the same theme.

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# Mass. Cranberry Station and Field Notes

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

## Personal

Prof. "Stan Norton" attended the Annual Meeting of the American Society of Agricultural Engineers held in Athens, Georgia, the week of June 21. He is a member of the Irrigation System Design Committee for this organization.

Dr. Fred Chandler, Professor Emeritus of the Station, has just returned from the West Coast. He was in the Washington area from June 10 to June 30 as a visiting professor. The main purpose of the trip was cranberry breeding.

## Frost

There were a total of 22 frost warnings released during the spring as compared to 18 in 1964. This includes afternoon and evening warnings. In case

you are interested, the record is 41 and was set in 1949. Frost damage has been spotty and on the light side, probably in the neighborhood of 2 percent of the total crop, and water injury from late spring flooding has been negligible. The frost season wound up with a flourish with the period of June 14 to 17 being a series of near misses and night after night of nervous watching and waiting. On the night of June 17, some bogs had temperatures from 26 to 29 degrees, but only slight damage has been observed.

While on the subject of frost warnings, it seems in order to thank both George Rounsville and Kenneth Rochefort for their very capable frost forecasting this spring. This is a tremendous re-

sponsibility that these fellows must bear, and this is one "hot spot" that I personally am very happy not to be on. We are also indebted to the weather observers, telephone distributors, radio stations, and the U.S. Weather Bureau personnel for the important part they play in this service which is sponsored by the Cape Cod Cranberry Growers Association.

## Annual Meeting

The 78th Annual Meeting of the Cape Cod Cranberry Growers Association will be held Tuesday, August 24 at the Cranberry Experiment Station beginning at 10:00 A.M. The program is incomplete at this time; however, there will be the usual machinery and equipment exhibits, guided tours of the State Bog and the crop report presented by Mr. Byron S. Peterson of the Crop Reporting Service.

## Crop Prospects

From personal observation and other reports it seems that the Massachusetts bogs will have one of the heaviest blooms on record. Practically every bog is loaded with "pods" and even those with little or no frost protection have a nice "umbrella" bloom coming. It is much too early to estimate

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at this time, but we appear to have the potential for a very fine crop.

We want to urge the growers

to cooperate with the New England Crop Reporting Service by mailing their crop estimates in August to Mr. Peterson. A large

number of reports makes a more accurate estimate possible and adds to the value of this service.

#### *Insects and Weeds*

There have been numerous reports of large numbers of girdler moths being seen on bogs during the month of June. This pest was fairly well under control during much of the 1950's, but with the dry summers of recent years and the lack of a regular sanding program on many bogs it is now a major menace. Prof. Tomlinson indicates that the granular dieldrin or DDT treatments that are listed on the Insect Control Chart are very good for the larvae or worm stage. These treatments should not be applied when the bog is in bloom. "Bill" also warns that the growers should keep a sharp eye out for late infestations of fruitworm and Sparganothis fruitworm. These little devils can decimate a crop in short order.

There is still a little time to treat ditches using either fuel oil or dalapon. Shores and dikes may also be sprayed with 2,4,5-T to kill broadleaved or woody weeds such as poison ivy, small maples etc.; or dalapon used for poverty grass or switch grass.

#### *Weather*

The month of June was approximately  $\frac{1}{2}$  degree a day below normal in temperature. It was a month of alternating cool and warm spells, starting cool for the first few days, then turning warm for a week, then a week of very cool temperatures the middle of the month, followed by short periods of warm and cool weather for the remainder. Precipitation totalled 2.50 at East Wareham which is about  $\frac{3}{4}$  inch below the mean. Generally this was a fairly dry month with half of the rainfall occurring on the first 3 days. Bogs are getting very dry and some irrigating has been done already.

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## **READ CRANBERRIES**

# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of July, 1965 — Vol. 30, No. 3

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

### June Started Cold

The first week in June contained unseasonably cold and a warning of possible frost in colder locations was issued for morning of June 5th. A minimum of 29-30 was forecast with the tolerance of Early Blacks still at 29½. No frost materialized as the wind blew.

The first week of June as a whole was definitely on the cool side and at its end the temperature for the month to date was about minus 25.

### Hotter Weather

The week of the 8th there was a definite change in the weather pattern and the cranberry area had rather extreme humid heat. Temperatures were in the 70's, 80's and even 90 degrees. The temperature for the month changed abruptly to the plus side. By the tenth the plus was 4.

### Thundershower

There was a light thundershower on the evening of June 10th which helped the water situation a little.

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### Drastic Change

The fine weather continued until the 13th when there was a drastic change to the cold side with squalls lashing New England, upsetting boats and causing four drownings. Lightning struck and a fire destroyed a church in Ipswich. Some rain fell over the cranberry area on that night.

The temperature for the month had risen to a plus 24, but the 13th was 11 degrees below the average, and a chill, which necessitated furnace heat in homes and business establishments.

There was a fairly substantial cold rain all day on the 14th.

On the night of the 14th although there was no frost warning, many growers were up watching the weather and very

much worried. Expected cloud blew away about midnight and temperatures of 30 were reached. The tolerance of Early Black early-water was 29½.

The night of the 15th saw another frost warning issued, "possible frost, in colder places, minimum 29 degrees."

By the 16th temperature for the month of June which had been a plus changed to a minus of 17, the departure from normal on the 15th being minus 15. The minus on the 17th was 29. On the 18th 41.

Just a week from the drastic change in the weather to the cold side, on June 20 brought a plus of 5 degrees. It was not thought at the Cranberry Station that the June cold snap had caused any serious loss,

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although with the bogs generally coming into the blossom stage it caused most growers a lot of worry and use of water, particularly in bogs which had sprinkler systems. The first day of official summer was five degrees above normal.

The intense heat wave with

temperatures in the high 80's and 90's and excessive humidity ended on June 24.

#### *Sprinklers in Use*

This heat spell apparently did little harm to bogs, even though there was a lack of rain, as there had been much sprinkling and flooding for the frost spell

and growers had also sprinkled during the heat.

#### *Bees*

Probably more honey bees had been hired and placed in use this year on the bogs than ever before and while there were many wild bees around they were slow in getting onto the bogs. By the 25th most bogs had good bloom.

The bloom was apparently heavy nearly everywhere, and growers were expecting a very good Massachusetts crop if conditions continued favorable during the summer. With the heavy bloom it was expected harvesting this fall might be rather later than usual as there may be many bottom berries.

A very substantial and helpful rain came over the cranberry area on the afternoon and evening of the 24th when the heat wave broke. There was fair rain on the last day of June.

#### *Summary for June*

Rainfall as recorded at the State Bog was 2.50 with the average 3.21 inches. The month ended with a minus of 15 degrees, the total since January first being minus 359. Spring frost damage was set at possibly 2 per cent. June was a nearly perfect month for the coming crop as it was characterized by Dr. Cross, director of the Cranberry Station, except for being a little dry, perhaps with more rainfall in upper Plymouth County. Sunshine was 72 per cent of possible, way above normal. A number of growers said that honeybees were not as active as they should be but were plenty of bumbles and they

Continued on Page 16

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# NORMAN I. BRATENG, DIRECTOR OF OCEAN SPRAY CRANBERRIES, INC. IS ONE OF THE LARGEST CRANBERRY GROWERS IN WASHINGTON

**He has 18 acres and averages about 150 barrels to the Acre.  
All Acreage under Sprinklers—Active in local civic affairs—  
Bought Bog from Wilson Blair.**

By CLARENCE J. HALL

Norman I. Brateng, a director of Ocean Spray since August 1959 is a good example of how West Coast cranberry growers are consolidating their bog holding and gradually making bogs self-sustaining, thus permitting them to become full-time growers. Until August of 1963 he had 8 producing acres on Pioneer road at Long Beach, Washington. This bog is next to the Coastal Washington Experiment Station.

Then Mr. and Mrs. Brateng purchased the property of Mr. and Mrs. Wilson Blair on both sides of Pugh Road, a property with 21 acres in all and 10 in production. At that time there were two more in planting. Blair has produced as many as 1,500 barrels in a year. Brateng's top production was in the "big year" of 1961 when he harvested more than 2200 barrels. On some of his acreage he grew 312 barrels to the acre.

## *Large Producer*

Brateng is one of the largest producers in the Long Beach area, with the exception of huge Cranguyma. Elwell Chabot and Robert Osgard have larger holdings, and may have the potential to produce larger crops than Brateng. Brateng says, without boasting that he has been fortunate enough in most years to produce about 150 barrels to the acre.

## *Norman's Background*

Norman was born April 29, 1910 on a farm a few miles from the Thief River Falls in western Minnesota. The family moved to Longview, Washington. At the time his father, Carl, was a saw-mill worker for the huge Weyerhaeuser Lumber Company which has large mills at Longview and elsewhere on the Pacific Coast. Longview is in western Washington about 40 miles from Long Beach. Norman attended public schools at Longview. He had three years of vocational training while in high school, and feels this course "was of tremendous benefit to me."

## *Took Part in Okinawa*

During the Second World War Brateng was a gunner's mate 3rd class. He served mainly on the Ticonderoga in the Pacific theatre. He took part in the invasion of Okinawa and also saw action off the coast of Japan.

## *His Father Started Bog*

Norman's father Carl bought the property on Pioneer Road in 1945. Norman assisted him in the winter and spring of 1947 by putting in three additional acres. By this time Norman says "the original plantings made on 20 acres in about 1914 or 1915 'were in terrible shape.'"

"So with the 3 new acres and 2½ wrestled from the natural jungle of the Peninsula he then had 5½ acres producing."

Brateng was in the gravel business for awhile, and in about 1950 he came to think that carpentry was a better opportunity. He then worked at that trade in heavy construction and housing then "I graduated into boat building during the winter of 1952."

"I enjoyed this work very much," he recalls, "then my father's health went bad in the summer of 1954. I quit the company (Tollycraft) I was working for and purchased the bog from my father."

The producing and newly planted area had grown by then to 6 acres with 2 more acres scalped and ready for leveling and planting. Since that time a sprinkler system has been expanded to include all 8 acres. A new and larger water sump has been put in. This was

dredged out by using a suitable pump and other equipment. An automatic control was installed that operates the system turning it on at some pre-determined temperature and turning it off again on a 3 degrees temperature rise.

This is completely automatic and allows for sufficient temperature rise to control frost without saturating the ground with water. "I believe this is important during the late spring period," Brateng adds.

The Pioneer Road bog is all set to McFarlins. The original bog was owned by the Western Cranberry Company and according to D. J. Crowley, formally experiment station director, the vines were shipped from Massachusetts in about 1915, and Crowley remembers they were "bailed like hay."

## *Experimenting*

Brateng has been experimenting for the past several years to find if there is any cold damage done in winter. These experiments are to test out a theory that injury occurs in the post-harvest period when temperatures drop not sufficiently to cause a severe frost, but the temperature may still be cold enough to cause vine injury. Brateng is inclined to think this damage may occur and so does Crowley. It has been only during frost periods that Brateng has been sprinkling for temperatures below 25 degrees. He is trying also to compare with other Long Beach growers if this damage is done to bogs which are not sprinkled. Brateng does sprinkle for exceptionally low temperatures at any time after harvest.

"It is my belief that we haven't protected the vines enough during sudden drops after prolonged temperatures.

Twig blight, a troublesome matter often in the Pacific Coast

cranberry region is no problem to Brateng, as he has followed the advice of the Experiment Station and fungicides to control this, which is caused by a fungus disease.

#### *Water Reel Harvest*

Brateng harvests by the water reel method and engages in bulk handling of berries. He is one of the few growers on the Coast who do not use paint thinner (a petroleum product) in his weed control. He is hoping that some of the new herbicides may help him to overcome the weed problem. His worst weeds are loostripe and horstail.

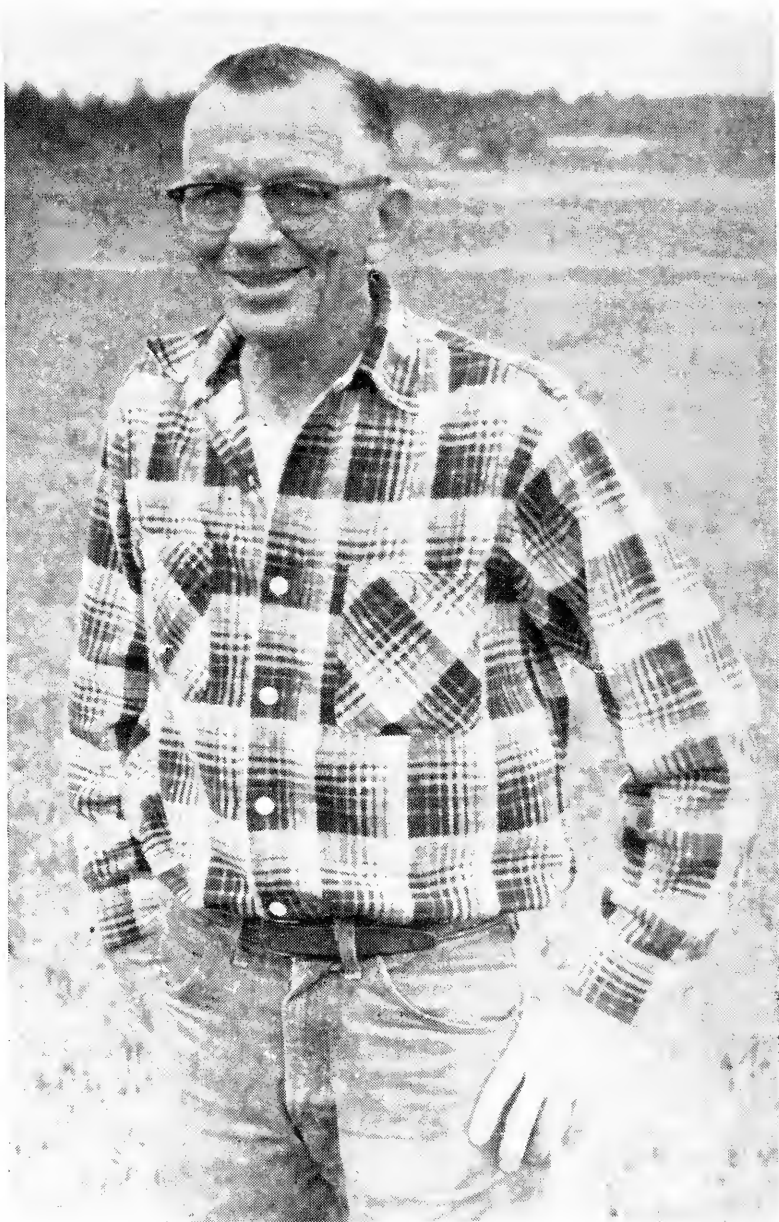
Brateng is married to the former Mary Volcott of Longview, whom he met while in high school. The couple have two children, Norman Carl, who is 21 and son Eric, who is six. They have one grandchild.

#### *A Full-time Grower*

Brateng has been a full-time grower and working cranberry man since he obtained his Pioneer road property of 8 acres. He believes a living can be made on this much acreage — by inducing intensive fruit-tip growth and thereby getting more berries to the acre.

The Bratengs in 1963 completed a most handsome home at the bog. Brateng did nearly all the work assisted by his wife. There are clarestory windows in the living room; flourescent lighting; wide windows and handsome woods. In the living room there is a very large fireplace, modern in design, one whole side of the big living room is of glass. The kitchen has every modern electrical convenience — cabinets are built in.

Brateng is not a "joiner" of social clubs. He does belong to the Long Beach Peninsula Cranberry Club; the Long Beach Lions Club. He is also a member of the Board of the A.R.A., or Area Development Association. He is vice chairman of the Board, Pacific County A.R.A. He is also a member of the Advisory Board of the Long Beach Flood Control District. As an Ocean Spray director he is secretary of the finance committee and regularly



**Wilson Blair Sold Bog to Norman Brateng.  
(CRANBERRIES Photo)**

attends all meetings of the directors at Hanson, Mass. or elsewhere.

Brateng is of Scandanivan descent while Mrs. Brateng is Scotch-Irish.

Brateng says he has served on the Pacific County Planning Commission since its foundation last December. This is an appointive position, a very controversial and none-reimbursive, but very gratifying. He has served as secretary of the commission so with his bog work, and being a director of Ocean

Spray Brateng is a busy man.

#### *Wilson Blair*

Shortly after Mr. and Mrs. Blair sold their property to the Bratengs they moved to Las Vegas where they entered into the car washing business. Blair had been a cranberry grower for 16 years. He was raised on a farm in Idaho and was in the oil and auto business for 15 years. He resided in Grayland after the war and got interested in the cranberry business and bought his Long Beach bog in 1947.

Blair had revamped some of this acreage and then bought two acres on the north side of Pugh Road. He harvested by water reel, building one himself. The acreage of this bog now owned by the Bratengs is wooden-diked for the harvest.

The sprinkler system which covers the entire bog has both Buckner and rain Bird head. The system has an automatic warning that rings a bell and got Mr. Blair out of bed frost nights. There are three sumps, one an acre in extent, one 60x150 feet and a small one and in depth these water holes vary from six to 14.

In an interview before he sold his bog Blair said Long Beach production was increasing. "But I think we will have to learn a lot about fertilizers to fit our particular conditions," he said. "We do not use enough phosphate; too much nitrogen affects the quality of the fruit.

Blair has long been active in Long Beach affairs particularly in cranberry matters. He was a member of the West Coast Advisory Board for Ocean Spray.

He was also on the Advisory Board of Long Beach Experiment Station; on the Advisory Board of the Flood Control District of Pacific county, and a director of the A.R.A.

While at Long Beach his hobby was sports salmon fishing both in the Columbia River and the ocean. He had a license to operate charter boats. He enjoys bowling. The Blairs have two daughters, Mrs. Maureen Newson, and Barbara Knapp, the latter and her husband having two children.

Blair has now returned to Long Beach and has purchased a part of the Bernhard property. He has also become Long Beach manager of the Ocean Spray plant there.

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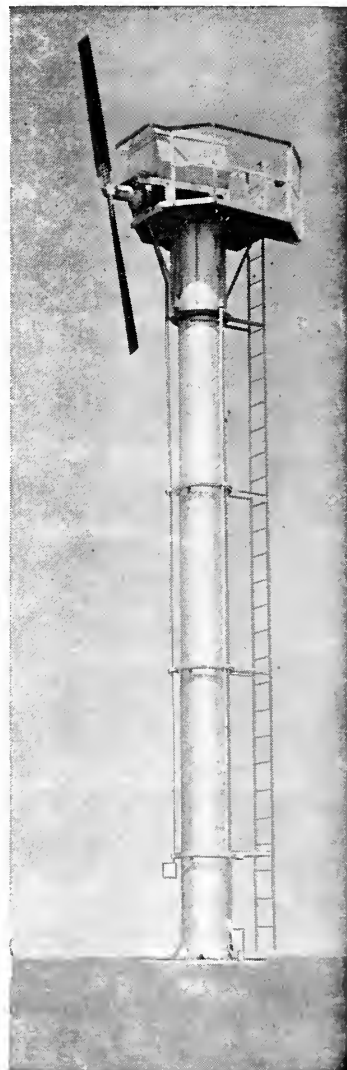
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PEAD CRANBERRIES

# DIRECTOR OF STATE AGRICULTURE MAKES FINDING IN PROPOSED WISCONSIN MARKETING ORDER

## Referendum to be held — Advisory Board of five and five Alternates to be elected—

Under date of June 11, D. N. McDowell, director of the Wisconsin State Department of Agriculture has sent Wisconsin growers the decision upon a proposed state Marketing Order for cranberries. He states his decision is based on the evidence taken at the hearing on May 12. A petition signed by 13 cranberry producers was received by the director on January 20, requesting a marketing order be established.

This means that a referendum of cranberry growers whether they want such an order or not is to be conducted. The referendum is to be by mail ballot within 45 days of June 11.

There is to be an advisory board of five members, these being producers to assist the director in the administration of the order if it is voted in. A ballot has been sent to each grower asking for nominations to the board of advisors, and the ballot is not valid if received by the Department of Agriculture after July 1. Each nomination must be signed by five qualified producers to be considered. Each grower shall vote for all five members.

The five 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 become alternate members.

The term of the members and alternate members is to be for

three years. The duties of the advisory committee are to be advisory only to the Director and it may make recommendations relating to the marketing order.

While the marketing order is in effect each producer is to be liable for an annual assessment of two cents per barrel. The funds collected are to be budgeted to carry on applied research, financing and educational program including funds for a frost warning system.

From the funds collected the Director would work with the U.S. Department of Commerce Division of Forecasts and Synoptic reports. The service would include a special service of forecasting temperature, weather and other pertinent conditions during the cranberry growing season and disseminating this information to the cranberry growers.

The notice to growers says a frost warning service has been in operation for the past number

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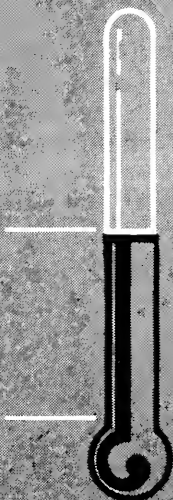
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AGRICULTURAL EQUIPMENT

**JOHN BEAN DIVISION**

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of years and the program has been supported through voluntary contributions from growers; "the program is in danger of being abandoned because of rising costs and the lack of financial support from a minority of growers."

Report continues 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.

Furthermore the notice says the order, if voted in, would provide for the Director to carry on research and long-time research, surveys, and may include the developing of new and improved varieties, production practices, including the use of chemicals for

insect, weed and fungicide control, developing objective quality and maturity features for cranberries; marketing techniques to promote more efficient operations.

The notice stresses that the success or failure of an entire cranberry crop might well rest on receiving weather forecasts and frost warnings. It asserts cranberries are grown in 17 of Wisconsin's 72 counties; the production of cranberries is an important factor in the agricultural economy of the state, representing four or five million dollars gross income to growers of Wisconsin.

It points out that Wisconsin is the second largest producer of cranberries in the United States, producing approximately 400,000 barrels annually which represents about 33 per cent of the nation's supply. "Production has been increasing over the years, primarily because of added acreage."

If the order is voted in it provides that in the event of failure of any person to pay any assessments due, the Director may bring an action against him in a court of competent jurisdiction for collection thereof. In the event of failure of any sales agency or processor to collect the assessments levied, such processor shall be personally liable for such assessments.

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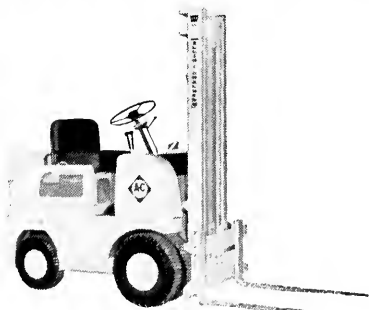
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## MRS. RICHARD REZIN OF WISCONSIN

Mrs. Richard F. Rezin, 97, Rt. 2, Warrens, a member of a pioneer Wisconsin Cranberry growing family in Good County, Wisconsin, died on June 5 at the Tomah Memorial Hospital. Ill since September, she had been hospitalized for two weeks. Death was attributed to a stroke.

Mrs. Rezin, the former Pearl Forbes, was born in Wisconsin Rapids Nov. 12 1867. Her parents Mr. and Mrs. Charles Forbes, were cranberry growers.

Following her marriage to Richard F. Rezin on June 17, 1889. at Webster, S. D., they established a cranberry marsh in the town of Cranmoor in 1890. Ten year later they moved to

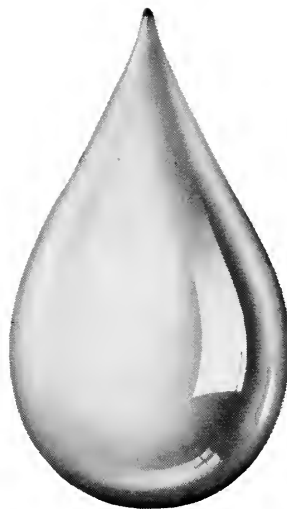
Warrens where they continued in the cranberry industry.

Since the death of her husband May 13, 1945, Mrs. Rezin had been associated with a son Russell, in the cranberry business. She traveled extensively and for the past 14 years had maintained a winter home at Fort Meyers, Fla., with a daughter, Isabel.

As a child she saw the first railway train come into Centralia (now Wisconsin Rapids) and watched covered wagons going west from the home her parents later bought near Neenah.

Mrs. Rezin is survived by three sons, Leslie of Eagle River and Russell and Daniel of Warrens; two daughters, Isabel and Mrs. Walter Lenocho, both of Warrens; four grandchildren and 42 great-grandchildren. Her husband and five children preceded her in death.

She was a member of Ahad-Ad-Ad-Ad Chapter, Daughters of the American Revolution, and of Mount Olive Chapter 6, Order of the White Shrine of Jerusalem.



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## MASS. CRANBERRY CLINIC WELL ATTENDED — INSECTS

A well-attended cranberry clinic was held at the Massachusetts Cranberry Experiment Station bog on the afternoon of July 1. Speakers were Entomologist "Bill" Tomlinson, Dr. Cross director of the Station on irrigation and Irving E. Demoranville, Extension Cranberry Specialist on weeds and disease control.

Tomlinson said there might be a bad girdler building up from the number of moths on the bogs and this might get worse in near-future years. He also said the heavy gypsy moth infestation which appears to be shaping up earlier in the spring had not developed for this summer, but he did not like the build-up as there were some on the bogs and it could be worse also in the near-future. Some 25,000 to 30,000 acres were treated on the Cape by helicopter and straight wing plane, the material used being SEVIN.

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**CUTTING THE CRANBERRIES TO OPEN CRANBERRY HOUSE IN ORLEANS MASS.**, is shown (left to right) Edwin T. Moffitt, Ocean Spray's Manager of Retail Sales; Mrs. John W. Higgins, Supervisor of the new Cranberry House; Selectman Gaston L. Norgeot of Orleans; Mrs. Frances Florinda, Supervisor of Cranberry House in Onset, Massachusetts; Kim Lade of Dover and Orleans, student at Endicott and Nancy Neelans of Hazardville, Connecticut, student at Northeastern; rear right, Willie Fleming of Wareham, Cranberry House cook.

## OCEAN SPRAY OPENS SECOND CRANBERRY HOUSE

Ocean Spray Cranberries, Inc. is leading the way to a diversified taste for cranberries with the opening of its second Cranberry House in Massachusetts. The first, located in Onset, is adjacent to one of Ocean Spray's canning plants and has been in operation over a year. The second, opened June 16, is located in a new shopping center in Orleans, at the gateway to the Cape Cod National Seashore Park.

Both houses combine a restaurant or luncheonette, a gift shop and bakery, all featuring cranberry flavor and motif. Guests also have an opportunity to sample new cranberry products being introduced by Ocean Spray. A cranberry museum and cranberry theater, with daily showings during the summer of Ocean Spray's movie, *Heritage of Flavor*, are also part of the Cranberry House in Onset.

Cranberry House menus are enhanced with Cranberry Jewel Salad, Cranwiches, Cranberry Fruit Nut Bread and even the Sunday Special of roast turkey is plumped out with a cranberry stuffing. Cranberry bread and muffins are also featured at the

bakery along with cranberry cookies, cranberry crunch, cranberry pies, cakes, and doughnuts.

In charge of Ocean Spray retail facilities is Edwin T. Moffitt who can think of more ways to glorify the cranberry than anyone since the Indians who used them for a food, medicine and a color for their bright rugs and blankets. He has his Cranberry House personnel appropriately uniformed in Cranberry Red with pert white aprons and Pilgrim-type hats.

"Cranberry House," he says, "is an effective way to show the public how god tasting and versatile cranberries are and we hope will stir up a whole new enjoyment of cranberries."



Cape Cod cranberry growers and families enjoy a private opening of Ocean Spray's second Cranberry House, in Orleans, on Cape Cod, Massachusetts. They are shown seated at the luncheonette sampling the cranberry specialties on the menu.

### MRS. ISAAC ISAACSON

Mrs. Alma (Lahti) Isaacson, 72 of Rocky Meadow Street, Middleboro, Mass. died June 21 in Jordan Hospital, Plymouth. She had been a patient there for three weeks.

She was a member of Ocean Spray Cranberries, Inc. and was widely known to operate one of the best bogs in Massachusetts. She gave the bog her personal attention and it was one of the "cleanest" and best producing bogs in the state.

Mrs. Isaacson was born in Parkano, Finland and resided for many years at Briarsville before purchasing the former Shaw bog. She and her husband had operated the bog for 35 years. She was an active worker on the Finnish Relief Committee during the Russian Finnish war.

Survivors include her husband, Isaac Isaacson, a brother, Otto Lahti of Canada; a sister Emma Heinamake of Finland and seven nieces and nephews in this country and Finland.

### MISS BUCHAN TO VACATION IN IRELAND SCOTLAND, ENGLAND

Miss Betty Buchan, director of publicity for Ocean Spray Cranberries, Inc. flies August 4th via Irish Airlines to Ireland, England and Scotland for a vacation of three weeks. She will visit various spots in the three countries and will visit two uncles and an aunt in England.

### FRESH FROM THE FIELDS

Continued from Page 6  
were very active.

Nearly all bogs were heavy with bloom by the first of July, with prospects for a very good crop as of then, but as a grower said "you do not pick cranberry blossoms."

### NEW JERSEY

#### Frost Calls

The month of June was very hot some days and very cool some nights. The mean average

was 69 degrees, which was 2.2 lower than normal. This is the eighth year in a row when June was below normal. There were 10 days of 90 degrees and over, with a record high for the date on June 23rd of 97 degrees. On June 8th it was 93 degrees, which tied with June 1939, for the high for that date. There were 8 nights when the upland temperature was in the 40's and 3 nights broke records for the date—June 14th, 26th and 27th when it reached 41 degrees, 45 degrees and 42 degrees respectively. Cranberry growers were kept busy with frost calls. Minimum bog temperatures were 29 on June 3rd, 31½ on the 4th, 30 on the 13th, 32 on the 18th, 31½ on the 25th, and 28 on the 26th.

#### Less Rain

The precipitation during June at this Weather Station totaled 3.12 inches, which was .73 of an inch below the normal for the month. On June 24th there were local showers totaling 1.75 inches but only 9 miles away not a

drop fell. The total for the first 6 months of 1965 was 16.01 inches, about 2¼ inches less than the drought year of 1964 and almost 5 inches below normal.

#### *Torrential July Rain*

The drought was relieved by torrential rains in most cranberry areas on July 5th. At Tony De-Marco's bogs at Chatsworth 4.43 inches of rain fell in about an hour and a half. At the Laboratory at New Lisbon, 2.23 inches were recorded.

#### *Heavy Rain*

The season is considerably later than normal on cranberries in New Jersey as of July 6th. Blossoming is only slightly beyond the peak stage. Most growers are encouraged by the heavy bloom and the fact that there has been very little frost damage.

## **WISCONSIN**

#### *Water Ample*

Warm days and cool nights was the weather pattern for the Wisconsin growers during June. Precipitation was more

than ample early in the month and then finished on a dry note the last two weeks. The coldest readings were 25 on the 12th and the warmest was 90 on the 27th. The overall average was about normal for temperature. The heaviest rains fell during the first week with over three inches in some of the west central areas. Rainfall averaged normal to above normal in all areas of the state except the southwest. There was additional frost on the 21st but no losses were reported. This frost was almost a year to the day of the serious frost of 1964. The outlook for July calls for temperatures to average above normal and precipitation below normal.

#### *Crop Prospects Look Good*

For the most part fireworm activity on the first brood was quite light and most growers obtained good control. The cool weather held worm development down which allowed the growers more time for control. Some growers used their sprinklers with parathion emulsions for

their insect control with good success. Spot spraying with solvent was continuing on isolated species of weeds and grasses until mid month. First bloom was appearing by mid month and the time table appeared about normal but behind last year. Crop prospects appeared good as the hooking started to develop.

#### *Frost-Hail Losses Normal*

Losses to date have been light except for some spring damage caused by dessication on early pulled winter water. This condition did not show up until the actual growing season started in early June. Overall the loss is not great, but individually it is quite severe. These areas are being re-fertilized. Losses from frost and hail to date have been minor and considered normal. For the most part Casoron applications made last fall look very promising, except where calibration of spreaders was off. Spring applications also look good at the reduced rates.

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"Why, yes. I have been having quite a bit of rain up around my bog lately . . .  
how'd you guess?"

## GUEST EDITORIAL

### THE FUTURE OF CRANBERRY CULTURE IN MASSACHUSETTS

In 1950, about 15,000 acres of cranberries were harvested in the Bay State. Since then, the acreage in production has steadily declined, and for the last two years has leveled off at about 11,700 acres. In 1956, there were 962 growers in Massachusetts. By 1959, the number had declined to about 775 and is now down possibly to 600.

At first glance these figures would indicate a declining interest in cranberry growing, and a declining importance of the crop for Massachusetts in the national cranberry industry. Nothing could be further from the truth. During the first five years of this decade, Massachusetts has produced the first, second, fourth, and fifth largest crops in its history. In common with American agriculture generally, fewer growers are operating larger acreages, and this is being done with higher-level technical competence, greater capital investment, and lower unit costs.

Almost one-fourth of the Massachusetts cranberry bogs are now provided with solid-set sprinkler systems, most of them designed and installed since the disastrous frost of Memorial Day, 1961. These provide nearly-instant frost protection without the hazard of late-season flood-water damage, can be used throughout the growing season to prevent drought damage and to spread or activate pesticides and fertilizers. All this is achieved with considerable conservation of water compared to flood management. Several thousand acres more of sprinkler systems will be installed in the next five years.

By reducing losses to frost and drought, and by harvesting at later dates in the fall, Massachusetts cranberry growers plan to average 100 barrels per acre or better. At these rates, unit costs are down, current prices mean profits and some of the extensive marginal acreage which was abandoned in the last fifteen years will be rebuilt, some of it currently under way.

New and more productive varieties are under test and nursery stocks of the more promising ones are being developed. This and a readiness to invest in labor-saving machinery, contributes to the general attitude of enthusiasm and vigor that has characterized

CLARENCE J. HALL  
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Wisconsin Rapids  
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### Oregon

FRED HAGELSTEIN  
Coquille, Ore.

### Massachusetts

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

### New Jersey

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

the cranberry industry since the springtime of 1964. Massachusetts growers are at present supplying over one-half the world supply of cranberries, and because of this provide much of the leadership of the industry. From all current indications there is a solid determination among growers to continue in this role. There is general confidence that the state will produce its first million-barrel crop in the next five years. It is hard to believe that the first national million-barrel crop was produced only twelve years ago. The future of cranberry-growing in Massachusetts is promising and exciting indeed.

DR. CHESTER E. CROSS  
Director Massachusetts  
Cranberry Experiment  
Station

## INDIAN TRAIL SENDS LETTER REGARDING NEW OWNERSHIP

A notice has gone out from Indian Trail Cranberries of Wisconsin Rapids, Wisconsin, to members and others regarding the recent sale of that unit to Dean Foods Company of Chicago.

It begins that the tonnage of Indian Trail has increased from 12,000 barrels to several times that volume in the past 17 years. The notice signed by Ben G. Pannkuk, now manager of Indian Trail says the purchase of Indian Trail by Dean Foods, which is one of the finest companies in its field, is most desirable for the growers making up the Indian Trail group, employees, customers and the cranberry industry in the State of Wisconsin.

The Dean Foods Company was founded in 1925 by Samuel E. Dean, Sr., and T. A. O'Connor.

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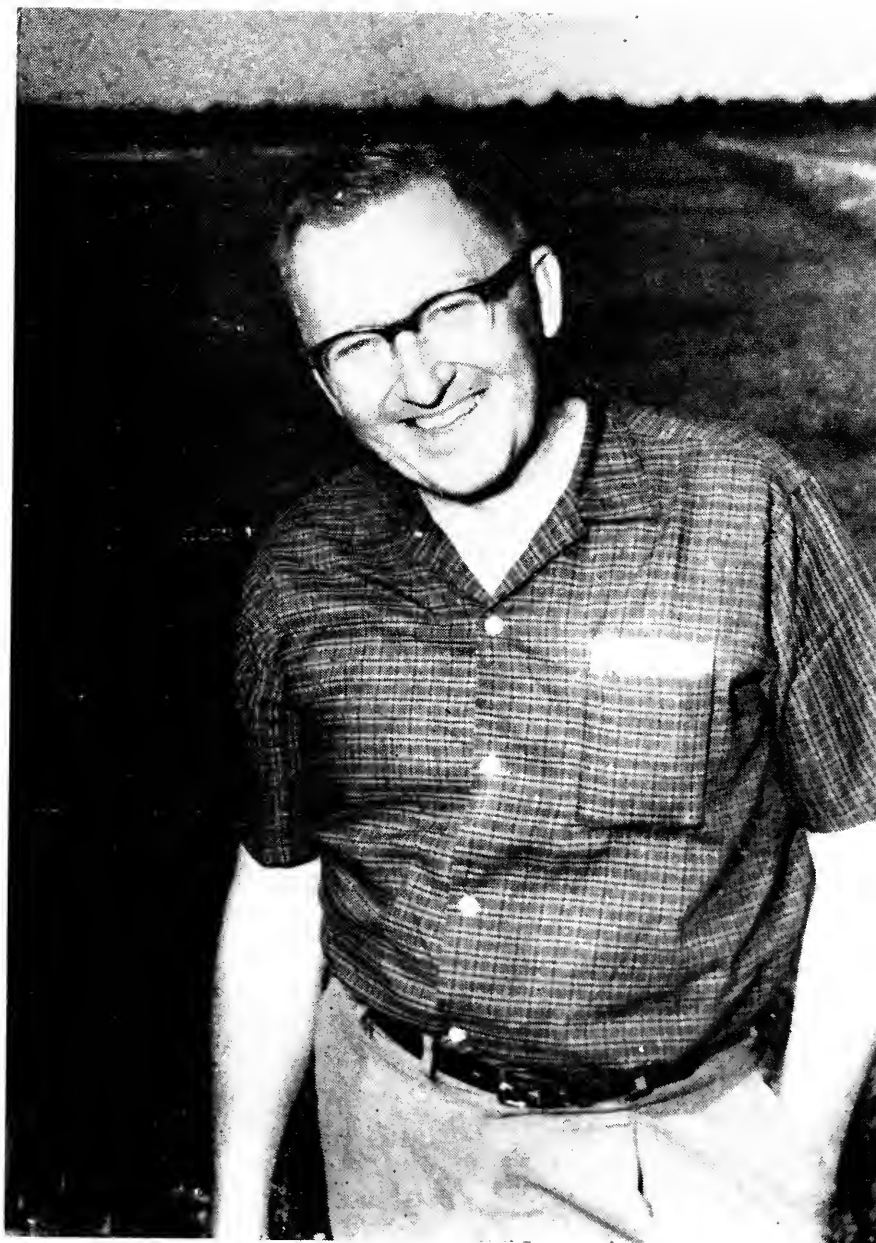


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Prof. George C. Klingbeil, Extension Horticulturalist, University of Wisconsin. (See Wisconsin story, page 8.)

(CRANBERRIES Photo)

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## BEE COLONIES DOWN IN 1965

New Jersey beekeepers had a total of 35,000 colonies on hand, July first, according to the New Jersey Crop Reporting Service. This is a decline of four percent from 1964. This year marks the first decline in three years.

Colonies lost during the winter and spring totaled 24 percent of those entering the winter.

Colonies of bees on July first in the United States totaled 5,-558,000 on July first, one percent

below the high level in 1954. Losses of colonies through this past winter and spring were generally heavier than the previous winter and spring. Severe winter temperatures along with a late spring caused heavier colony losses generally across the northern half of the country.

### PERSONAL

Vernon Goldsworthy, president of Cranberry Products, Eagle River, Wisconsin, Mrs. Golds-



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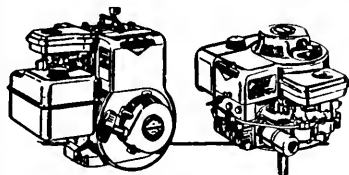
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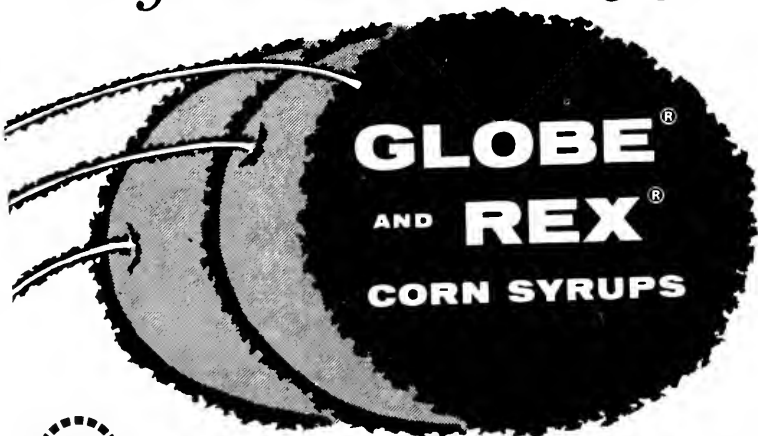
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worthy and their daughter, Mary were late July visitors to the Massachusetts Cranberry area. On the way East they stopped at the bogs of Charles LeRocque at Drummondsville, Province of Quebec, who is making further addition to his cranberry properties. They visited the Mass. Cranberry Experiment Station, Decas Bros. Cranberry Company, Edward Gelsthorpe, general manager of Ocean Spray and the editors of *Cranberries Magazine*.

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# Mass. Cranberry Station and Field Notes

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

## Personals

Prof. "Stan" Norton has been attending summer school at the University of Florida. He is expected to return about the middle of August.

Andrew Charig began his duties on July 6 as Research Assistant to Dr. "Wes" Miller, our Station biochemist. "Andy" is a recent graduate of SMTI and lives in Westport. He will assist Dr. Miller in his work with chemical determinations in soil and water.

Vernon Goldsworthy, Wisconsin grower and President of Cranberry Products, Inc., stopped in for a visit recently and we had a very pleasant chat. He reports that there is considerable interest in the Stevens variety in

Wisconsin and that a fair amount of new acreage has been, and is being planted to this variety. He also noted that some of the cranberry marshes had suffered considerable damage from hail during late July.

## Weather

July was another in the series of cool months that we have been experiencing, ending up nearly 3 degrees a day below normal. Rainfall was extremely light with only .67 of an inch for the month. The largest amount in any storm was .12 or only  $\frac{1}{8}$  of an inch for the year to date. We are 10.5 inches below the 30 year average at the Cranberry station.

The drought is now widespread throughout the cranberry

area and water supplies are fading fast. In many cases, the water supply was used up some time ago. Growers are digging new water holes and irrigating in every conceivable way, even to using lawn sprinklers and perforated plastic hoses on one small bog that we saw recently. Bogs are really starting to suffer, with some showing patches of brown vines and others withered berries which are the forerunner of dying vines. Other bogs that appear to be unaffected by the drought have small berries which may not grow to normal size. This can really hurt when it is time to harvest. Unofficially we estimate that 150,000 barrels may have been lost to the drought as of the end of July.

## Harvest

As the work on production of the crop tapers off and the berries get too large for work on the bog, growers should take some time to plan for the harvest. Many months of hard work and worry have been put in to raise the berries and now everything depends on the care and planning of the harvest as

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to the condition of the berries when they are delivered to the shipper. Growers should do everything in their power to deliver fruit in the best possible condition. (1) Now is the time to make sure that the picking machines and wheeling-off rigs are in top running order for a smooth harvest operation. (2) Wait for color, ripe berries stand more frost. By waiting, berries will be larger and easier to pick and boxes will also fill up faster. Set machines to pick no deeper in the vines than is necessary

to get the berries, this avoids bruising. (4) Run the machines at a moderate pace, racing scatters berries, areas may be skipped over and the vines are pulled unnecessarily which hurts next year's prospective crop. (5) Pick when the vines and berries are dry and discontinue picking when the dampness of the late afternoon sets in. Picking when the vines are damp will increase bruising, put an unnecessary strain on the machines and damage the vines.

#### *Picking Machine School*

The picking machine school is scheduled for the afternoon of August 31 at the State Bog, Robert St. Jacques and Louis Sherman will be the instructors for the Darlington and Western machines respectively. They will cover operational techniques, general maintenance and simple repairs. Growers are urged to have their machine operators present to participate in these informative sessions.

#### **Notes From British Columbia**

Norman V. Holmes of New Westminster, British Columbia, estimates this fall the bog on Lulu Island will have a crop of close to 15 000 barrels. There had been little rain since the first of June, which was unusual for the area, but moisture was still about a half inch below the surface.

Holmes, who is building a bog of 100 acres, as the Columbia Cranberry Co., Limited, has four tractors and bulldozers working full time, and he hopes to have the whole 100 acres ready to plant by this fall and next spring.

He personally drove a truck to Wisconsin the last week in May and brought back a load of vines. These were all planted by hand (the old-fashioned method) and more than 15 acres were planted with from just under four tons. The plantings were two acres of Stevens and about 13½ acres of Searles. The balance will be planted to McFarlins, or at least the next 80 acres.

The company has purchased another 30 acres, but this will not be planted for at least four years after the peat is taken off. "By this time," Holmes says, "we will know just what the Stevens look like out here and we may put in all Stevens." There is also a small patch of #72 from Oregon, which he is watching closely.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of August 1965 — Vol. 30, No. 4

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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

### Disastrous Drought

Drought, terrible drought has been the main concern of Massachusetts growers since almost the first of July. The month began with beautiful weather and reasonable temperatures, but continuing dry.

At Fourth of July unofficial estimates of the coming crop were made at the Massachusetts Cranberry Experiment Station of a big production of about 800,000 barrels. But the rain did not come. At the end of July the rainfall for the month had been a tiny .67 of an inch with the normal 3.21 inches. There were a few brief sprinkles but at no one time was there more than .012th of an inch recorded at Station.

At the end of July an estimated 150,000 barrels had been taken by the dryness, and the drought was being called the worst ever known in recent years, exceeding the bad years of 1944, 1947 and 1952.

The situation was at the dis-

aster stage for the grower. It was figured that from a fifth to one quarter of the potential income of Massachusetts growers had been cut, while at the other end of the picture, growers' expenses were extremely high, with every effort being made to get some water onto the vines, with every conceivable method being used. Growers used their pumps, sprinklers, open-end hoses and pipes, with crews working 16 hours a day making every effort to get more moisture onto the bogs. Some growers with sprinklers had no water.

Cranberry bogs need about one inch of water per week, 28,000 gallons per acre.

Flash flood would have helped,

but would probably have damaged the crop. Ditch irrigation under the severe conditions helped only a narrow band of vines near the ditch.

Growers were even digging holes in in the bottoms of ponds to get a few more gallons as the ponds dried up.

### Vines Dying

But, one of the worst features about the drastic situation was that vines were drying on many bogs. These were at first bare spots, but they grew and merged together. These bare spots will bring in a multitude of weeds, next year of course. It was estimated it might be four or five years before the damage to vines in this July of 1965 is made good. A flash card from the Cranberry

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station July 28 said "every effort should be made immediately to get water to the dying cranberry vines. Until this is done, all other on-the-bog operations should cease.

As July ended the loss was being figured at one percent a day or about 8,000 barrels.

#### **Sprinklers Enormous Help**

Unless there had been sprinklers placed on about 2500 acres; or more of Massachusetts bogs it was declared at the Station that the situation would have been indescribably worse. "I shudder to think of what would have happened without sprinkler systems," declared Dr. C. E. Cross, director of the Station.

At the end of July the big crop in prospect had dropped to about 600,000 barrels or less, and many of the berries were small in size.

The month ended with a big minus in temperature of 83 degrees. This was one fortunate factor, if it could be called fortunate, that there were no 90 degree temperatures. Had a few of these occurred, or even one the cut in crop would have been even more, and more vines would have shrivelled and died.

#### **Rain August 2**

The first day of August was

bright and sunny, but on the afternoon and evening of August 2 there came a substantial rain over all, or most all, of the cranberry area. Dr. Cross felt following this that the drought was "temporarily ended."

The Station believed that growers who had been systematically and continuously getting some water onto their bogs received the full benefit of the rain.

#### **A "Cranberry" Rain**

It was the extreme southerly part of Massachusetts where most cranberry properties are located which received the best of the rain. Boston only got about a quarter of an inch. The State Bog measured 1.30 inches; there was an even inch at East Sandwich, there were two inches at Mashpee, three at Orleans further down the Cape; two at Centerville and 1.27 of an inch at the New Bedford pumping station in Rochester; about an inch in Lakeville, Carver and Kingston.

#### **Long Dry**

Until that rain the precipitation had been about 10 inches short of normal for 1965 and 1964 was also about ten inches short of normal. In fact rainfall has been deficient for three or four years.

The inch of rainfall equals

50,000,000 gallons of water, and the Mass. Dept. of Agriculture by a yardstick it had previously set up, called this the "million-dollar rain," but weathermen at the same time warned that much more precipitation was necessary for the dry conditions to become normal again.

About 50 cities and towns in the Bay State had placed restrictions on the use of water.

#### **Cool**

By the fifth the deficiency in temperature had come to a minus 29 degrees.

#### **Heat Wave**

As of August 6th when this issue was closed, there was a tropical heat wave with high humidity and no substantial rain in sight. While 80 and 90 degrees were bad for the crop, the humidity might help a bit.

#### **Growers Working Again**

Just a week after the rain, growers were at work again trying in every way to get some water onto the bogs. This was a repeat of the efforts during most of July, but with even drier conditions. It was felt that rain must come shortly to be of any benefit.

#### **Berries Good Quality**

As to the berries, Dr. Cross said he expected the berries to be from small to medium but of very good quality, because of the dryness and the coolness of the summer. The crop was estimated to be about on time in maturity, with harvest to begin about Labor Day.

It was also felt that perhaps the loss in dead vines was not quite as severe as at first anticipated, that there would be ample vines for a good crop in 1966.

However, some doubt was being expressed if the Mass. crop would even come up to 600,000 barrels.

#### **Fall Frosts**

With such a shortage of water, if there should be much frost this fall, Dr. Cross said the situation was "too frightful to contemplate."

Reports from other areas, in-

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dicade that the Wisconsin crop will be down as is Massachusetts, while the smaller areas of New Jersey, Oregon and Washington will have a good production.

## **WISCONSIN**

### **July Pleasant**

July was a pleasant, comfortable month which set no weather records as both temperature and precipitation averaged slightly above normal. There were only two July days of plus ninety weather, with the mercury hitting 94 on the 24th and 95 on the 25th. Low readings were on the first and 21st when marsh readings as low as thirty-one were recorded.

### **Rain Up**

Rainfall was slightly over 4 inches and occurred on 12 different days being well scattered throughout the month. Total rainfall for the year in the main cranberry areas totals about 20 inches or just about average. Nights tended to be cool with half the nights finding temperatures in the middle to low forties on the upland with borderline freezing on the marshes. The extended forecast for August call for below normal precipitation and much below normal temperature.

### **Hail Damage**

The big weather story of the month was the severe hail storms occurring the third week of July in Jackson and Monroe counties destroying an estimated 40,000 barrels. Hail also fell in the Manitowish area the next week taking an additional 5,000 barrels. Less than half of the losses were covered with hail insurance. Much scarring of small berries was noted along with some up-right damage. About 8-900 acres were involved in the three storms in the two areas.

### **Crop Shortening**

Bloom was late due to the cool June and cool and rainy July. Set looked good on the earlier varieties. Growing conditions appeared one week to ten

days behind normal and two weeks behind last year. Some water damage from frequent floodings was noted in some areas along with overgrowth from too heavy nitrogen fertilizer applications this spring. Likewise too short growth was noted in some areas from lack of nitrogen. Some marshes sustained severe spring vine injury apparently from deep frost conditions. All of the above will definitely reduce Wisconsin's crop by at least 50,000 barrels and warm weather is needed for berry sizing. There is also some crop reduction from Casoron weed killer applied last fall and especially on sanded bogs.

## **NEW JERSEY**

### **July Cool**

The month of July was cooler than normal. The maximum average was 85.5, the minimum average 61 and the mean average for the month 73.3 degrees, which was 2.3 below normal. Ever since the year 1958 July temperature was 90 degrees or over, while the 46 low on the night of July 2nd tied with the record low for the whole month of July for the 36 years the Station has kept weather records. On this night Whitesbog recorded 32½ which is believed to be the closest to a frost on a New Jersey bog in July. The other two nights that the temperatures dropped that low during July were on July 2, 1952, and July 4, 1938. On July 20th and 21st new lows were established for those dates, being 52 and 48 degrees respectively.

### **Much Rain in July**

During July the rain at the New Lisbon Weather Station totaled 5.17 inches, higher than the normal of 4.33 inches and much higher than in the northern part of the State. On both July 5th and July 11th, over 2 inches fell. The total precipitation for the first 7 months of 1965 has been 21.18 inches, a little more than 1 inch behind the first 7 months of last year and just under 4

inches of normal.

Cranberry growers experienced some anxiety over the drought in early July but ample rain fell in all New Jersey cranberry areas on both July 5th and July 11th. At the Tony DeMarco bogs 4.43 inches of rain fell on July 5th and over 2 inches on July 11th. There was no appreciable rain from July 11th through July 31st but on August 2nd about one-half inch of precipitation occurred.

### **Crop Prospects Up**

The crop prospects for New Jersey as of now appear to be good. Most growers do not think they will equal last year's "bumper" crop but a better than normal crop is expected, perhaps 100,000 to 110,000 barrels. Much will depend on how the berries size up through August. There appears to be a good set. Honeybees were used more intensively than usual and bumblebees appear to be more numerous than they have been for several years. A curious phenomenon on New Jersey bogs this year is the long blooming period. On August 1st appreciable bloom could still be observed on many late held bogs. Most growers think that when this happens it portends a good crop.

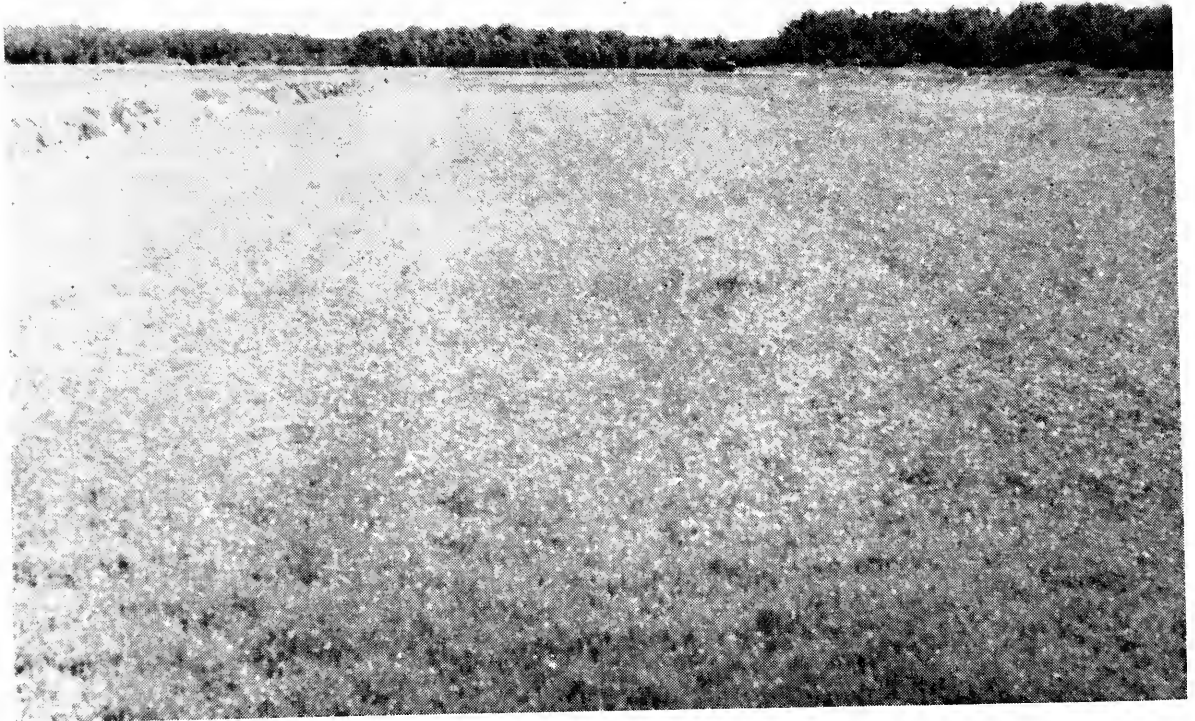
## **OREGON**

### **Good Crop Anticipated**

At the end of July the Bandon area crop prospect was up from the past two years. According to Ray Bates, veteran grower of Bandon, the crop may reach 40,000 barrels. It now appears that spring frost and cranberry fireworm did quite a lot of damage on a few of the smaller bogs, whose owners have other occupations and did not give their bogs the proper attention. Berry size he reports is unusually large this season and at the end of July many would go over a 15/36 screen.

### **Bog Changes**

W. R. "Bob" Ward has purchased  
Continued on page 20



A Wisconsin Marsh (Du Bay)

(CRANBERRIES Photo)

# THE WISCONSIN CRANBERRY INDUSTRY IN 1965

## A Revisit to the Badger State

by CLARENCE J. HALL

"On Wisconsin" is the motto of Wisconsin whose cranberry marshes we revisited last month, and that applies to the cranberry industry in this second-highest producing state.

First, a personal note—wherever we have gone in any cranberry-producing area we have always found the growers extremely hospitable and helpful and in this there is no group more so than the growers of Wisconsin. We want to thank Leo A. Sorenson, cranberry consultant of Wisconsin Rapids, who was our chief mentor in telling us about cranberry growing in the Badger State in 1965. Also Lawrence E. Dana and Mrs. Dana of the Dana Machine & Supply Company of Wisconsin, a chief supplier of the growers.

John Roberts and Frederick Gebhardt of Black River Falls, Roy Potter and A. E. Bark of the famed DuBay marsh; Bob Gottschalk of Cranmoor, Mr. and Mrs. Guy Potter and Lloyd Wolf, Ocean Spray representative of the Rapids and others. Doubtless others would have been as helpful, but these were the ones

we were in contact with. We were also glad to again see Miss Jean Nash of the Biron Cranberry Company and also her brother, Dr. Philco Nash, the latter being up on vacation from Washington, where he is in charge of United States Indian affairs and not the least Dr.

George L. Peltier, now retired and working on the history of Cranberries in the State of Wisconsin.

Sorenson now provides the only consultant service in Wisconsin except for Vernon Goldsworthy in the Eagle River-Manitowish Waters section in the far northeast.

### *Cranberry Area Wide-Spread*

The Wisconsin cranberry area is widespread mostly in the "Heartland of Wisconsin," that is the center of the state from Gordon at the extreme north 300 miles south to Tomah and from Black River falls on the west to Berlin on the east, a distance of more than 100 miles, with Wisconsin Rapids, a city of about 20,000 population, the generally accepted center of the industry. In his consulting work Sorenson estimates he travels

about 45,000 mi. a year. Sorenson knows the Wisconsin cranberry industry, culturally, technically, and "politically." Cranberries are grown in 17 of the state's 72 counties.

The average holding of a Wisconsin grower is larger (although we do not have an exact figure) than in any other area, even the smaller growers have relatively large marshes. The growers 100 percent have their own warehouses and the vast majority live on their marshes. Each is a unit unto itself.

There is a growers association, the Wisconsin State Cranberry Growers Association. There is no state cranberry experiment station (although there was one a number of years ago.) Cranberry research is done by the University of Wisconsin at Madison, a considerable distance to the south of the cranberry area. Frost warnings come over radio or TV in a special broadcast to the growers in the afternoon and evening.

We were in Wisconsin in the middle of last month, and it was generally believed by the growers that a State Marketing Order will shortly be voted in. This will provide for improved frost warning service and for more short and long term research.

The largest concentration of growers is at Cranmoor about ten miles out of the Rapids. This is a township with not more than 150 inhabitants, men, women and children, and the tax income of the town is entirely from cranberry marshes except for one general farm.

It so happened that on the 15th of July there were three state-wide weed clinics held on three marshes, with the attendance being perhaps 200 growers some of these coming from as far away as 125 miles. The meetings were under the direction of Dr. George C. Klingbeil Extension Horticulturist, University of Wisconsin, with Dr. Malcolm Dana, who seems to be universally known as "Mac"

among the growers, with Dr. Klingbeil, Dr. Donald Boone and all giving discussions at bog-side. Much interest centered in the use of Casoron, and its effects on the cutting down of weeds, particularly wire grass and any side effects on the vines. There were some adverse effects, but generally the feeling was that the chemical was extremely effective.

These meetings were at the Indian Creek Cranberry Company (Fritz Panters;) near City Point; the marsh of Dr. J. S. Mubarak (formerly the marsh of the late Marvin Hewitt), the H & H marsh, where are located two of the frost protection so-called "wind machines," about which more will be said later, and the third at the Cranmoor Cranberry Company (D. B. Rezin).



**A part of a tour group on dikes at Indian Creek Cranberry Marsh. (CRANBERRIES Photo)**



**One of the so-called "Wind Machines" at marsh of Dr. J. S. Mubarak. Note size of standing figure. (CRANBERRIES Photo)**

These meetings gave us the opportunity to be introduced and to meet a number of the growers we had never met before.

The worst insects in Wisconsin, according to Sorenson are the blackheaded fireworm and fruitworm, but these were not discussed at these meetings.

When we arrived in Wisconsin crop prospects for 1935 according to reliable information were from 450,000 to 500,000 barrels, a very big production for Wisconsin. That week two severe hailstorms took an estimated total of 50,000 barrels, from the bogs which were in a state of late blossom, setting and small berries. In the storms one big grower lost an estimated 25,000 barrels and on some of his acreage the loss was 90 to 100 percent.

By the time we had left crop prospects were for a crop of about the same as last year, 405,000 barrels. This figure, of course is subject to late revision in Wisconsin and especially when the official USDA estimate is announced this month.

At the same time of the hail storms the growers of Wisconsin were worried about low temperatures and were watching the frost reports. Wisconsin can and sometimes does have frost loss in every week of the growing season. The growing season is short, compared to the East and to the bogs on the West Coast.

In the winter, particularly the winter of 1964-65 temperatures of 39 below were not uncommon, and of course the total snowfall of the winter is far greater than in any other cranberry area. Yet, Wisconsin people say they do not mind the cold as the air is so dry, and if they venture to Chicago with the Great Lake or to the East with the ocean they "freeze to death" in the heavier moisture air.

Although the Wisconsin growers had their hail troubles this summer, there is no shortage of water, such as in Massachusetts, with its terrific drought. The

water table is satisfactory, streams, lakes and reservoirs were high. There has been satisfactory moisture.

The Wisconsin growers have about 800 acres under sprinkler systems; some marshes are only partly so protected and a few completely. But every grower we talked with, as in most other areas, intend to put in systems as can be financially done, or to put in systems if they have none. It seems safe to say that eventually most Wisconsin marshes will be under sprinkler systems.

A number of Wisconsin growers have given up using the mercury-type thermometers and are using an electronic thermometer. We understand about 50 are now in use with the number increasing. These are said to be more accurate than the mercury type and can make a recording as far as 4,000 feet. They can be so rigged as to cause an alarm to sound by a grower's bedside when a dangerous temperature is reached. Several can be placed about a single marsh holding.

Another grower used a thermocoupler which also does away with the mercury type.

Many Wisconsin growers use a soil tensionmeter to tell the level of moisture in a bed. "Sticking a finger down is no good" in the opinion of Sorenson.

#### *Beds Rectangular*

The Wisconsin growers make their beds in rectangular shape, as we believe is generally well understood now. Beds do not twist and curve around as in other areas to follow the peat. Beds average about 100 feet wide by 800 feet long, although there are a few larger. So the beds are about four or five acres in area. Some growers plant directly on raw peat, with distributing and disking in the vines by mechanical means.

The majority do sand later, if not at planting time, as this sand, as is widely recognized can raise the temperature of the air at vine level a few degrees by radiating the heat of the day

on a frost night.

In replanting or in making new marshes Wisconsin growers use the Searles Jumbo or McFarlin as they have for many year. "The Searles is the tops," according to Dr. George L. Peltier.

The improved Bain-McFarlin is also planted and of the new hybrids the Stevens seems the most popular. Growers are also putting in Ben Lear, the native Wisconsin variety that ripen early, about the same time as the Early Black. They wish to get some of their fruit off earlier, one reason being to shorten the harvest season.

All harvest is wet, with the Dana-Getsinger machine being used or the Case, or adaptations of these machines.

Coming probably in the relatively near future will be a picker cutting a 6 foot swath. Such a harvesting machine is mechanically feasible, but such a vast number of berries coming off so fast, especially in a bed with a lot of berries, will create bottlenecks in the entire harvesting process unless this "bug" is remedied.

There are now four of the towering FMC Tropic Breeze Wind Machines in operation, two on the marsh Dr. J. Mubarak (Six M Marsh) formerly owned by the late Marvin Hewitt. Sorenson has found this machine to be practical in frost protection, although not so useful in sudden and very low drops in temperature as perhaps are the sprinklers.

An additional use for these wind machines has been developed. This is to dry out the marshes after a rain or a heavy dew early in the morning. The breeze agitates the vines and is apparently a big help in getting better pollination, by increasing the hours of pollination.

"In Wisconsin we are going to have both wind machines and sprinklers," he predicts, and this combination will be a factor in getting bigger crops, and may

re one of the factors which will push up Wisconsin production per acre.

*"The Bridges"*

Another piece of equipment which no other cranberry area has are the so-called "bridges." The first is at Camp Douglas, developed by the late Roland Potter, son of Guy Potter of Wisconsin. The second and the one we saw is at DuBay and here is a third at Manitowish Waters to the north (on the Kolter Leasure marsh).

The one at DuBay is 186 feet wide, looking much like any small steel span for the crossing of a narrow stream. It is five feet high at either end and 13 feet high in the middle. Some 3,000 tons of steel went into its construction.

The ends of the bridge are placed on two trucks on the dike of the bed. Beneath the bridge is a movable platform upon which the men work and this platform travels across, from one side to other of the bridge. When a portion of the work is completed the trucks move down the length of the bed carrying the bridge down the bed. The men on the platform weed, clip vines, spray and apply fertilizer.

The object of the bridge is to get work done staying off the bed.

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Growers in general have their own dusters and sprayers for insect control but there is an air service used by some growers, which flies a World War II Stearman biplane which has been rigged to carry a large load of fertilizer or insecticide.

Growers, almost without exception, we believe pack fresh fruit in cellophane and sort their own berries for processing. It was said considerable still goes fresh, but processing is increasing all the time as in other areas.

Seventy-five to 85 percent of the Wisconsin total crop goes to Ocean Spray Cranberries, Inc. with the processing done at the North Chicago plant of the co-operative. The rest of the processing is done by Indian Trail, Inc. now owned by Dean Foods of Chicago and by Cranberry Products (Vernon Goldsworthy) in the north at Eagle River.

Most, if not all of the growers have their own warehouses, generally situated at the marshside, and many of these have complete, or nearly complete machine shops, laths, drills, presses, welding equipment and all the tools necessary. Growers themselves or some one in their employ, remodel standard farm equipment to the needs of cranberry cultivation, devise their own particular equipment and make repairs.

Wisconsin seems far ahead in the use of heavy equipment, as well as light. They own cranes, bulldozers, tractors, the big picking machines, the boats into which cranberries are harvested, front-end loaders, etc. The Wisconsin growers are ingenious and do not hesitate to make heavy investment in whatever equipment they deem necessary for their individual needs.

#### *Will Wisconsin Continue to Grow in Acreage and Production?*

It seems it will. New acreage, at least some is put in every year, there is rebuilding of some of the older marshes. Production per acre through improving

cranberry growing practices at all times of the year seem destined to push up production per acre.

There is plenty of raw marsh land to be put into new marsh, especially in the northern part of the state. One handicap to expansion, especially in the north might be the controversial and contradictory aims of cranberry growers and other users of water, such as vacationists at lakes. But this is true in other cranberry areas of the country. Vacationists and others claim that chemicals used by cranberry growers are destroying fish and other wild game life.

Vacationists and others dwelling on lakes object to the lowering of the water level when growers draw water. As to the controversy that cranberry chemicals are killing fish and other wild life Sorenson points out that the State is spraying forests widely with DDT while Wisconsin cranberry growers have not used this material for several years.

While new hogs are being built and others renovated there are not too many men from other occupations coming into cranberry growing at present, and few men from the "outside." Sons and grandsons of present growers are however coming into charge of marshes all the time.

Will Wisconsin become the leading state in cranberry production as it is in dairy products? Some in Wisconsin feel that it may, others doubt they will ever equal and surpass Massachusetts. One reliable member of the industry however, said he expected the state to gain 10 percent in production for the next ten years.

Wisconsin last year harvested 4300 acres, and produced 405,000 barrels. The average yield per acre was 94.2 barrels with Massachusetts 55.6 barrels. There has been no census of Wisconsin acreage since 1957 and a new one will be in progress shortly, according to Sorenson and he

predicts the total acreage will be found to be a little over 5,000 acres. The largest growers are the Hableman Brothers with about 200 acres.

The growth and supremacy of Wisconsin in cranberries are for the future to tell, but the impression from a relatively brief visit there is one of "bigness" and dedication to increasing production per acre.

(EDITOR'S NOTE: *This is the first of a series on Wisconsin cranberry growing, the rest to be articles on individual marshes and growers, but not necessarily in consecutive months.*)

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## **NEW JERSEY BLUES FEATURED AT N. Y. WORLD'S FAIR**

New Jersey cultivated blueberries were a feature at the New York World's Fair June 24th. New Jersey governor Richard J. Hughes was at the New Jersey Pavillion and received a tray of blueberries grown in New Jersey. The blueberry queen is Miss Betty Ann Muschinski of Hainesport, who made the presentation.

Visitors had a chance to sample the New Jersey blue, being given a cupful.

Among those attending were the officers of the newly-formed American Blueberry Council, the president being Stanley Johnson of South Haven, Michigan and vice president Michael Scepansky of New Lisbon, New Jersey.

Stanley Coville of New Jersey, "Mr. Blueberry," appeared on Channel 3 TV with Dan Kessler, Burlington County Agent. They spoke of blueberry production.

These events coincided with the real start of the 1965 blueberry season. According to the New Jersey Department of Agriculture early indications are that the crop may be the largest on record. About 9,000 acres are expected to be harvested this year compared with 8,100 last year and 5,200 ten years ago.

Last year's crop of 1,782,000 trays was valued at \$5,267,000.

# NEW CRANBERRY VARIETIES FOR PROCESSED PRODUCTS

by

F. B. CHANDLER,

I. E. DEMORANVILLE AND K. HAYES

A cranberry breeding program was initiated by the United States Department of Agriculture in 1929 (1). The primary objective was to develop cranberry plants that were resistant or immune to the False Blossom disease which was threatening the industry, especially in New Jersey and Wisconsin. In 1931 it was discovered by Dobrosky (3) that this disease was transmitted by the blunt nosed leafhopper. Over a period of years a spray program was worked out for the control of this insect that has also helped considerably in controlling the spread of False Blossom. Since these discoveries, the emphasis in the breeding program has shifted to the development of cranberry varieties with greater yield, larger size and superior quality.

The first varieties were named in 1950, Stevens was suitable for Wisconsin, Wilcox was chosen for Massachusetts and Beckwith for New Jersey. Except for Stevens these have not been planted extensively. Wisconsin has over 50 acres of Stevens, and Beckwith has been planted on a few acres in New Jersey. Wilcox has not been planted except in test plots.

In 1961, three more of the new varieties were named: Bergman, Franklin and Pilgrim. Fruit from these three new varieties was made into whole and strained sauce, and the two standard varieties, Early Black and Howes, were used as checks. The sauce was canned and stored for various periods of time, then opened and tested for color, texture and flavor. At first there was little or no difference, but 19 months later Pilgrims and Franklin were in poor condition. Early Black and Howes were poorer than at the time of canning but were of better quality than Franklin and Pilgrim. Bergman was about as good as Early Black and better

than Howes. Normally cranberries are canned throughout the year from frozen berries and have a shelf life of about six months. However, once canned and on the store shelf they may be there for some time. Pilgrim, the variety thought best for canning because of its high yield, does not hold up well over a long period of time.

Studying all of the panel reports, we might make these statements. Bergman makes the best whole sauce. Franklin makes the best strained sauce. Early Black is the next best variety for either kind of sauce. Pilgrim is poor, particularly if stored too long.

Cranberry juice has been studied at the Food Technology Laboratory since 1928(6). There are two methods of extracting the juice and a third mentioned for blueberry juice (2). The pH of the juice varies from pH 2.4-

2.5, but as Fellers and Esselen reported (4) there seems to be more variation between bogs where the fruit was grown than between varieties. The pH also seems to be associated with maturity. Juice pressed in December 1960 was higher in sugar than the same varieties pressed in May 1961. This was shown earlier by Morse (5) in the loss of sugars by respiration. In 1960 ten varieties were studied for soluble solids and showed very little difference. Pilgrim and Howes seem to be low, CN may be high. These varieties were studied from our locations, one location seem to be low. (Table 1). It appears that the presence of peat may also be associated with soluble solids. Fellers and Esselen (4) had shown a higher content of pectin from a bog on deep peat than a bog on Savanna.

TABLE I  
PERCENT SOLUBLE SOLIDS OF CRANBERRIES BY VARIETIES AND BOGS  
1960 CROP SOLUBLE SOLIDS

Variety	Barrows H	Barrows P	United	Eldridge	Average
Bergman	8.85	8.07	6.98	7.89	7.95
Franklin	8.71	8.97	7.64	7.92	8.31
Pilgrim	8.85	8.07	6.98	7.89	7.92
Early Black	8.77	8.83	7.70	8.17	8.34
Howes	9.31	9.09	7.88	—	8.76
CN	8.96	8.53	8.38	8.22	8.52
AJ	8.53	8.92	7.85	8.28	8.39
35	8.80	8.50	8.02	8.37	8.21

TABLE II  
SEASON OF HARVEST, CUP COUNT, RELATIVE YIELD OF JUICE, RELATIVE BERRY WEIGHT OF VARIETIES

Variety	Harvest Season	Berries Per Cup	Relative Yield of Juice	Relative Berry Weight
Beckwith	Late	58		
Bergman	Midseason	65	Good	Light to Medium
Franklin	Early	78	Poor to Fair	Medium
Stevens	Midseason	62	Good	
Pilgrim	Late	62	Good	Light
Early Blk.	Early	102	Fair	Medium
Howes	Late	97	Good	Heavy
CN	Midseason	87	Fair	Very Heavy
AV	Midseason	80		Heavy
35	Late	65		

TABLE III  
NUMERICAL RATING OF TEXTURE, COLOR AND FLAVOR OF  
WHOLE AND STRAINED SAUCE  
A HIGH NUMBER INDICATES HIGH RATING

Variety	TEXTURE			
	Whole		Strained	
	6-12-62	7-30-63	6-12-62	7-30-63
Bergman	59	14	29	14
Franklin	33	14	30	25
Pilgrim	29	4	25	8
Early Black	35	14	33	27
Howes	35	14	24	22
FLAVOR				
Bergman	60	15	22	28
Franklin	32	15	35	25
Pilgrim	30	8	26	10
Early Black	25	11	22	32
Howes	34	11	26	32
COLOR				
Bergman	45	18	17	19
Franklin	72	15	33	22
Pilgrim	30	12	30	15
Early Black	41	22	24	29
Howes	38	17	24	29

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- (5) — Morse, F. W. A chemical study of cranberries Bul. 265 Mass. Agric. Expt. Stat. 1930.
- (6) — Rice, C. C., C. R. Fellers and J. A. Clague. Cranberry juice-properties and Manufacture. The Fruit Products Journal. Vol. 18: 197-200. 1939.

Table 2 gives the season the fruit matures, the size of berries and relative yield of juice from limited tests. This shows that some of the varieties are better than others for making juice. The great range in size, (cup count), is also reflected in the berry weight which for these cup counts would range from 1 gram per berry to 1.9 g per berry or from 454 berries per pound to 240 berries per pound.

The results of the panel are presented in Table 3, which in general shows that the newer varieties do not make as good sauce as the old ones. Also that

the new varieties are not as good for whole sauce as strained sauce, and that the fresh sauce from the new varieties is relatively better than the older sauce. Color, flavor and texture all deteriorate to a certain extent for all varieties with age.

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## Miss Betty Buchan Leaves Ocean Spray

Miss Betty Buchan, who has been public relations director of Ocean Spray Cranberries, Inc. for the past 15 years has resigned from that position. The public relations work of Ocean Spray in the future will be under the direction of the office of Mrs. Janet Taylor, home economist and who operates the Cranberry Kitchen.

This month, Miss Buchan went to Scotland and England for a vacation of three weeks. Upon her return she is going back to college to obtain a master's degree. It is understood she intends to teach.

### NEW S. E. VARIETY

#### BLUEBERRY RIPENS EARLIER

A blueberry variety that should advance the start of the marketing season in the Southeast by as much as a week has been released by the USDA and North Carolina Agricultural Experiment Station. The new hybrid, named "Morrow." was developed as a very early variety to replace Angola in that region.

It is canker resistant, and both size and color improvement over its Angola parent. Morrow ripens all the fruit in a shorter period than any of the commercial varieties grown in the Southeast.

## Marketing Committee To Meet at Boston August 26

The Annual Meeting of the Cranberry Marketing Committee is to be held at the Logan International Motel in Boston, Mass. Thursday, August 26. The Session will begin at 9:30 a.m.

As the official USDA cranberry estimate for 1965 will be known by that time it is expected that any set-aside, if one is felt justified, will be fixed then.

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Asters  
Buckbean  
Hawkweed  
Western Lilaeopsis  
Marsh Pea  
Plantain  
Smartweed (Marshpepper,  
Pennsylvania, Spotted,  
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 Grass  
Little Hairgrass  
Crabgrass  
Rice cutgrass

**Sedges Controlled:**

Bunch grass  
Muskrat grass  
Nutsedge (Nutgrass)  
Short Wiregrass  
Wideleaf grass  
Stargrass  
Woolgrass  
Cotton grass  
Needlegrass  
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## Another Firm Merges with Dean Foods Company

The Liberty Dairy Company, Big Rapids, Michigan, has been merged with Dean Foods Company, it was announced by Sam E. Dean, Chairman of Dean Foods and Mr. O. H. "Tommy" Thompson, President of Liberty Dairy Company. The merger was accomplished by an exchange of stock between the two firms. Dean is the recent owner of Indian Trail, Inc.

Liberty Dairy had annual sales of approximately \$3,000,000.00 in 1964. Liberty processes and distributes fresh milk products under the "Liberty" and "Wonderland" labels throughout the western third of Michigan's lower peninsula. Its market area includes Cadillac, Muskegon, Holland, Battle Creek, and Grand Rapids, Michigan.

Liberty's present management will be retained. Mr. O. H. "Tommy" Thompson stated, "We at the Liberty Dairy Company are pleased to be associated with Dean Foods Company. The new association will strengthen our operation by bringing to Liberty added resources for research and production of fluid dairy products. I know of no more effective way to assure our many loyal customers and employees of the continuation of Liberty Dairy's tradition."

## Mass. Water Raking

Considerable interest seems to be developing in water harvest in Massachusetts this season.

Marlin Rounselle, who owns the 35-acre "Windswept" cranberry property on Nantucket Island, this fall for the second time will water rake his crop. Last year he harvested with a Bana-Gersinger machine from Wisconsin, but this year is considering buying another or of trying the West Coast "water reel" method.

The largest of his bogs is six acres so he has not much of a problem flooding for the wet method is getting him larger placing them in tray out in the air and he says they are always dry the next day except when Nantucket is having a spell of "dog days," or wet sticky weather. He finds the wet method as getting him larger crops and in general very satisfactory over the eastern method of dry picking.

Dave Eldridge, manager of the Ellis D. Atwood bogs in South Carver has purchased a Dana-Getzinger harvester from the Dana Machine Company of Wisconsin Rapids and this fall will use it on certain acreage. However he will use it for dry picking and not wet, although he is interested in the possibilities of wet raking, but this presents its water problems with the Massachusetts bogs. He believes this machine in dry raking has an advantage quality-wise over the other two machines.

Dave Mann of Head-of-the-Bay road in Buzzards Bay who has been leading the Massachusetts parade in harvest will again pick his big bog wet this fall. This is the third or fourth year he has so harvested. He has two Dan-Getsinger picking machines and may acquire two more pickers of some type this fall to be used in wet harvest.

A project study of water raking for Massachusetts growers is to be made by "Stan" Johnson, engineer of the Massachusetts Cranberry Experiment Station. It is understood funds will be available from the U.S. Department of the Interior.

## DR. ZUCKERMAN TO POLISH NEMATODES PROGRAM

Dr. Bert M. Zuckerman of the Massachusetts Cranberry Experiment Station staff, who is steadily gaining in world recognition as a foremost nematologist, is to fly August 26th to Poland. There at Warsaw, he will be one of a panel giving instruction to other nematologists. These include one each from England, Germany, Denmark and one or two other countries.

They will first engage in lectures to Polish nematologists and later will instruct student beginners in the field of nematology. Nematodes are the microscopic "worms" which destroy the roots of many kinds of vegetable life including cranberry roots. Dr. Zuckerman will make the trip under the auspices of the cultural educational exchange under the auspices, in this case, of the United States Department of State. He will be gone about five weeks.

## PERSONAL

William S. Haines of Chatsworth, New Jersey, a cranberry grower and director of Ocean Spray, was appointed by the Burlington County Board of Agriculture to select a minister to attend the Town and County Ministers' Conference at Rutgers University in June.

## Cape Cod Cranberry Cooperative, Inc.

South Duxbury, Mass.

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Mr. Haines is also the beneficiary by the will of his late father, Ralph Haines, who was a banker, attorney, and former U. S. Commissioner. "Bill" Haines and his brothers shared in property in several townships.

sold was the so-called "Onset bog," at Onset, at one time long a property of the Fuller-Hammond Company. Its latest owners were William M. Atwood

and Robert St. Jacques, both of Wareham who own other property together. The bog was bought by Nathaniel Wing, Jr. of Pocasset, who has begun an extensive improvement program.

## Duration of Receptivity of Blueberry Flowers to Pollination

by

WM. J. LORD

Department of Plant and Soil Sciences

Studies conducted by J. N. Moore at Beltsville, Maryland, and reported in the *Proceedings of the American Society for Horticultural Science*, (Vol. 85) indicate that, under field conditions, some fruit set of cultivated high-bush blueberries occurred even when pollination was prevented for 8 days after opening of blossoms. The per cent fruit set was significantly reduced, however, when pollination was delayed 6 days or longer on Coville and 8 days on Blueray.

Delaying pollination also resulted in a decrease in average weight per berry. A decrease occurred on Blueray when the pollination delay was only 2 days, whereas a 6-day delay was necessary for a significant reduction to occur on Coville. Nevertheless, an 8-day pollination delay resulted in a more marked reduction in berry weight on Coville than on Blueray.

As Moore pointed out, varietal differences in length of pistil receptivity to pollination may be important when unfavorable conditions for bee activity occur or when the bee population is limited.

—FRUIT NOTES, College of Agriculture, University of Massachusetts.

**NATHANIEL WING, JR.  
BUYS ONSET BOG  
AT ONSET, MASS.**

Still another Massachusetts bog has changed hands. The bog



Showing how the new superhighway construction in Massachusetts, especially Carver, is taking parts of some bogs. This shows a fill covering one edge of a Carver Bog, the former Beaton property, now owned by the Cranberry Corporation of America.

(CRANBERRIES Photo)

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**CLINTON MACAULEY**

**VISITS MASSACHUSETTS—**

**JOINS OCEAN SPRAY**

Clinton Macauley, president of the American Cranberry Growers Association (New Jersey) and the subject of our June feature article was a visitor in the Massachusetts cranberry area the last of June. He with Mrs. Macauley visited CRANBERRIES, the Mass. Cranberry Experiment Station and was taken on a Carver tour of bogs by Dr. C. E. Cross.

Mr. Macauley who lives at Tuckerton, has resigned from the Growers' Cranberry Company and has signed up with Ocean Spray. This is chiefly because Ocean Spray will receive wet berries, promptly after harvesting. He is changing from dry harvest to wet as have a number of other New Jersey growers, chiefly using the water reel.

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## WILLIAM HUFFMAN

William Huffman, of Mather, Wisconsin passed away July 14th at the age of 83. He had operated a marsh in the Mather area for many years.

## Dr. Dana, Wisconsin Chief Speaker At CCCGA Meeting

Dr. Malcolm N. Dana, University of Wisconsin, Madison, Wisconsin who aids Wisconsin growers with research and cranberry-growing problems will be the chief speaker at the Annual meeting of the Cape Cod Cranberry Grower's Association, State Bog, East Wareham, August 24. There will be heard a report of the new varieties committee. The annual cranberry crop report will be given and a lunch will be served at noon.

Annual election of officers will be held and the usual exhibition of cranberry equipment and supplies will be on display.

## FRESH FROM THE FIELDS

Continued from Page 7  
chased the Frank Ison bog of nine acres, and Mr. and Mrs. Ward are being welcomed by the older growers of the area.

Jimmy Olson has added several acres to his holdings. He purchased the Jack Hutching's property just south of his "Town" property. The bog is about five acres.

Several acres of new bog, about 20, are now under construction in the Bandon area.

## WASHINGTON

### July Beautiful Month

July was a beautiful month in the Washington State cranberry area. It is reported that even

"old-timers" cannot remember a July that was so dry and warm as this year. The actual high for the month was 78 degrees on the 23rd and the actual low on the bog was 36 on the night of the 18th. The mean high for the month was 64.09 and mean low 49.6 degrees.

### Month Amazingly Dry

Total rainfall for July was .64 of an inch which was amazingly low for July in the area. However, due to high water table there was not any serious shortage of water for the bogs, at least in the Long Beach area. The long range weather forecast for Western Washington is for hotter and dryer conditions than normal.

### Growers Optimistic

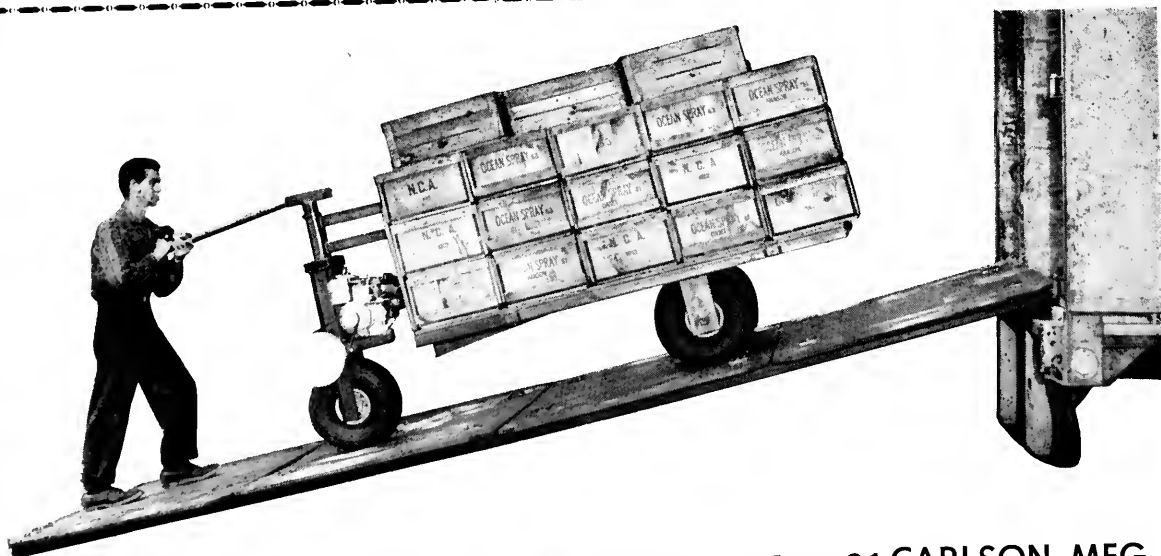
The weather during the bloom period was ideal and as long as the water table stays up growers should have to worry only about weeds, fungus, etc. which are always problems. Cranberry growers are optimistic.

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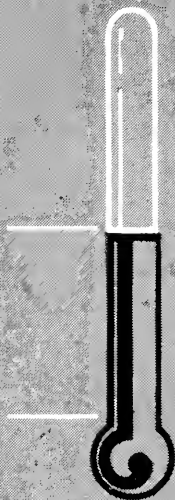
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## NATURE CUTS CROP ONCE MORE

As cranberry growers and other agriculturists have learned over the years, Nature can step in and cut prospects for what appeared to be a big crop of cranberries; cut the prospects badly. In Massachusetts what is now being called the worst drought ever, has destroyed 150,000 or more barrels; in Wisconsin hail took an estimated 50,000 or more in July and there was also some frost damage.

(Of course the exact size of the national cranberry crop will not be known until the official USDA estimate is out and after that there can be further adverse factors such as frosts.)

The drought is actually a disaster to the growers of Massachusetts, with the loss of berries for this fall and the damage to the vines, concerning the crop of 1966 and probably longer.

In a way it has been almost comparable, in Massachusetts, to the disaster of 1959, except that was man made.

We don't know yet what the price this fall will be. But, we think, that despite the shortness of the crop we should not expect or want exorbitant prices. We are sure, however that when announced, the prices will be fair to both the hard-hit cranberry growers, particularly of Massachusetts and fair to the consuming public.

## WISCONSIN HAS TROUBLES, TOO

Before our most recent trip to Wisconsin (see article elsewhere) we did not realize somehow that hail and summer-long frost, or prospects of frost, were as severe as they are. In the East there has been an opinion that the Wisconsin growers "had it easy." We are now aware that Wisconsin growers have their troubles as well as the East, and in fact every area has its share of hurdles to go over to harvest a good crop of cranberries.

CLARENCE J. HALL  
Editor and Publisher

EDITH S. HALL — Associate Editor  
Wareham, Massachusetts

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### Massachusetts

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

### New Jersey

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

It seems odd (in Massachusetts) to be talking about water harvest this fall. But the rains have always come, and more water raking may come in the Bay State. But with the West Coast all wet harvest, Wisconsin also, and much being done wet in New Jersey, we wonder what so much wet harvest will have on the quality of the national cranberry crop? Quality cranberries are still needed for the fresh market.

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## 'Goldy' Feels Wisconsin Crop Getting Less

Vernon Goldsworthy, president of Cranberry Products, Inc. of Eagle River, Wisconsin, reported the first of August that the Wisconsin crop appears to be getting shorter by the day. The reduction in crop is due to hail, frost and an extremely poor growing season, which was mostly cold and wet. The late bloom did not set well. He asserts there was talk of a crop of only 350,000 barrels.

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## Bandon, Oregon Holds 19th Cranberry Event

Bandon, Oregon, the last week of September held its 19th annual Cranberry Harvest Festival with much success. There was the queen contest with chestnut-haired Sharon Ward being chosen queen, there was a cranberry parade and other events.

A highly successful part of the celebration was a talent show put on by the princesses who were runners-up to the Queen,

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including Queen Ward. Special entertainment was provided for the three-day festival.

The parade featured beautifully decorated floats. School bands provided music. A third place winner in the civic division was the Southwest Oregon Cranberry Club.

### EARLY PRICES GOOD

On September 22, Ocean Spray opened its prices on Wisconsin Searles at \$4.75 a quarter, the same as for Massachusetts Early Blacks. At the end of September,

with quite a lot of harvesting in Massachusetts and New Jersey completed, independent canners were buying fruit at not less than \$18.50 a barrel.

Ocean Spray opened at price on Washington McFarlins on October first, at \$4.75 a quarter.

An Ocean Spray notice to brokers stated that promotions at store level, fresh cranberries, starting October first were in greater number than ever before.

### WISCONSIN SUMMER WET AND COOL

Wisconsin had a wet summer, but not as wet as the year before, it is reported. During the summer months there was rain on a total of 48 days, with rainy days in 1964 being 46; but total rainfall for the three month

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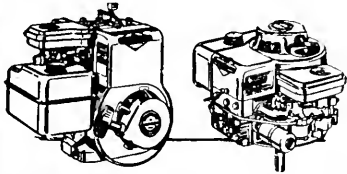
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period in 1965 was 10.3 inches, 1964, 15.62.

The number of sunny days totaled 23, 1964 27; overcast 31, both years; partly overcast 38 and 34. Out of the 92 days of summer "Old Sol" was not seen as much this past summer as the previous one.

The average temperature this summer was 48.7, 1964, 55.9. Temperature-wise this was a much cooler summer.

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# Mass. Cranberry Station and Field Notes

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

## Personals

Dr. Surindar Paracer is the newest member of our Station group, beginning his duties on September 20. He will work under the direction of Dr. Bert Zuckerman on various nematode problems for the next two years. Dr. Paracer is a native of India, but comes here from California where he has been working to earn his Doctorate.

## Weather

The month of September was cool, averaging about 2.5 degrees a day below normal. Rain-fall totaled 2.38 inches at East Wareham, which is about 1.5 inches below the 30 year average. This is the 9th consecutive month with below average precipitation and we are now slightly more than 13 inches deficient for 1965. The last two weeks showed only 0.18 inch.

## Harvest

General harvesting in Massachusetts began on the weekend of September 11 and 12 with some growers starting a few days before. Color was not very good the first week of harvest and size about average. Both improved after a 1½ inch rain on the 13th and 14th. About 55 to 60 percent of the crop had been harvested by October 1st. Frost on the night of September 27th with bog temperatures ranging from 17 to 24 degrees, possibly 2,000 to 3,000 barrels lost. Eight general frost warnings have been released from the Cranberry Station as of October 1. These include afternoon and evening warnings.

## Market Report

The first cranberry market report for fresh fruit was released September 20 from the Agricultural

Marketing News Service under the direction of John O'Neil in Boston. This will be the 12th season that these weekly reports have been prepared for growers and shippers. These reports include current information on the movement of fresh cranberries by rail and truck, price and terminal market conditions in the leading cities in the United States. Those who wish to continue receiving this report should return the necessary form to Mr. O'Neil. Anyone else interested in this report may receive it by writing to the Agricultural 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, blue joint, sphagnum moss and wool grass. Casoron should be used in cold weather (after November 1) preferably just before a rain. It is less likely to harm vines that are healthy and vigorous. 4) Casoron and sand should not be applied in the fall to bogs that do not have winter protection because of the increased susceptibility to winter injury. 5) This is an excellent time to rake and/or prune the bog, also do not forget the trash flood where water supplies are available.

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These are very valuable practices that will keep the bog in shape for peak production next year. 6) 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. 7) It might be a good idea after the fall work is done, to put in the flume planks on those bogs that have dry reservoirs. Any water that can be saved would be helpful later on for winter protection.

## Proposed Nuclear Canal Near Bogs In Washington

A proposal to dig an intra-coastal waterway in Washington State 110 miles from a point near Olympia, the state capitol, to a point near Ilwaco at Long Beach and Grayland was reported.

This was a half million dollar proposal by U.S. Army engineers with the digging to be by nuclear blast. To blast would have required special permit as the country is now under a nuclear ban.

Ilwaco area and Grayland area are both cranberry bog districts and if the proposal went through there were fears for the effect upon the Washington cranberry industry.

A later report in the Ilwaco Tribune, weekly newspaper said the plan to use nuclear blast had been ruled out. A spokesman for the Seattle Office of the Army Engineer Corps was reported as saying "in view of the questionable construction cost advantage and the socio-economic impact of the side-effects of the nuclear detonations, we cannot recommend the nuclear excavation at this time."

It was reported that even if other construction methods of the waterway seemed feasible and economically advisable it would be at least ten years before plans could be drawn and funds appropriated for the canal to start construction.

## Wisconsin Agricultural Water Users Organize

A Water Resources Development association has been re-activated in central Wisconsin to present a united front for the protection of water users. The association has hired Menzel-Williams & Associates, Inc. of Stevens Point, a public relations firm, and Howard Hazen, *Sun Prairie* lobbyist to represent it in the state legislature at Madison.

At a meeting after 105 new members were enrolled, James Burns, Jr., Portage County association president, explained that the association was formed because of the concern of the "lack of representation and interest in" state legislation which might affect agricultural uses.

Burns said that potato growers, muck farmers, cranberry growers and fruit growers and other water users should all work together in the new association to protect their water rights.

Republican Assemblyman Louis Romell, of Adams declared that "strange water laws can come like a thief in the night." He cited a 1963 law which requires landowners to get state public service commissioners' approval of any ditching or pond building which might affect navigable streams.

Romell reported he has introduced legislation which would eliminate the law's application to agriculture.

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# Cranberries

## THE NATIONAL CRANBERRY MAGAZINE

Issue of October 1965 — Vol. 30, No. 6

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### FRESH FROM THE FIELDS

Compiled by C. J. H

## MASSACHUSETTS

### Sept. Starts Chilly

September came in on a rather chilly note, but with beautiful days, perfect early fall weather, but there was still no general wide-spread rain. Up to the 8th the temperature for the month was a minus 38. Betsy, that fearful hurricane which struck the Bahamas and Florida and New Orleans, and for a time gave slight concern that it might head for New England as so many do, no longer was a threat here. Only effect on Massachusetts were some very heavy seas on the "back-side" of the Cape, believed to have been caused by the tempest way down south.

There was slight and scattered rain over the cranberry area on the night of September 9 — .003 of an inch being recorded at the Cranberry Station.

On Sept. 13 there came the most substantial and helpful rain in months, as 1.34 inches was recorded at the Cranberry Station. This was general over the entire cranberry area. However, weathermen said much more rain

was still needed. There was little or no picking that day or the following. The temperature variance for the first two weeks of September was minus 67 degrees.

### Tropic Weather

From the 18th for about a week there was completely tropical weather with high humidity and several light night showers. This slowed harvest somewhat. Days were also often foggy. This extremely humid condition was the situation as autumn officially came in on September 23. The third hurricane of the season was swirling far out in the Atlantic.

This all-but record heat and humidity at least kept frosts away.

### Second Frost Spell of Fall

The Cranberry Station sent out

a warning for dangerous frost 21, on the night of September 28; tolerance of Early Blacks, 23. Temperatures as low as 17 on a cold bog in Carver and 18 on a cold bog in Mashpee were reached, with many 18 and 20's. Some damage was done. All Early Blacks not harvested but were generally pretty well along.

There was some frost around for the next couple of nights, but the total loss was not considered serious, two percent being put down at the Cranberry Station.

### September Very Cold

September ended with a minus 80 degrees. The Boston Weather Bureau declared this to be the 17th colder-than-normal month out of the last 19. It was noted that the year 1960 averaged exactly normal in temperature and

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each year since then has been colder than normal. This seems to lend some credence to a theory that New England is changing towards a cycle of colder weather.

#### **Rainfall Off**

Rainfall was also off for the cranberry area. There was a total of 1.88 as recorded at the State Bog with the average being 3.56 inches. So precipitation remains still critical and is becoming more so with each passing month. Some portions of New England have had adequate rain, but the driest portion has been near the coast, which includes the cranberry bogs.

September was also less sunny than normal.

#### **Driest in 147 Years**

Weathermen in Boston, digging back, came to the conclusion that the first nine month of 1965 were the driest in 147 years.

At the end of September and beginning of October a labor shortage was hampering getting the crop off.

## **NEW JERSEY**

#### **Sept. Temperature About Normal**

During the month of September the maximum average temperature was 80.9 degrees, 1.5

above normal; the minimum average was 55.6 degrees, about 1 below normal. The mean average temperature was 68.3 degrees, .8 above normal. There were 5 days during the month when the temperature was over 90, and many more days than that with extremely high humidity. On September 25th a cold front came through this region, when the temperature in the uplands dropped to 38 degrees and down to 27 on the coldest cranberry bog. It warmed up a bit the next night but on the 27th it dropped again and ranged from 25 to 28 degrees on cranberry bogs. An unpredicted wind saved growers from probably what would have been excessive damage. Temperatures had dropped to 26 degrees by 10 p.m. and with good radiational conditions which had been predicted the temperatures could easily have gone below 20 degrees before sunrise. There was a general lack of water for flooding at the time, so it was definitely not an ill wind blowing on that night.

#### **Rainfall Less**

The rainfall during the month totaled 2.32 inches, 1.30 inches below normal. For the nine months of the year total precipitation was 8 inches below normal and almost an inch and a half below the drought year of 1964.

#### **Crop Holding Up**

Cranberry harvest as of October 1 was still in its very early stages. Most bogs are running fairly close to the estimate. Berries are a bit smaller than normal and, in general not well colored. The few cold nights late in September did much to enhance coloration and color is expected to be more than adequate in the next few days. There are some excellent crops in the Chatsworth area, with some bogs exceeding 125 barrels per acre.

## **WISCONSIN**

#### **September Weather Poor**

September brought a continuation of cold and wet weather, even worse than the preceding

Continued on Page 17

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# J. C. WINDHURST, BANDON, OREGON GROWER HAS PERHAPS SMALLEST SPRINKLED BOG IN EXISTENCE

**His Bogs are Beautifully Kept Up with an  
Average Crop of 1400 Barrels on 10 — 11 Acres**

By CLARENCE J. HALL

Perhaps the smallest bog area sprinkled anywhere is a one-eighth acre piece owned by John (Jack) Cleveland Windhurst whose cranberry property is near Bandon, Oregon. This piece of McFarlins is completely fenced in with barbed wire for protection against deer. This round piece of bog is somewhat strangely picturesque, with a gate, sitting as it does along the lush heavily wooded bog near the entrance to the Windhurst property.

The single sprinkler in the center of the one-eighth acre is a Buckner with a sprinkling radius of 60 feet.

In all Jack Windhurst has 10-11 acres, all under sprinkler system, but not all are automatic.

## *Production*

The Windhurst bogs are set to all McFarlins and his largest crop to date has been 1600 barrels and the average production is 1400.

The first six acres of this bog were built by "Hank" Dufort, father of "Bill" Dufort, who is Ocean Spray manager for the Bandon area. One and one-sixteenth acres were built by E. R. Ivey and the rest by Windhurst.

Mr. and Mrs. Windhurst first came to the Bandon area in 1942 and Windhurst worked with Mrs. Windhurst's father, Gunnar Erickson. They bought the property in 1947 from Mr. Ivey. Mrs. Windhurst, the former Gunhilde Erickson and her father bought the old Langlois bog, the Langlois family being pioneer growers in the Bandon area.

It was on a visit to Bandon in 1942 that Jack was first "bitten by the cranberry bug," a condition that has become more acute with him through the years. "I was impressed with cranberry culture," he says.

Windhurst was born in Edina, Missouri in 1905 on a farm. His father later moved back to Iowa, and later still to a farm in Southern Minnesota. This was in 1914. "I left home in 1926 going to California where I met and married Gunhilde in 1930," he says.

Mr. Windhurst is a jovial man who enjoys talking. But he is a hard-working man as can be attested to by his bogs which are beautifully kept, with scarcely a weed.

## *Live at Bogside*

The Windhursts live in a very pleasant home by the bogside. Mrs. Windhurst is interested in

ing and strong examples of her art hang on the walls of their home.

The couple has one son, "Bill," 19, who is in the U. S. Navy. He is married and this year the Windhursts became grandparents.

Windhurst formerly had a newspaper agency at Walnut Creek, California, which was in a "fabulous" location he says, in the foothills near Oakland. Mt. Diablo overlooked the rolling countryside, where grew walnuts, pear and peach orchards. "It is hard to believe that this charming land has now become a metropolis in recent years. Freeways, shopping centers, and apartments have obliterated many of the old familiar scenes," he adds.

He is a member of the Masons, and at present is not on any cranberry committees. Windhurst water-picks all his crop. He was one of the first growers to use this means of harvest. He also rigged up the first mechanical pruner, a Gravelly tractor with long teeth on the sickle bar. Some growers are still using these. He built and used the first elevator to lift wet ber-

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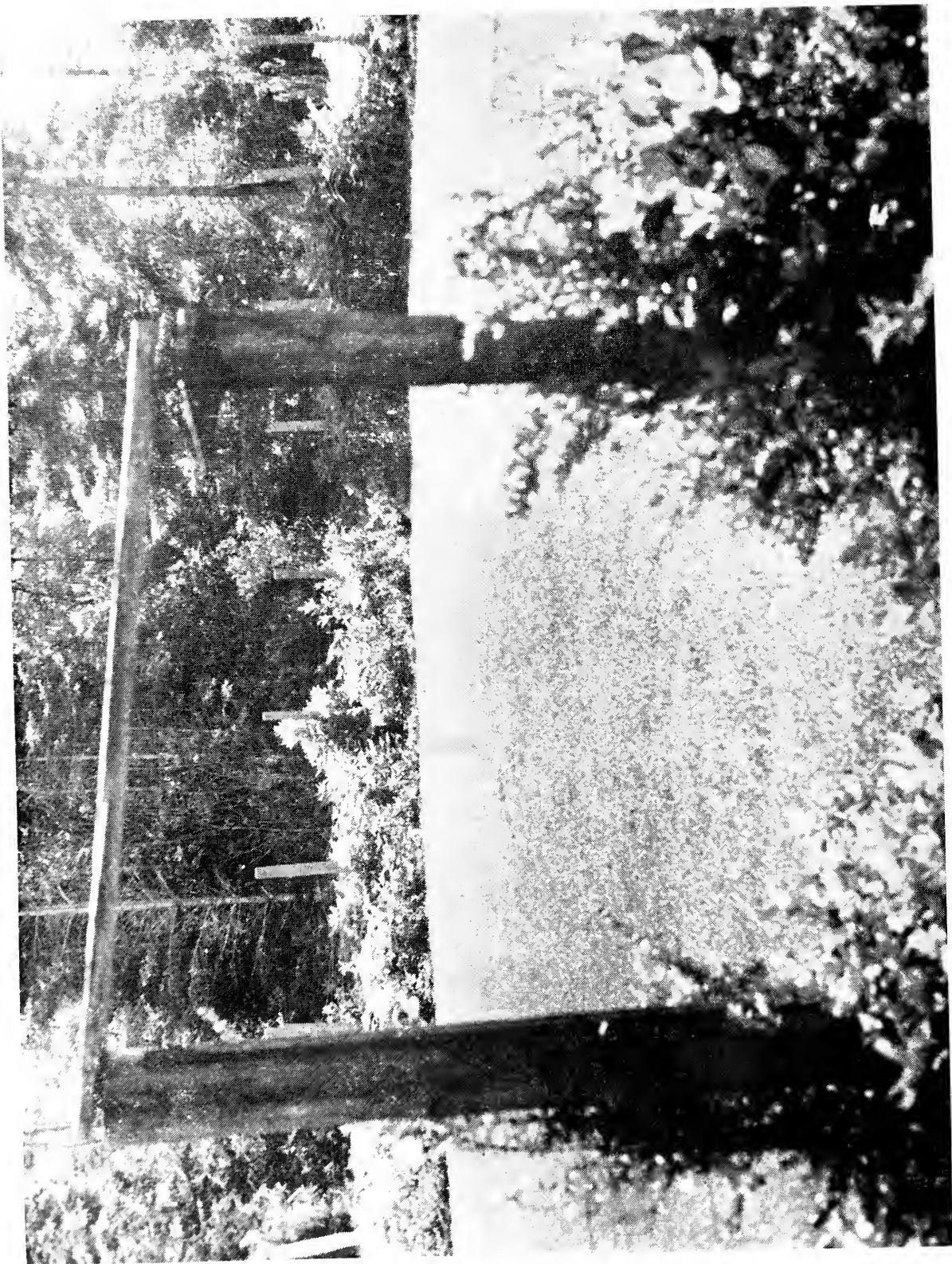
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Showing the single Sprinkler with Entrance Gate to small bog.  
(CRANBERRIES Photo)

ries from the bog to truck, thus eliminating the need of boxes.

Like many other West Coast growers Mr. Windhurst has another occupation. He is a long-shoreman and a member of ILWU.

He is a member of and sells his fruit through Ocean Spray.

## 75 Percent of Wisconsin Growers Voted In Order

In the recent vote on the Wisconsin State Marketing Order, the only cranberry state marketing order, at least so far, the "Yes" vote represented 75 percent of the registered growers. According to Market Order legislation 66 and 2/3 percent must approve before such an order can be made.

Those who favored the Order produced 249,901 barrels of the 1964 crop. This represented 65 percent of the total state production. The law requires at least 51 percent of production.

The 2 cents a barrel which is collected by means of the Order will be used for a program of research, production, processing and distributing as well as for the frost report so vital to cranberry growing.

The growers elected five of their members to serve at the Cranberry Market Order Advisory Board. These are: Bruce Potter, Camp Douglas; Tony Jonjak, Hayward; Charles L. Lewis, Shell Lake; Keith Bennet, Warrens and Donald Duckhart, Wisconsin Rapids.

The alternates: F. W. Barber, Warrens; William Harkness, Millston; Craig Scott, Warrens; Robert Gottschalk, Wisconsin Rapids; and Richard Indermuhle, Manitowish Waters.

The committees will serve to advise and counsel with D. H. McDowell, Director, Wisconsin Department of Agriculture, and his staff.

## OBSERVATIONS ON WEED CONTROL AND OTHER PRACTICES FOR CRANBERRY CULTURE

(EDITOR'S NOTE:) *The following is the complete text of a most interesting talk given by Dr. Malcolm N. Dana of the University of Wisconsin at the annual meeting of the Cape Cod Cranberry Growers' Association, at East Wareham, Massachusetts.)*

It is a pleasure for me to bring you greetings from the cranberry industry in Wisconsin. Although our Wisconsin industry competes with you for the sales dollar, we are all interested in healthy growth for the whole industry and enjoy good natured rivalry that exists between the two producing areas. The numerous problems of production and marketing will always tie cranberry growers together in a common bond of respect and friendship.

On behalf of Wisconsin growers, I extend a word of appreciation to the research efforts of the staff at Massachusetts Cranberry Experiment Station. Our growers have, for many years, relied upon your information to guide them in the use of new pest control methods and materials and cultural practices. Although our growing conditions differ from yours in some elements, the information emanating from your station may often be readily modified to satisfy the need in Wisconsin.

### *Sprinklers*

I have been interested to see the extent of your conversion from depending upon flood irrigation for frost protection to the use of sprinkler irrigation. In Wisconsin we also are rapidly installing overhead sprinklers. Perhaps 30% of our acres are now covered with sprinklers or will be in the next few months. Wisconsin installations are all aluminum pipes, but I notice that most, if not all, of yours are a combination of aluminum mains with plastic laterals, either buried or on the surface. The use of plastic offers economies

of installation and resistance to freezing damage both of which are significant benefits in this use. I will call these things to the attention of the Wisconsin growers.

We anticipate certain advantages to accrue from the use of sprinklers in comparison with flooding. Fruit keeping quality should improve due to the reduced opportunity for spreading fungal spores through use of less total water and the use of water less often. Precision frost control will now be a reality, for a grower can wait longer before starting protection than he could with flooding and both high and low spots should get equal protection. It will no longer be necessary to flood during the critical blossoming period and thus improved fruit set and early fruit development should result. It goes without saying that great economies in water consumption will result for now it will no longer be necessary to fill all ditches and put inches of water over the surface, but rather the grower may apply .10 inch per hour or less during the frost period and obtain adequate control. Many borderline frost situations will now consume no water whereas under the flooding program water was used to fill ditches and get ready for flooding as a precautionary measure. We are all interested in the influences that sprinkling may have on the weed population. Certainly less seeds will be moved in from reservoirs and ditches which may be a very important factor. However, the reduced use of water and the resultant improved aeration conditions at the bog surface may encourage germination and development of many seeds that would not have grown under former conditions. We may find that annual weeds will become a more serious problem than they were before this shift.

### *Wind Machines*

I will just mention the wind

machines that have been installed on two marshes in Wisconsin. These machines are designed to bring warm air from air strata a few feet above the bog and mix it with the cold air collected near the bog surface. Their effectiveness depends upon a stratification of air, in other

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words, there must be a source of warm air for mixing or no value can accrue from their operation. There is no value in their operation during a convection frost, when the cold air is moving in on wind currents. Although these machines have been used successfully for summer frost control, their limitation to usefulness only under rather restricted conditions has discouraged grower interest in them.

### *State Marketing Order*

The growers of Wisconsin have recently approved a state marketing order that provides for a check off system to contribute funds for the encouragement of applied research for cranberry production and for payment of the frost warning service. This marketing order is administered by the Wisconsin State Department of Agriculture. A grower advisory committee counsels with the Department Director on the allocation of funds to research organizations.

I am happy to see this action by Wisconsin growers because it

represents a recognition by them that in today's research climate, agricultural industries desiring research assistance must be willing to participate financially in the support of research effort. Those industries unwilling to participate will soon find research efforts channeled away from their specific interests and into those areas from which money is forthcoming.

### *Weeds*

Weed control still remains a primary problem for cranberry growers everywhere. Although the species of weeds differ somewhat among areas of production and the intensity of weed populations vary all areas are cursed with a plentiful supply of problems. I am sure that each group thinks it has more severe problems than the other group, but my observations lead me to conclude that there are enough problems for everyone.

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The work has produced information for recommendation of several materials.

Dalapon is used to a very limited extent as a swab treatment. This treatment suppresses grass growth and eliminates the need for clipping of weeds. Much care in application is necessary if vine injury is to be avoided.

Simazine was found helpful for annual broadleaf weed control when used at 2 lbs./A. and applied as a granule. The safety range for this herbicide was to be very narrow. The problems of application to stay within the limits of safety have prevented the acceptance of this herbicide and little or none was used this year.

The use of 2,4-D granules was extensive several years ago but, as with Simazine, the injury experienced outweighed the advantages of weed control obtained and little material of this type is now used. The development of better applicators and more understanding of herbicide limitations may encourage use of this material for situations where annual broadleaf weeds are the primary problem. Growers may find 2,4-D granules a useful complement for dichlobenil (Casoron).

There is still a limited use made of 2,4-D amine for swabbing of brush and coarse broadleaf weeds. Such use will continue until a more effective herbicide is found.

We have found a limited use for CIPC granules primarily for annual grass control. Unfortunately, the herbicide does not provide full season control from rates of application that we feel are safe to cranberries. Some growers are using it on two- and three-year-old sections for grass control and in some instances the results have been good.

The latest and most outstanding herbicide to receive registration is dichlobenil (Casoron). The results from its use have been so outstanding that one grower now calculates cranberry history as B.C. and A.D.; Before Casoron and After Dichlobenil (Casoron). Certainly, since the passing in

1959 of the one truly great cranberry herbicide, no other material has approached the effectiveness of Casoron for a wide spectrum of weeds. Although it is not a panacea, it surely offers hope for turning the tide against many weed invaders.

#### *Spreaders*

The widespread use of Casoron has re-emphasized the importance

of application equipment and careful operators. Many of our growers are using the Noble Chmi-Caster as modified by the Dana Machine Company and often further modified by the grower himself. The Chmi-Caster is an adequate machine when the shutoff mechanism is working and when the operator uses care in turning at the



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ends of the sections. Of course, careful calibration is essential to proper use, but this is true of any machine. It would seem to be essential to take the machine out of the field after a pass the length of a section and then to re-enter the section and make a straight trip again. Turning on the beds while the machine is operating distributes excess herbicide near the pivot wheel and inadequate material at the outside wheel. The vine injury patterns observed this summer fully confirm these obvious conditions.

Several Wisconsin growers have built a machine modeled after the spreader I use for plot work. The basic delivery unit is taken from a Brillion grass seeder manufactured by the Brillion Iron Works, Brillion, Wisconsin. The spreader provides precise delivery of material and positive shutoff of granule flow when the mechanism is stopped. I believe it has advantages of maneuverability and control worthy of investigation by more growers. Dana Machine at Wisconsin Rapids has a pilot model ready for testing this year.

The specificity of Casoron con-

trol for certain weeds suggests that growers must start to think in terms of "patchwork" application. It is false economy to apply expensive herbicides on areas either lacking in weeds, or infested with weeds known to be resistant to the material used. You must start to map your beds in detail during the growing season and then apply the herbicide only to those areas where control may be reasonably expected. The risks of vine injury and the material cost are too great for indiscriminate application over wide areas. Precision application equipment and intelligent handling must become a part of successful weed control.

Casoron has also taught us one other great lesson. This herbicide will not provide good weed control in areas of thin, weak vines. Its best control is exhibited where the vines are thick, vigorous and productive. The control apparently results from the suppression effect of the herbicide in the presence of highly competitive conditions provided by vigorous vines. Neither condition alone can eliminate weed populations, but the two working jointly overcome the

weeds. The lesson we are learning is that you first must grow a good vine stand and then you may use herbicides to selectively eliminate the weeds. You can't grow cranberries without vines. Therefore, integral parts of any weed control program are the other management practices including soil fertility, insect and disease control and water management.

Our experience with Casoron has shown that Howes are the most tolerant variety with Searles showing the most sensitivity. This places Massachusetts growers in a favorable position relative to the situation in Wisconsin. We have found that fall application is particularly effective on certain early spring emerging perennials, but that spring applications afford better control of rice cutgrass, sensitive fern and other late emerging perennials. In general, those bogs established on sand bottom have suffered more injury than those bogs on peat bottom. Apparently the high organic content of peat inactivates some of the herbicide through absorption or other phenomena.

A fall application of the recommended rate of Casoron, followed by a winter sand application definitely enhances the activity of the herbicide. It may step up the effect by as much as 50%. This means that in those areas where you have hard-to-kill weed species, you may wish to plan your herbicide treatment in conjunction with your sanding program and thus take advantage of the extra effect. In contrast, where you have weeds that are relatively easy to kill, you could reduce the herbicide to 2½ or 3 lbs./A. followed by sanding and obtain control equivalent to 4 lbs./A. without sanding.

We believe that Casoron effect on vines is closely associated with soil conditions. In some instances, at least, we see more injury on very low pH soils than we do on soils with a relatively higher pH. Whether this reaction is a pure response to pH level or whether it is the result of other

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factors associated with soil pH, we are not sure. In any event, it is a research area needing further exploration in order that we may be able to reduce the injury by simply adjusting the soil status.

#### *Manganese*

Recently, we have been working with nutrient absorption by the cranberry plant. A sidelight to this work is the interesting observation that cranberries can accumulate large quantities of manganese without apparent growth retardation and that these plants can grow in high concentrations of aluminum without showing toxic symptoms. These observations are of interest because it is known that many plants are adversely affected by high levels of these two elements. We now wonder if soil applications of these elements could be used as selective herbicides in much the same manner that iron has been used in the past. Our work thus far has been under laboratory conditions and needs much further expansion before any practical application may be realized.

The weed control problem continues to be a challenging one to research workers and growers. With a continuing source of materials for testing and the application of new knowledge within the framework of established practice, the battle will be won.

It has been a pleasure to spend this day with the Cape Cod Cranberry Growers Association and to share these few ideas with you. I hope you can all take time to come to Wisconsin soon and see the methods we use to grow cranberries.

#### **LONG BEACH CROP REPORTED UP**

Wilson Blair, Area Manager for Ocean Spray of Long Beach, Washington is quoted as reporting that the area will harvest 25,000 barrels of the state crop. Last year's harvest was 17,000 so a gain is expected.

Harvest in the area began about October 4th.

## **OUR CHANGING VALUES**

by

**RUSSELL A. TRUFANT**

(Editor's Note: Mr. Trufant is an engineer and a long-time successful Massachusetts cranberry grower, recently retired.)

A year ago I revisited places in the Southwest where I worked forty-odd years ago. I inspected many reinforced-concrete structures I had designed and built there. I was pleased to find each one in good condition and serving its purpose, but chagrined to find that each had been altered to serve new purposes—to meet needs that did not exist when the structures were built.

Coming back to Massachusetts, I had an eye out for the changing needs and values over the years. Do we realize how our sense of values in cranberry bogs has changed (or been changed) within our own memories? Changes due to Experiment Station work, to use of new or different machines, to adoption of sprinklers, etc? Take our idea of a really good bog. How has that changed?

In my youth, a really good bog was long and narrow with good sand pits all along both sides, on a big enough stream so all you had to do was put the planks in, and the bog went right under. Few would build such a bog today. The frequent cross-valley dikes and big flumes would be too expensive, and the risk of storm-flood water damage too great. The advantage of the narrow bog has been lessened by the replacement of the wheelbarrow and plank by the machine sanders and power wheelers. The sand is less important with today's thinner initial sand coat; by grading with peat instead of sand; by extending the interval between sandings; by the convenience of the front-end loader and dump trucks for stockpiling sand around the bog in off seasons.

Changes since my youth have been gradual but widespread. Until the advent of sprinklers, we

aimed for a bog with water stored on three sides but not running through, and good drainage on the fourth side. If we could put on a frost flow in an hour and drain it off before noon the next day, and do that five days running, we had a real good bog. We had to be up almost all the frosty nights, but we avoided many flows. We still remembered the old-timers rule of the three "F"s: Three flows equal one frost; three frosts equal one freeze; three freezes equal one failure.

Then came along sprinklers. We saw more and longer sleepless nights. We found we were using lots of good bog swamp for needless reservoirs. We found good protection from heat-drouth damage. It would take courage to depend on today's sprinklers against winter-killing, but that may come yet. It also seems that a bog kept too wet by oversprinkling will raise just as rotten berries as any bog kept too wet by other causes. And it is hard to imagine any trouble with a good frost-flow system that would be as crucial as a breakdown—even a short one—in a sprinkling system.

Assume that today's standards include the sprinkler. Just what are the other requisites for a good bog? Leave out the things which can be added anytime, such as shore roads, fertilizer, pesticides and Tender Loving Care. What has to be there to begin with? Peat, sand, water and its controls and drainage; not necessarily important in that order, but there.

Peat is the vines' own water reservoir. Its capillarity feed its moisture up to its surface for the vine roots. Not that it has to have capillarity, like a wick. It should be heavy peat, the kind that sticks to your shovel, not loose forest duff. The ideal peat layer is about the same thickness all over the section; deep peat out in the middle means future settlement there. Six inches to a foot of peat will provide root moisture thru most drouths. You can make good

bog on peatless hard bottom by adding a layer of peat.

The sand has virtues too numerous to list here, not the least of which is its action in delaying rain runoff while the slow-drinking peat replenishes its supply. We have reduced the thickness of the initial sand layer from the old-time six inches down to two or so. By proper trash removal and pruning, we have lengthened the interval between sanding. The ease of stockpiling around the bog in off-times means we are not dependent on the sand that happens to be handy. The sand should be reasonably clean and free from clay, since the roots need air as well as water. And a thick layer of sand hastens the day when the buildup of re-sanding lets an accidental over-wet condition kill those lower vine roots that bring moisture up from the peat.

You may well ask why we need this moisture system when we can sprinkle at will. It is because no bog is uniform.

Drouth damage first shows up in spots, we know, where the moisture system is not working properly. If we sprinkle before those spots show damage, we are keeping the rest of the bog too wet.

Mechanical picking has made it more imperative that the surface sand be free of stones. The potential of stone damage to the machines is too great to ignore.

The requirements for water have been changed most radically by sprinkling. We need water for three general purposes: sprinkling, trash removal, and winterkill protection. Water harvesting is so akin to trash removal that it need not be considered separately. For sprinkling a minimum storage might be enough for five nights in a row. That could mean five inches over the whole bog. Then a twenty-acre bog would need a one-acre reservoir with an average depth of 100 inches, etc. A sump might do. There are places around here where a sump will not hold water. In other places a sump rebuilds almost

as fast as you can pump it out. Each spot has its own peculiarities.

In considering reservoirs, remember that a full reservoir is an asset right up to bloom time. Then it becomes a liability. A low reservoir is an asset then because it may intercept enough storm water to prevent storm flooding on the bog and consequent loss of the crop. Then at Fall frost time this situation reverses again, and you need a full reservoir. Can you get it?

Trash removal (and water harvesting) bring up the matter of dikes. Each large bog should be subdivided by dikes into blocks which are of convenient size for quick flooding and quick trashing or picking. Perhaps three acres is a good size. That calls for a reservoir, and one big enough to flow a bit over the vine tops. For a bog with many such block, you may be able to rehandle the water from the first block again and again for the rest of the bog. That will probably involve the familiar bog pump. Otherwise, you need about as much reservoir with sprinkling as without.

Most bogs, other than the present "dry" bogs, can accumulate enough water for winter flooding. A sprinkler system can, in time, winter-flood a bog. In any case, there is likely to be a critical time after the usual oxygen-deficiency warning when you want to reflow because of ice

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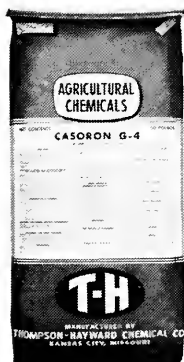
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cover. But this usually involves a thaw which gives you time and water if you are on the job.

Drainage you need, too. Not as fast drainage as you needed to get a frost flow off in six hours or so to avoid water damage. But the water table should be under some control. If a natural stream flows through the bog, it is well to detour it around the bog to avoid storm-flooding in bloom, for example. The possible need for rehandling water has been mentioned above.

High parts of a bog mean nothing to sprinklers, but for thrashing and winter flooding they are an abomination. It is better to cut down the high edges (putting on a layer of peat if necessary) than to build up the center to match the edges. The center will settle anyhow; build it up and it will settle more. This is assuming that there is deep peat in the center, as usual.

What other needs are there, perhaps unrealized needs? One is to get rid of the section ditch. We need shore ditches, and probably ditches between varieties. Ditch banks are often unpicked. The labor cost is high, and the berries from the ditch banks are often rotten enough to raise the cost of the sound berries and perhaps degrade a whole shipment. We thus lose about 10% of our possible acreage and crop to the ditches. Yet we give the ditches frost protection, pesticides and all the rest. They even have their own weed problems. And they need periodic cleaning out. They add a touch of risk and adventure to thrashing or water picking. They complicate crop hauloff. They give burrowing animals access to many points on the bog. They are a nuisance in most mechanized operations.

With sprinklers, you need to drain off but about an inch a day of frost water. At least a part of that would go down to the peat. Heavy rain makes the real need for good drainage. You would reasonably prepare to drain off an inch a day for five days of storm. It is not economic

to protect against much more, because "all outdoors" would be flooded anyway. It would be rash to depend on surface drainage alone to get all the water off. Some degree of underdrainage is indicated. The present ditches on an old bog, and perhaps some grid system on new bogs, would furnish a ready-made location for such underdrainage. Especially since on old bogs the present ditches presumably tap the known wet or springy spots.

Just how would we do it? My crystal ball suggests that we should first clean out the old ditch, put in a bedding layer of sand, then lay the pipe (rigid or semi-rigid, perforated), then fill with sand to a high peak in the middle, fill the edges with peat (perhaps the ditch cleanings) to the top of the bog peat, then end up with a level grade with knock off the center peak of sand and add more sand if needed to perhaps a foot width of sand between peat fillings to let the surface water down to the pipe. Maybe we need an occasional riser pipe to let us wash out sediment from the pipe with a hose stream. Does this whole thing sound like a railroad job? It is a railroad job.

Forgive me, please, for having overlooked the many points which occur to you on reading this. I have just tried to outline what I think it takes to make a real good bog today, and take a brief glance into the future.

---

### Remarks at the Blueberry-Cranberry Research Center Dedication on August 26, 1965

(EDITOR'S NOTE: The following is the address by Dr. Paul Eck, who has supervision over the New Jersey Cranberry and Blueberry Station at the summer meeting of the American Cranberry Grower's Association. The meeting was held at the new Cranberry - Blueberry Research Center at Lake Oswego.)

As a researcher who will be putting this facility to use, I would like to express my appreciation to the people of New Jersey for making it possible.

I have been trained in the field of plant nutrition and physiology. It is my assignment to apply the basic principles in these areas of specialization to the solution of applied problems in blueberry and cranberry culture, as well as to conduct research which will add to our basic understanding of these crops.

A study of the influence of the major plant nutrients upon blueberry growth, production and quality has been initiated at this center. An additional important objective of this study is the development of a diagnostic technique based upon plant and soil analyses which may be of usefulness in correcting plant nutrition problems. From this study we hope to produce the most accurate nutritional recommendations possible for blueberry production.

Poor fruit set on many of our commercially important varieties has been a problem for almost a decade, both in New Jersey and in other major blueberry producing regions. We know that trace elements play primary roles in the enzyme systems which are pressed into service during this critical physiological period. Therefore, the role of trace element nutrition in influencing pollination, fertilization and fruit development will be one of the areas of research at this center.

In the greenhouse and laboratory this problem of fruit set is being approached from still another direction—that of producing fruit parthenocarpically, i.e., fruit development in the absence of pollination and fertilization. Through the use of plant growth regulators we have been able to achieve 100% fruit set without benefit of fertilization. These exciting results are being studied further for potential application to the commercial industry.

Additional cultural studies have been initiated at the research

center in which different plant spacings will be evaluated, sod culture will be compared to clean cultivation and new pruning techniques will be tried in conjunction with mechanical harvesting methods.

In cranberry plant nutrition we are also interested in studying the influences of various fertilizer regimes upon plant growth, production and fruit quality. In addition, the interaction between fertilizer practices, degree of pruning and water table will be studied in an attempt to ascertain which set of ecological conditions are conducive to maximum production of high quality cranberries.

We are also experimenting with plant growth regulators in cranberries in hopes of producing fruit set parthenocarpically. Promising results have been indicated in this area also.

We are grateful for the opportunity to work on problems—the solutions of which may have immediate application to the industry we serve. We are also grateful, however, for the opportunity to train graduate students and in so doing direct a portion of our energies to basic areas of research. Such problems as the identification and quantitative determination of endogenous growth regulators in the blueberry plant; the determination of the role of nutrition upon predisposition of the cranberry plant to disease, and the basic cation nutrition of the blueberry are examples of some of the research being conducted as thesis research in partial fulfillment for advanced degrees.

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## WISCONSIN COLD, RAINY, SNOWY, HELP SHORT

The northern cranberry area of Wisconsin had almost two solid weeks of rainfall in the latter part of September, with occasional snow mixed in and temperatures down to 18 degrees. This was delaying harvest and help was also short. The latter part of the month was therefore pretty rugged for the growers. The crop seemed to be falling off in the opinion of Vernon Goldsworthy.

The first snowfall of the year at Wisconsin Rapids occurred on the night of September 25. By early morning however, it had melted.

## OCTOBER CROP UP SLIGHTLY

There is a change in the USDA cranberry crop report for October. Massachusetts is up to 680,000; New Jersey up from 140,000 to 150,000; Wisconsin still 400,000 (locally expected to be down from that); Washington, the same 85,000; Oregon 38,000 down from previous 40,000. This brings the total crop up to 1,353,000.

## FRESH FROM THE FIELDS (Continued from Page 6)

August. Temperatures averaged about four degrees below normal and precipitation was from two to five times the normal of three inches. Most of the cranberry areas received from three to four times the normal amount. Coldest reading was 24 on the 26th, which also brought the season's earliest snow with one third inch on the ground in most cranberry areas. The highest temperature was 85 on the 9th and this was followed by violent storms including hail in the Mather area. There were a total of 20 days in the month in which some form of precipitation fell. The outlook for October calls for below normal temperatures and below normal precipitation.

### Harvest Delayed

Needless to say the weather

experienced during the month curtailed berry growth, but hastened coloration. Little if any harvesting was done as conditions were so adverse. Reservoirs were spilling over and some beds were flooded with the heavy rains. Here again was a complete reversal of the past several years. The surplus rain has recharged many springs and ponds along with a rapidly increasing soil water index.

### Estimates Down

The early raking clearly showed the smaller than normal berry size and as expected following the cold August, this would have a material effect on the Wisconsin crop. Berry color appeared the best in years, but keeping quality was expected to be poor due to the heavy precipitation in August and September along with more than normal frost flooding. It is now quite apparent that Wisconsin will have difficulty reaching the 400,000 barrel figure for 1965.

## WASHINGTON

### September Dry

Cranberry harvest got underway in Washington State about the first of October, after an unusually dry September. Precipitation at Cranguyma Farms recorded only .94 of an inch for the entire month. This was the fourth month in a row which has been drier than normal.

September had its greatest precipitation for a 24-hour period on the 14th when .57 of an inch was recorded. There was measurable precipitation on six days. October started out in an attempt, apparently, to reverse the process by spilling 2.06 inches on the 4th and 5th.

High temperature for September was 83 on the 24th and a low of 30 on the 17th.

## READ CRANBERRIES



## WATER — A MAGIC SUBSTANCE

Rainfall, water; that magic substance was perhaps the chief source of concern in the cranberry business this past season. Massachusetts had not nearly as much of it as was actually necessary; New Jersey had none too much. While Wisconsin and many parts of the West had much more than needed or wanted, in fact in many areas the floods were disastrous.

The big answer to the cranberry areas which have been too dry has been sprinkler systems. Frost control has usually been the main use of sprinkler systems, but if it had not been for sprinkler irrigation in Massachusetts this year there would not have been much of a production.

There were difficult times on the Pacific Coast due to storms and too much water and then there were the damaging floods along the Mississippi and elsewhere in the mid-west. We usually have abundant grapes and beach plums at our home near the Cape, but this year there were none, due we believe, to the lack of rain.

Water is necessary to the human being. A man in the temperate zone can get along on 5½ pints of water a day, we are informed. Yet we use an average of 60 gallons a day for one use or another. For every pound of dry matter in a plant, there are five to 10 parts of water. For every pound of dry matter manufactured by a plant, the plant must use about 700 pounds of water in transpiration.

Obviously as our population increases the demand for water increases and our supply diminishes. The silting and pollution of our streams is becoming a major factor. Out in Wisconsin there is now strong controversy as to the uses of water. Particularly in the northern resort regions the interests of the cranberry grower and the resorters seem to be coming more and more in conflict. This is more or less true in all cranberry areas.

We should realize that water is a miraculous and indispensable substance, and it is well for us to stop and think about it for a while. We should become better informed of our use of water. Water must be conserved and we should make the best use of it for all of us concerned.

CLARENCE J. HALL  
Editor and Publisher

EDITH S. HALL — Associate Editor  
Wareham, Massachusetts

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It is too early as this goes to press to speculate much on the cranberry price. But we do know the Ocean Spray opener on Early Blacks was a dollar more than in 1964. And we do know there is heavy demand on the part of independent canners. So the situation does look encouraging. And the U.S. total crop is after all not too small.

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## "Captive" Family Visits Marshes In Wisconsin

In Wisconsin Rapids this past summer the Wisconsin Rapids Area Chamber of Commerce has been taking "captives," and showing them some of the "sights" of the area. The "captives" were visiting tourists, guests of the Chamber. Among what the "captives" were shown were Wisconsin Rapids great paper mills and cranberry marshes.

The event proved so interesting to a "captive" Illinois family that the Chamber may decide to make this an annual event.

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MR. AND MRS. LOUIS LECONTE Operate the P. & L. Co. in Carver, Mass. Story on Page 7. (CRANBERRIES Photo)

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## "Colorama" Tours Include Wisconsin Cranberry Marshes

There has been a month long "Colorama," tour in Villas County, the region of the north-eastern cranberry marshes of Wisconsin, the period being from September 15 to October 15, with ten townships taking part.

There were trips through wild life preserves with outdoor cook-outs, including venison, wall eye pike and bear on the program.

Rounding out the events there were tours of cranberry marshes at Manitowish Waters, showing the cranberry harvest and a tour of the Cranberry Products, Inc. plant at Eagle River.

This is a resort area and the "Colorama" program was designed to entertain fall visitors of the area.

### CANADIAN VISITS

#### EAGLE RIVER

Jack Raine of the Canadian Department of Agriculture, Van-

couver, B. C. last month spent a couple of days at Eagle River, Wisconsin, visiting Vernon Golds-worthy and others. He was in-terested in learning as much as possible concerning the insects and insect problems of Wisconsin cranberry growers.

## Screening Program, Agricultural Viricides By Niagara Chemicals

Addition of a vericide screen-ing program to its pesticide re-search and development effort was reported today by Niagara Chemical Division of FMC Cor-poration. The new endeavor will be conducted in the fungicide research laboratory at Middle-

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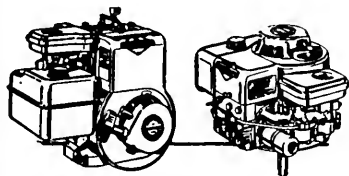
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According to Dr. Bushong, there are currently no anti-virus agricultural chemicals commercially available today and a very real need exists. He points out that virus diseases are a particularly serious problem on sugar beets, tobacco, corn, potatoes, sugar cane, beans, stone fruits and many other crops.

In its viricide screening program, Niagara will employ the tobacco mosaic virus (TMV) as the test species. This was selected because it is a typical or representative plant virus and considerable is already known about it. Additionally, it can both be used on host plants for propagation purposes and be readily transmitted to localized areas of test plants.

The screening effort will entail a search for both contact and systemic viricides. Among some of the commercial plant virus problems for which controls will be sought are: swollen shoot on cocoa; virus X, virus Y and leaf roll on potatoes; corn stunt disease on corn; and, of course, tobacco mosaic virus on tobacco.

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# Mass. Cranberry Station and Field Notes

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

## Harvest and Frost

The Massachusetts cranberry harvest was virtually completed by the end of October, which was about the same date as last year. For the past two years, we seem to have shortened the harvest period by about two weeks. We have started picking about one week later and finished about one week earlier. This is due, partially at least, to the increased number of picking machines in use.

The frost warning service was terminated for the season on October 31. We sent out 26 general warnings during the fall, with the bulk occurring in October. This includes both afternoon and evening warnings and compares with 25 sent out last fall. We estimate that approximately 40 to 45,000 barrels of berries, or 6 to 7 percent of the crop, was lost due to the frost. The bulk of this loss, 5 to 6 percent, occurred on the night of August 30-31 when bog temperatures were as low as 22 degrees. Slight losses were noted on the night of September 27-28 when temperatures ranged from 17 to 24 degrees, and on the night of October 5-6 with temperatures as low as 10 degrees on one bog,

but generally from 13 to 20 degrees.

The present author, as well as all preceding authors of this column, have expressed their thanks to the frost warning service and to the people "who make it go." Although it may become boring to some of our readers, it is a gesture of our appreciation and small compensation to these dedicated people. So once again we would like to express our thanks to George Rounsville and Kenneth Rochefort who calculate and formulate the warnings for the very fine work on this most important phase of the operation. 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.

## Weather

The month of October was another in the series of cold, dry months that have been plaguing us for so long. Temperature was about  $2\frac{1}{2}$  degrees a day below normal and this was the 16th of the past 17 months colder than normal. The rainfall for the month totalled 1.68 inches which is about one-half the average for October, with only .03 inch occurring since the 16th. This is the 10th consecutive month with below average precipitation and makes us nearly 15 inches deficient for 1965. The Weather Bureau in Boston reports that this is the driest 10 months since records have been recorded over the last 148 years.

## Drought Warning

A warning on drought conditions was released by the Cranberry Station on November 3 and reads as follows:

Cranberry growers should be alert to the hazards of the continuing drought. Many ponds and reservoirs have such low water levels that the possibility of getting winter protection for the bogs is remote. The bogs them-

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selves are dry, a situation which is likely to increase the mechanical injury of the harvest and reduce the potential crop of next year.

**Recommendations:**

1. Put planks in drainage flumes to catch and hold any water that would otherwise be lost.

2. Postpone raking, pruning, sanding and fall weed control work where a winter flood is not assured.

3. If sprinklers are used for irrigation this month, block flumes to prevent any run-off and sprinkle at night and when winds are calm to reduce evaporation loss.

The weather trend to cold and dry is now more severe and entrenched than conditions in 1943. The loss of cranberry vines in the winter of '43-'44 took half the '44 crop and reduced that of '45. All practical methods to conserve water for the coming winter should be used immediately.

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## **Wisconsin Acreage Survey by Varieties And Sprinklers**

A special survey of the Wisconsin cranberry marshes was underway in late September. This was to make a more complete enumeration of acreage and varieties.

The survey was being made at the request of the Wisconsin State Cranberry Growers' Association and was being financed by funds supplied by both the Wisconsin and the United States Department of Agriculture.

The survey, directed by Elex Sturges, will include questions to cranberry growers on harvested acreages by variety this year and the expected acreages five years from now. Questions will also be asked on the use of sprinkler systems and the types of power units used.

### **GEORGE DANA WISCONSIN, INJURED**

George Dana, son of Mr. and Mrs. Lawrence Dana of the Dana Manufacturing Company, Wisconsin Rapids, Wisconsin, who was injured at a ski jump is now recovering. He suffered a torn ligament and for a time was on crutches.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of November 1965 — Vol. 30, No. 7

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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

#### October First Rain

October opened with a very substantial and, of course, much needed rain, in this prolonged period of drought.

October third blew in one of the earliest cold spells in recollection. The fourth was 17 degrees colder than normal, with high winds which made it seem even more winter-like than it was.

#### Frost Spell

That night a frost warning went out from 14 to 15 degrees if the wind died down and clouds came in. Both of these things did occur to some extent but temperatures from 15 up were reported. Ice was formed in buckets of water. Not too much damage was done as more than half the crop had been picked and most berries still on were in places which could be protected.

The fifth was even colder, being about 20 degrees colder than normal and that night a warning was sent out for "very dangerous frost, 13-14 degrees."

A temperature as low as 10 was reached on the Oak Swamp Bog in the Tihonet area of Wareham, and mid-teens were common. The following night there was still a third warning for a very dangerous frost, minimum 18 degrees. This temperature was reached at the same Oak Swamp Bog.

#### Not Much Loss

Although these were hard nights for the growers it was estimated at the State Bog from reports coming in that the damage was not great. Most damage

### Drastic Mass. Drought Warning Issued

So critical is the prolonged drought situation in Massachusetts as winter comes in, that a flash card drought warning was issued by Dr. C. E. Cross, director of Mass. Experiment Station November 3. He issued some drastic recommendations

"Cranberry growers should be alert to the hazards of the continuing drought. Many ponds and reservoirs have such low water levels that the possibility of getting winter protection for the bogs is remote. The bogs themselves are dry, a situation which is likely to increase the mechanical injury of the harvest and reduce the potential crop of next year.

#### Recommendations:

1. Put planks in drainage flumes to catch and hold any water that otherwise would be lost.
2. Postpone raking, pruning, sanding and fall weed control where a winter flood is not assured.
3. If sprinklers are used for irrigation this month, block flumes to prevent any run-off and sprinkle at night and when winds are calm to reduce evaporation loss.

The weather trend to cold and dry is now more severe and entrenched than conditions in 1943. The loss of cranberry vines in the winter of 1943-44 took half the '44 crop and reduced that of 1945. All practical methods to conserve water for the coming winter should be used immediately.

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being to high spots. No per cent of loss was put down.

Although during this spell in which much ice was formed, up to five inches by sprinklers, there was a good side to it. This included the fact that with not much harvest going on it gave berries a chance to ripen more and size; Ocean Spray had a chance to catch up on handling berries and the box shortage was lessened.

**Rains**

There were a couple of fairly good rains during the week of October 3, but the temperatures remained below normal. Up to

Columbus Day, October 12 the minus was 75.

**Hail**

On the afternoon of the 10th there was a violent thunder and lightning storm in northern Plymouth County which brought huge and heavy hail stones. Much of the crop had been picked and no damage to bogs was reported.

**Again Frost Warning**

A frost warning was issued for the night of Oct. 13, but some clouds and wind developed and low temperatures were only about 24-25. There was also a warning for the night of the 17th,

and there was one low of 15 and a number of 19 and 20. However, the crop was all in but an estimated 10 percent and there was believed to be no loss.

**Indian Summer**

Although the month was still considerably colder than normal, beautiful Indian Summer weather followed this frost for several days. People were even going about coatless.

**October Cold**

Following this spell of warm weather the temperatures turned decidedly colder. The month ended with a minus of 68 degrees. This made October the 18th colder-than-normal month of the last 20.

**No Rain Exceeds All Records**

But it was the continued lack of rain that was hurting. Precipitation at the State Bog was only 1.68 inches, normal, 3.74 inches. Weather experts declared that the rainfall of the past 10 months was the lowest since 1817, or much more than a century. A weather observer at Boston said the 19.90 inches of rainfall (Boston) was 1.3 inches under a record low of 21.26 set in 1845 and this year's lack was a new low for the 143 years of observation.

This dire lack of precipitation, which was causing a rash of forest fires as October went out, did not apply to the whole of New England or of Massachusetts. The most critical was the Boston and coastal Southeastern Massachusetts section, which includes the Mass. cranberry area.

A total of nearly 300 forest and brush fires were reported in Massachusetts on the last day of the month. Fallen leaves and tinder-dry woods in general made the situation worse.

Normal rainfall for the cranberry area in a year is 44.10 inches.

**Rain Situation Very Bad**

Water was so short for most Massachusetts growers that few were able to have the usual after-harvest flood to remove trash and clean up the bog. A few could, but not many. Immediately after harvest not a

*Continued on Page 16*

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# HEAD OF CARVER MASS. CONTRACTING FIRM SPECIALIZING IN CRANBERRY WORK "JUST A FARMER AT HEART"

**Louis Leconte, of P & L Company is a Very Busy Man with Cranberry and Other Work — Also is Cranberry Grower — Ably Assisted by Wife, Phyllis**

By CLARENCE J. HALL

"I'm just a farmer at heart," say Louis M. Leconte, "with I guess a bent for working with heavy farm and excavating equipment." Mr. Leconte heads up the P. & L. Company of Beaver Dam Road, West Carver, Mass. The town of Carver has more acreage and more cranberry production than any other.

Mr. Leconte specializes in cranberry work; he is a grower himself, a member of Ocean Spray Cranberries, Inc. and of Cape Cod Cranberry Growers' Association.

Mrs. Leconte is bookkeeper of the company, assisting her husband in many ways. The attractive Phyllis Leconte was present at the interview and it was to her that Louis turned frequently for dates and other bits of information. She had the answers on the tip of her tongue.

## **Louis M. Leconte**

Louis Leconte was born in Acushnet, Massachusetts, March 31, 1930. His father, the late George Leconte ran a dairy farm, so he has a farming background. He attended the Watertown school in neighboring Rochester.

## **Army Stint**

Then came a stint in the U. S. Army from 1951 to 1953. He trained at Camp Rucker in Alabama. He was five months overseas in Germany. He was in the infantry in the motor pool division as a driver. Leconte began as a private and was honorably discharged as a corporal.

Louis was then in the construction business for a contracting firm in the New Bedford area.

He was married in 1954 to the former Phyllis Clemishaw of Rochester. They then bought their present home on Beaver Dam Road. Before marriage Phyllis worked for a time as bookkeeper in the office of Cornwall's Department store in Wareham, Mass.

## **Buys Bogs**

He first bought an old bog of about six acres in South Middleboro in 1957, which was in need of renovation. Since then he has

been bringing this bog back into good production.

About 1964 he bought another bog of four acres which is off France Street in West Carver. In 1964 they picked their first crop from both bogs and it was about 700 barrels. The bogs are set to Early Blacks and Late Howes. Leconte uses both Westerns and Darlings in the harvesting. Mrs. Leconte has helped on the bogs operating the blower for the Western.

Both bogs have sprinkler systems, using Rain Bird heads.

Leconte sells his berries through Ocean Spray trucking the crop himself to the Ocean Spray plant at Onset. He likes the Ocean Spray service and set-up as the berries are off his hands after delivery at Onset.

He has used Casoron for weed control on his bogs with good success.

For insect control Leconte hires Plymouth Copters, Inc. (Whitey), using both 'copters and straight wing service.

Leconte does his own frost work. His sprinklers are not automatic and he has to handle the operations himself, for "heats." irrigation and frosting.

## **The P. & L. Co.**

The P. & L. Co. seems to be really "big" business, that is for its type of work, chiefly in cranberries, although Louis does not say so. Neither did he give any intimation of the investment he has in equipment, insurance, license plates for operating on the roads, etc., but this is obviously heavy.

He has equipment for bog building and repairing, ditch cleaning, dike repairing, bulldozers and trucks, track and rubber tire loader and backhoe, and other items.

The P. & L. Co. hires three men most of the year, and they must be highly skilled at the type of work done as is Louis himself.

He does not hire his equip-



ment out, but takes jobs as they come along. Some jobs may last only two or three hours, others for considerable periods. His work is not confined to Carver, but he works in the Plymouth-Kingston and the Wareham-Rochester areas and on the Cape in Barnstable county, wherever they come along.

Neither is his work confined to cranberries although that is the chief objective. He does take other excavating and construction work as he finds the contracts.

He is even busy in the winter, there is sanding on the ice. Louis can do any kind of construction, grading or excavation work.

He also sells sand, gravel and loam.

#### Job Keeps Him on the Go

This work keeps Mr. Leconte on the go most of the time. A job has to be done when the contracting person wishes it done.

"I am so busy I do not find time to do much of anything except work," he says. Evenings there is book work to be done with Phyllis doing most of this.

*Cover photo shows Mr. and Mrs. Leconte in front of a bulldozer with son, Michael in the driver's seat at upper left. The back yard of the Leconte dwelling is a maze of equipment, even though some of it was on a job when the photo was taken.*

When asked if he had any hobbies, he replied, "No, there is no time. I guess I would say my work is my hobby, and I am not afraid of work, and I like the outdoor part of it."

There is a small repair shop in the back of the home on Beaver Dam Road, and this is utilized especially in the winter, when the snow and ice is on the bogs.

(Your editor and associate editor, Mrs. Hall can appreciate this situation. With much to do there is little leisure during the day, which is too short as are the evenings.)

The Leconte's have two children, Michael 10 and Vickie 7.

After the interview Mr. Le-

conte hurried away to get on the job again. But he did taken time to light up a cigar.

## OCEAN SPRAY 1964 PAYMENT HIGHEST SINCE 1952

Ocean Spray made its final payment on the 1964 crop at \$1.29 a barrel. This brought the total net for that crop to the growers of about \$14.00—actually \$14.91 from which some received a quality bonus, retains and stock. Last year it was \$12.95, or about a dollar more to most growers for 1964.

There were intimations the 1965 crop might bring more and final payment made earlier.

Gross cranberry sales for the entire United States in the 1964 crop totalled \$44,084,000 as against \$37,055,397 for the crop of 1963. Canada produced about one million more.

The 1964 payment by Ocean Spray for the crop of last year was the highest since 1952.



Two of the Trucks Owned and Operated by P. & L. Co.

Cranberries Photo

## **Dr. Paracer Joins Staff at Mass. Station**

### **A Native of Pakistan He Will Assist in Nematode Studies**

Dr. Surinder Paracer, a native of Pakistan is a new assistant to Dr. Burt M. Zuckerman, in his research in nematology at the Massachusetts Cranberry Experiment Station. Dr. Paracer is the second assistant at the East Wareham Station to come from the Indian sub-continent, the first being Dr. Satendra Kawra, who has now returned to his native land.

Dr. Paracer is committed to stay at least one year and may stay two.

He was born in Punjab, January 6, 1941, the eldest son of three children, his father being professor of botany at Ludhiana University of Agriculture. His family has lived there for the last ten years.

He had ten years of English in school at Punjab and at a private school, English being compulsory in Pakistan. He prepared for his bachelor of science degree at the University of Punjab. His studies included botany and zoology. He then came to this country, received his master's degree from the State University of South Dakota at Brookings.

While in South Dakota studying plant pathology he became interested in diseases caused by nematodes. He found University of California offered the greatest opportunity to study further into this subject. After three and a half years he received his Ph.D. While there he studied nematodes as they affected grapes, peaches, walnuts, almonds and the nematode problems of roses.

Dr. Paracer is making his home at New Bedford. For sports he likes tennis, likes to bowl and played cricket in Punjab.

When he leaves the cranberry station he expects to return to Pakistan to teach.

Dr. Paracer is a member of Sigma Xi and also a member of the Society of Nematology.



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# OBSERVATIONS ON THE SYMPTOMS AND CONTROL OF CRANBERRY RED-GALL DISEASE

by

B. M. ZUCKERMAN and  
KENNETH ROCHEFORT  
*University of Massachusetts  
Cranberry Experiment Station,  
East Wareham*

The red-gall disease of cranberry, caused by the fungus *Synchytrium vaccinii* Thomas, attacks the young stems, leaves, flowers and fruit, and causes formation of small, reddish gall-like swellings on their surfaces (1,3). Motile spores are formed within the galls, and these are set free when the galls are covered by water. These swimming spores attack new plants and serve to continue the cycle of the fungus.

The disease usually appears just before the blossoms open. Stessel (2) found that symptoms first appeared July 1 on Howes cranberries. Heavily infested flowers die. The fruits are affected throughout the season by secondary infection and may become severely galled.

Fortunately, this disease is of erratic occurrence, and has been reported recently from only 3 bogs in New England. However, where it does occur, it may cause severe economic losses. Observations by Stessel indicated that a crop reduction of more than 50% may result from a heavy infestation. However, these figures may be deceiving, for infestation is usually spotty, with small pockets which are highly diseased being interspersed within larger areas in which the disease is less prevalent.

As implied previously, the disease is spread by spores which must have free water for dispersion and to enable them to infect the plant. As a consequence, the distribution and development of the parasite are dependent on water management practices and the amount of rainfall.

### *New Observations on Symptoms*

In the course of several years study of this disease, two new observations of berry symptoms

have been recorded. After the fruit is harvested, the galls dry and fall off, leaving small, circular scars and a slight indentation in the surface of the berry. Where several galls occur in close proximity, growth of the berry in the area immediately beneath the galls is inhibited, resulting in a large indentation in the mature fruit. Severely infected berries have several of these indentations, which make the berry unusable for fresh fruit, and it is doubtful if these berries would pass through the commercial screening machines.

### *Control of the Disease*

The obvious approach towards control of this disease is the alteration of water management practices to reduce opportunities for infection by the swimming spores. Since spring frost flooding and irrigation by flowing are the two principal uses for water between bud break and harvest, these are the practices for which a substitute was needed. Sprinkler systems have provided an answer. On one bog establishment of sprinklers for frost protection and irrigation has resulted in elimination of the disease problem.

Additional observations have been made on another bog which indicate the importance of water management. In 1965, this bog was subjected to nine frost floods during May and June. Random samples of a five-acre piece

which is considerably out of grade yielded the following results: Higher areas: 10 samples, no infection observed. Lower areas: 6 samples, berries infected 12.4%. New shoots infected, 55.0%. Selected counts which were made in another low area which encompassed several acres gave the following results: 10 samples, berries infected 43.4%. New shoots infected 75%. Each sample comprised 16 sq. inches of vines. These observations, though not giving conclusive proof, offer strong evidence that where exposure to free water is kept at a minimum, the disease can be controlled.

In 1965, an experiment to determine the efficiency of fungicides in controlling red-gall disease was carried out on the latter bog. Four spray schedules were undertaken; maneb, 1 and 2 applications, and Bordeaux mixture, 1 and 2 applications. Rates of application were maneb 12 lbs./acre/treatment, and Bordeaux mixture 20 lbs. copper sulfate — 8 lbs. lime/treatment. The materials were applied to all 4 plots in late April, and a second application made to 2 plots one month later. Areas adjacent to the plots served as untreated controls.

The results of this experiment are given in part in Table 1. Infection occurred only in a zone 20 feet wide which ran parallel to an irrigation ditch. This zone encompassed a portion of two control areas and the plots on which two applications of maneb or Bordeaux mixture had been applied. The areas to which

TABLE 1. Observations on the effects of fungicide applications on the control of red-gall disease.

<i>Treatment</i>	<i>Number of Samples</i>	<i>Infected Berries-%</i>	<i>Infected Flowers-%</i>	<i>Infected Shoots-%</i>
Bordeaux mixture				
Two applications	10	1.6	1.0	15.1
Maneb				
Two applications	10	6.3	5.0	23.0
Untreated	10	22.5	15.0	21.3

Each sample was made up of vines within a 16 square inch area.

one application of either maneb or Beaudaux mixture had been applied, and the adjacent control areas, were free of red-gall; consequently, evaluation of the effect of the single treatment could not be made.

Two applications of Bordeaux mixture were effective in reducing the amount of berry infection. Treatment with maneb reduced incidence of berry infection also, and would, in my opinion, be preferred since the possibility of copper toxicity is avoided. Fungicide treatment had little effect on primary infection, as indicated by the large number of new shoots infected.

#### Conclusions

On the basis of one year's tests, fungicide spraying offers a feasible method for control of red-gall, under conditions where optimum water management conditions cannot be attained. The establishment of sprinklers, to substitute for water management procedures which require flowing of the bog, offers the most effective solution to the red-gall problem.

#### Citations

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Stessel, G.C. 1962. Observations on cranberry red gall disease, incited by *Synchytrium vaccinii* Thomas. Phyto 52: 29.

Thomas, F. 1889. Cranberry leaf-galls. Insect Life 1: 279-280.

#### CRANBERRIES GROWING FAMILIAR IN ENGLAND

American cranberries were among the U. S. imports at the Manchester, England, Food, Cookery and Catering Exhibit recently, as reported by USDA publication *Foreign Agriculture*. This publication stated that the Cranberry Institute found that nine out of ten visitors were "already acquainted with cranberries, so that promotional emphasis concentrated on year-round use."

#### NEW PRODUCT BY DEAN FOODS CO.

"Flavor Charm," a non-dairy coffee creamer development in Dean Food Company's research laboratory is now in distribution for home use. Dean Foods is the owner of the Indian Trail of Wisconsin brand of cranberry products.

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### RUTGERS COLLEGE OF AGRICULTURE HAS NEW NAME

The College of Agriculture, Rutgers University, New Brunswick, New Jersey has taken a new name. It is now the College of Agriculture and Environmental Science.

This is to relate agriculture to environment, a particularly important matter in this year of extreme drought in the East.

### Wisconsin Acreage May Be Up 25% By 1970

A partial report based on about two thirds of growers' responses, in a Wisconsin survey to show acreage, varieties and other aspects shows for one thing, that an increase in acreage of 25 percent by 1970 may be expected. Searles so far account for about 68 percent of the acreage with a slightly lower share, 67 percent expected by 1970.

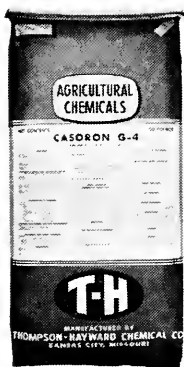
Searles leads in all the Wisconsin cranberry sections with McFarlin second.

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thirds coverage report. This is 38 percent of the acreage reported so far. Not many growers yet have their total acreage covered.

The most common type of power supply for the sprinklers is the gasoline engine; electric was second and diesel third.

The preliminary report comes from the Wisconsin Statistical Reporting Service, and the complete tabulation is expected before long.

---

## TWO BLACK DATES

Did you happen to note the date of the great northeastern U. S. power black-out? It was November 9th, the sixth anniversary of the "Black Monday" of the amino triazole disaster.

---

## FRESH FROM THE FIELDS

*Continued from Page 6*

Few growers put in planks and attempted before November first to start to flood for winter, or at least make a start in that direction. However, not much progress was being made as November came in. The weather continued absolutely dry and with no rain in sight and unusually cold. Snow had fallen in the mountains of New Hampshire and on November first there were a few flurries in the Boston area, and a dusting on the bogs.

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### 1966 Bud Set

The fall bud set for the 1966 crop was reported to be good.

### Fall Frost Loss

The State Bog estimated the fall frost loss as close to 40,000 barrels, including that freak August freeze.

---

## NEW JERSEY

### N. J. Also Drought-Stricken

The drought continued through the month of October. Only 1.26 inches of rain fell during the month, bringing the deficiency of rainfall for the year to 10 inches. So far in 1965 it has totaled only 26.67 inches—even less than the 29.07 inches which occurred in the first 10 months of 1964 which was considered a very severe drought year. Only March and July in 1965 have had near normal rainfall. In the past 36 months only 8 have had normal rainfall. The accumulated deficiency during the past three years is about 19 inches. In the memory of older growers, cranberry bog reservoirs in New Jersey are drier than ever before for this time of year. In several cases there was not enough water for frost reflows during October.

### More, Severe Frosts

Frosts were of greater than normal frequency and of greater than normal severity. There were 21 frost calls during the month, with several bog temperatures below 20 degrees. The most severe occurred on October 30 and 31 when the mercury plunged to 12 and 11°. The most damaging, however, occurred on October 5 when there was still a large proportion of the crop unharvested. A few unflooded bogs lost from 16% to 20% of the berries. On one small property, where the temperature dropped to 14 degrees, the damage was estimated at over 50% of the unharvested berries.

### October Cold Month

The average temperature for October was 53.2 degrees, the fourth coldest for this month in the 36-year history of weather records at Pemberton.

### Drought Cut Crop

As of the end of October the cranberry harvest was more than 95% complete. Most of the smaller growers are running slightly below their estimates but the larger growers appear to be exceeding their estimates slightly. This prompted the New Jersey Crop Reporting Service to revise its estimate of 141,000 barrels, published on August 25th, to 150,000 barrels, published on October 14th. If this estimate holds, New Jersey would be only 3,000 barrels shy of the extremely good production of 153,000 barrels in 1964. Most growers feel that had it not been for the drought the 1965 crop would easily have exceeded that of 1964.

---

## WISCONSIN

### October Dry

October was as dry as September and August were wet. The month's rainfall in most of the cranberry areas was slightly under an inch or less than half of the 2.30 inch average. This was the second driest on record, being eclipsed by the 1944 total of .14 inch. Total rainfall for the year now measures close to 36 inches or 6 inches above the total annual average. The warmest day was 79 on the 18th and the coldest was 10 degrees on the 13th. The month started cold and wet and ended up dry and warm. Over half of the days averaged above 60 degrees with skys mostly sunny. There were only eight overcast days and only four days with less than an hour of sunshine. The combined temperature averaged about normal to one degree above normal for the month. The outlook for November call for below normal precipitation and normal temperatures.

### Fast Harvest

The advent of better weather brought harvest to a close quite rapidly by the third week of October. A number of marshes

*Continued on Page 20*

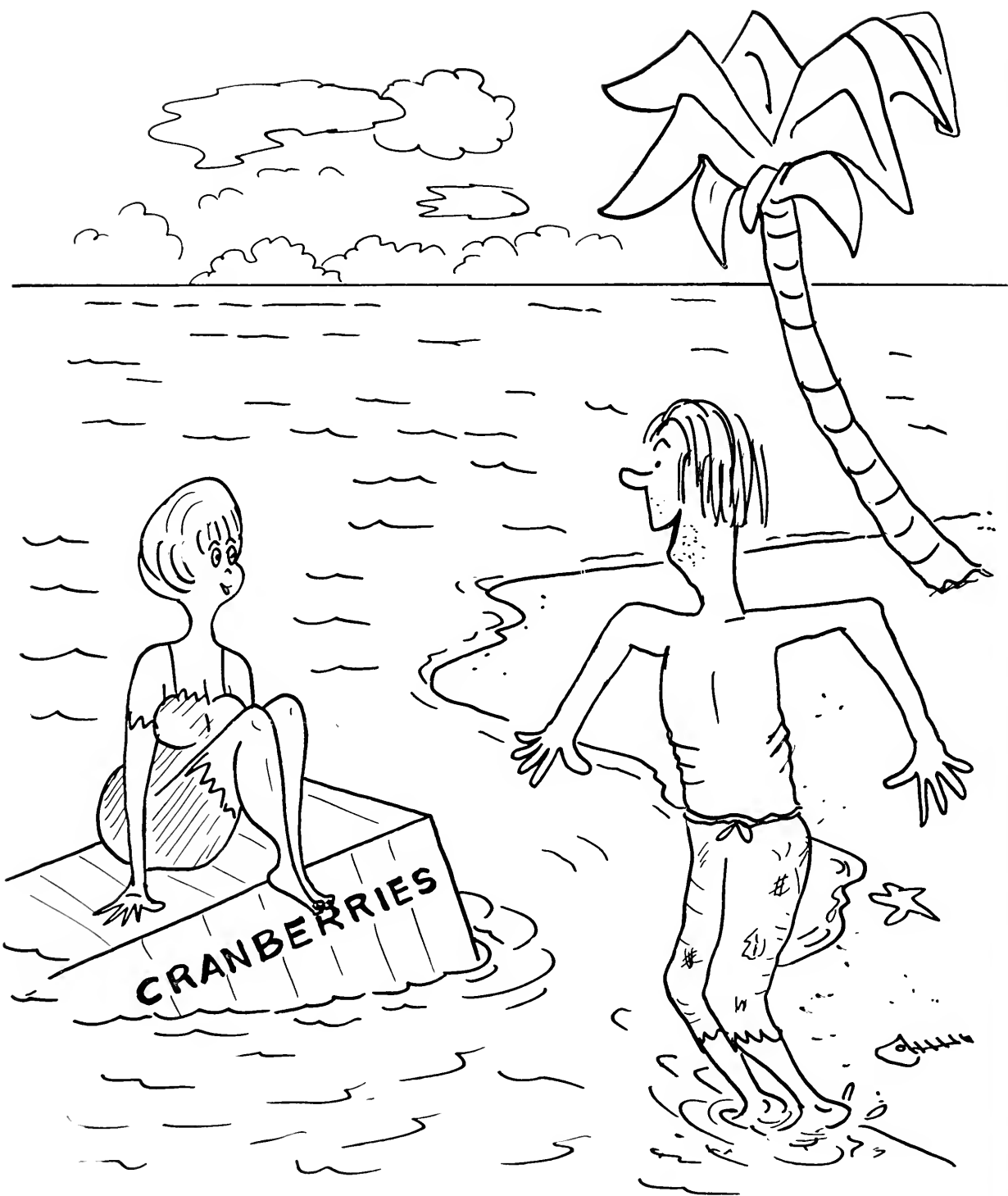
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## GROWERS DESERVE CREDIT

That the cranberry industry this fall has achieved a national production now estimated at about 1,380,000 barrels is a fact upon which the growers should be congratulated. This was accomplished with very little cooperation from Nature. Especially was this true in Massachusetts and Wisconsin, the two greatest producing areas.

The weather has definitely been "agin" these two regions for most of 1965.

The Wisconsin growers had altogether too much rain, too much water and there were frosts and considerable hail loss.

In Massachusetts, and to a lesser extent in Jersey there was nowhere near enough rain, and there were losses from frost, in fact an unusually early August one in the Bay State. The Massachusetts growers spent "like a drunken sailor" to get water to their acres in any way during the long drought, starting early in the summer and still continuing. They worked at this day and night.

It was the perseverance and the increasing know-how of growers that did pull this season through to the crop it produced.

And now in Massachusetts, the drought, the worst since 1817, when weather records were first kept, the situation is critical in the extreme. The growers struggled desperately in the summer to keep their vines from drying up. Now they are battling to save these same vines from perhaps a fearful winterkill from lack of flowage water.

## THANKSGIVING 1965

This is the Thanksgiving time, that one day of the year traditionally most associated with cranberry and the turkey. We believe most growers have something to be thankful about. The real active year of cranberry labor is over.

The price for fresh cranberries is the highest since 1952, and independent commercial processors paid a very good price for fruit, perhaps a little too much, but a very short crop was at first feared.

Many growers, even many in drought-stricken Massachusetts got excellent pro-

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EDITH S. HALL — Associate Editor  
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DR. CHESTER E. CROSS  
Director Mass. Cranberry Experiment Station  
East Wareham, Massachusetts

### New Jersey

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

duction, 100 barrels to the acre — and as just stated, prices are up. Yes, the industry at this period of Thanksgiving has come a long, long way since the "Black Monday" of November 9, six years ago when that fateful amino triazole disaster occurred.

did not start harvesting until the 4th of the month. At month's end only two marshes in north-eastern Wisconsin were still reporting harvesting. Needless to say berry color was exceedingly good and berry size was larger on the late raked berries. Some over-ripeness was noted on the late raking, but these berries were being shipped right out for processing. The warm, humid weather the middle of the month triggered the development of much storage rots, which necessitated some fresh berries being run into freezers. There were also some light hail storms the third week of the month but berry loss was light.

#### Only One-Quarter Fresh

The Wisconsin crop continues to hang near the 400,000 barrel figure with late sizing due to delayed harvesting making up some increase. Of the total crop only twenty-five per cent or about 100,000 is expected to be sold fresh. This is the smallest amount shipped fresh from the

Badger State in most growers' memory and can be attributed to the hail storms, poor keeping quality due to excessive rains in July, August and September and severe bruising from mechanical handling.

## WASHINGTON

#### Harvest Completed

Harvest in Washington was completed by about the first of November. Some growers in the North Beach area by early November were pruning.

#### Ample Water For Harvest

October brought mostly excellent weather. The total of rain for the month of October was 7.69 inches, a bit soggy, but prior to that the weather had been dry. Fifteen days in October registered rain, but in between two inches of rainfall on October 4th and 1.29 on the 18th the sun was warm and clear.

There was enough water to assure water harvest in the Long Beach area, even though in the first week of harvest water supplies seemed dangerously low.

#### Temperatures Fairly Even

Temperatures for October remained fairly even. Mean high

for the month was 61.29 F.; mean low was 44.12 degrees. Actual highest was 75, and the low on the bogs was 28, which was on the morning of the 9th. There were four days with 70 and above and five with 65 and above. Twelve days recorded below 39, all but one coming after the 14th.

#### Personal

Mrs. Irma Anderson who has been secretary at the Coastal Washington Experiment Station has been transferred to the station at Pullman and is making her home there as of October 15. She is succeeded by Mrs. Edith Bratto (Mrs. Ben Bratto).

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Earnings per share for the quarter ended September 30 in-

creased 29% to 53¢, as compared with 41¢ for the same period last year. Net income for the company was \$395,071 for the quarter, up from \$303,638, on sales of \$20,489,799, an improvement of 11% over \$18,487,461 for the comparable period in 1964.

Nine months figures were higher for 1965 also, Mr. Dean reported. Earnings per share were 1.77 (as compared to \$1.23). Net income increased 44% from \$914,837 to \$1,318,507. Net sales for the nine month period were

\$61,855,369 versus \$56,656,398 (up 9%).

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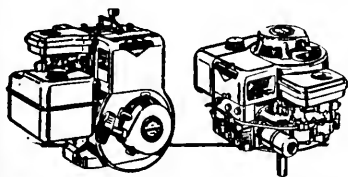
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### BUCKNER WINS ADVERTISING PRIZE

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# **Mass. Cranberry**

## **Station and Field Notes**

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

### **Weather**

November continued the cold, dry cycle that we seem to be caught in. The temperature averaged nearly 3 degrees a day below normal for the month. It is difficult to remember the last month with above normal temperatures; actually May is the only month this year and it was about  $\frac{1}{2}$  degree a day on the plus side. Precipitation measured 2.86 inches for November, about  $1\frac{3}{4}$  below the 30 year average for East Wareham. Largest single storm occurred on the 11th and 12th with .76 inch recorded. We are now more than  $16\frac{1}{2}$  inches deficient for the year.

### **Guest Columnist**

We are extremely happy to present Dr. Chester Cross writing on a subject that is very near and dear to his heart (in fact, to all of our hearts here at the Station) — the Massachusetts cranberry crop. He presents some of his thoughts in relation to one weather factor and the size of crop.

### **COLD IN SPRING AND THE MASSACHUSETTS CROP**

by

C. E. Cross

It was in May, 1952 that Dr.

Henry J. Franklin said to me "If the mean April temperature is below 43 degrees F. or that of May is below 53 degrees F., the crop is sure not to be large in Massachusetts." All Cape Cod growers are aware of the penetrating studies made by Dr. Franklin of the relation of weather to the cranberry crop. When I heard the above statement, I copied it verbatim into my copy of Doc's bulletin "Cranberry Weather and Water," and so can quote his statement in what is obviously his own phrasing.

Irving Demoranville and I decided to check this statement, and we did, using Middleboro temperature records all the way back to 1888. In every year in which the mean temperature of

April was below 43 degrees or the mean temperature of May was below 53 degrees, the following crop in Massachusetts was average or less than average.

During the frost season last spring there were many discussions about the prospects of the 1965 crop chiefly because the mean April temperatures at Middleboro was 42.67 degrees F. The crop is now gathered and gives rather clear evidence of being the third largest crop of record in Massachusetts. In other words, the crop is large despite the fact that April temperatures averaged lower than 43 degrees. This is the first time such a relation has developed in almost 80 years of record. Can we learn something from such an observation? Can this experience shed more light on *why* the relationship existed unbroken for so long a period of time? If so, perhaps we can alter our bog management in the future to avoid small crops following cold springs.

There is probably little or no question that cold springs reduce the crop prospect by causing frost injury to the flower

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buds. The staff at the Cranberry Station has become increasingly concerned that some spring frost damage does undetected until bloom or later, and it appears that this type of damage is probably more common in

Barnstable County than in Plymouth County. Many instances have been noted in the last few years indicating that the largest crops are raised on bogs most carefully protected from spring frosts.

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It now appears likely that with large acreages protected by sprinkler systems, Massachusetts growers are in a better position than formerly to protect their bogs from frost damage in the spring. We think the large crop in Massachusetts in 1965 would have been much smaller if growers had been unable to protect the bogs from the frost of May 14, 21 and later. The crop year of 1965 seems to prove again that funds spent on improved water - handling facilities are funds well invested, and that the grower who is extraordinarily careful and diligent in protecting his cranberry vines from spring damage is the grower most likely to produce large crops.

Finally it is probably best to be especially alert to the spring frost hazard when the mean April temperature is lower than 43 degrees or when as the month progresses the mean temperature of May falls below normal. Especial care is needed in early June when the spring is cold.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of December 1965—Vol. 30, No. 7

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

**Final '65 Month Starts Dry**  
With December about one-third gone (as this is written), the big drought continues. Rainfall, as recorded at the Cranberry Station was only one-tenth of an inch for the month so far. The month was also running about a degree a day colder than normal.

Dr. C. E. Cross, director of the Station was of the opinion that perhaps about half of the Mass. bogs would eventually get winter flowage to prevent excessive winterkill. The State Bog was one of the minority that were flooded.

#### Light Rains Early November

The first rain in a long while fell over the cranberry area on the night of November 6th. However, this measured only .10 of an inch, and while it dampened the vines, did little, of course, toward helping winter supplies. There was a little scattered rain the following day and night, but again no major gain in supplies.

There was fairly good, gentle rain on November 11 and 12, this being heaviest in New England in the Southeastern Massachusetts area, the cranberry region, where it was needed. On the lower Cape more than two inches was recorded, but at the Cranberry Station, East Wareham, only .76th inch.

#### Continues Colder Than Normal

The trend of being colder than normal continued and at mid-month there was a minus of about 50 degrees. The 16th and 17th were rainy, but not very

much so.

The 18th brought much snow to northern New England and ski resorts were opened earlier than usual. There were a few spits of the white stuff in the cranberry area.

However, there was no break in the drought in Southeastern Massachusetts, and some cities and towns were taking drastic steps to conserve what little water they had on tap. Weymouth, on the edge of the cranberry area took the measure of permitting no more building permits.

There was a fairly steady rain on the day of November 22, and mostly in the cranberry area, where it was most needed, but again it was not even a dent in the long drought. A

total of .56 was recorded at State Bog.

#### Cross on TV

Dr. Chester E. Cross, director of Cranberry Experiment Station was interviewed at considerable length at the State Bog on November 23, about the long drought and its effect on the cranberry. He said it was feared about half the crop might be lost because of winterkill, and that the rainfall deficiency this year to that date was 16 inches.

A fairly good rain occurred again on the 27th.

#### Nov. Another Month Lacking

Still another month in the long, long drought, ended November 30 with rainfall at the State Bog totalling only 2.86 inches. Average is 3.89 inches for November.

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November ended and December came in on a cold note. The month had a minus of 83 degrees in temperature. Small bodies of water were skimming over with ice and the ground was beginning to harden up a little. At the start of the last month in 1965 the departure from normal in temperature was a huge 713 degrees, since January 1.

## NEW JERSEY

### Drought Getting Acute

The long extended drought continued through the month of

November. Only 1.35 inches of rainfall occurred during the month. The deficiency for 1965 is now 12.11 inches. This year's drought is surpassing in severity that of 1964. Precipitation thru November total 28.02 inches for 1965; in 1964 over the same period the total was 30.73. Normal rainfall for the 11 months is 40.13. There must be some generous rainfall soon or some cranberry growers in New Jersey will not have enough water for the winter flooding. Fortunately a relatively mild spell of weather in late November has kept the soil unfrozen.

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## November Cold

The temperature during November averaged 44.9—about 1.3 degrees colder than normal. Growers still harvesting in early November had a little difficulty with the cold weather. During the first 10 days of the month, 7 nights were severely cold, with temperatures going down to 10 and the low teens. There was negligible damage to berries, the main trouble being the hardship to the workers.

### Record Yields

A late release of the New Jersey Crop Reporting Service on November 15th again raised the estimate of New Jersey's Crop for 1965. It is now put at 159,000 barrels, about 6,000 barrels more than last year. Unofficially this is considered a record year from the standpoint of yield per acre. Quite a few bogs produced more than 100 barrels per acre and the average will probably be over 50.

## OREGON

### Had Dry Summer

Oregon cranberry growers had a good but unusual year. There was an unusually dry spring and summer. There are only 2.80 inches of precipitation from the end of April until October first.

### Frosts in September

Some frosty nights in September did some crop damage, but there were no frosts in October, or November.

### Rainy November

November made up for the dry summer with nearly 12 inches of rain, there being very few days without some rain.

### Sprinklers Aided

The crop exceeded earlier estimates and there were especially good yields on bogs protected by sprinklers—most bogs so unprotected had low yields.

### Top Crop

Probably the top producer this year was Fred Hulton, with 140 barrels on one quarters acre, or at the rate of 560 barrels to the acre. The berries were McFarlins.

Continued on Page 16

# DuBAY CRANBERRY COMPANY MARSH IN WISCONSIN HAS THE REPUTATION OF ONE OF THE FINEST CRANBERRY PROPERTIES

**No Expense was spared in development of this 120 acre marsh, Nor now in its upkeep—Principal owners are Roy M. Potter and Albert E. Bark of Wisconsin Rapids**

*By CLARENCE J. HALL*

There is the old saying, "What's in a name?" There is plenty if you are referring to the DuBay cranberry marsh in Wisconsin, which has the reputation of being one of the finest, if not the finest cranberry properties in existence. A visit to this marsh of 120 acres, 28 miles north of Wisconsin Rapids in the township of Eau Plaine in the county of Portage, reveals why it has this reputation.

The marsh was carefully engineered, using all the best concepts of cranberry marsh, when it was first conceived. This applies to water management and every phase of cranberry growing. The marsh, with the completion of 10 acres last year is a perfect square as it was originally planned and is beautifully maintained.

Du Bay is not the largest marsh in Wisconsin, and this is one reason why it is not the top producer, but its production is enviable.

## *930 Acres In All*

DuBay is built on a tamarack and black spruce swamp. The spot was selected because it was easy to build as there were no trees to speak of to be taken out. The bottom consists of from three to fifteen feet of peat.

There are 930 acres of land in all in the property. Entrance is near the DuBay Park along the shores of the DuBay Lake, this lake being formed by the damming up of a portion of the Wisconsin River for a paper company to get the water power. DuBay owns a long shore line on this lake. DuBay Park is a beautiful recreation area for the town of Eau Plaine.

The name DuBay has a rather interesting history. DuBay was part Indian and part French, and was a descendant of Chief Oshkosh of the Winnebago Indian tribe. There is a story concerning him going back to around 1840, that he owned a lot of the former timber land in the area, when lumber was king in Wisconsin. The story is he was accused of killing a man who tried to get this timber land away from him and was taken to court and tried. The results of the trial seem to be

lost in the mists of time. His burial place was so close to the

marsh property that the name of DuBay was taken.

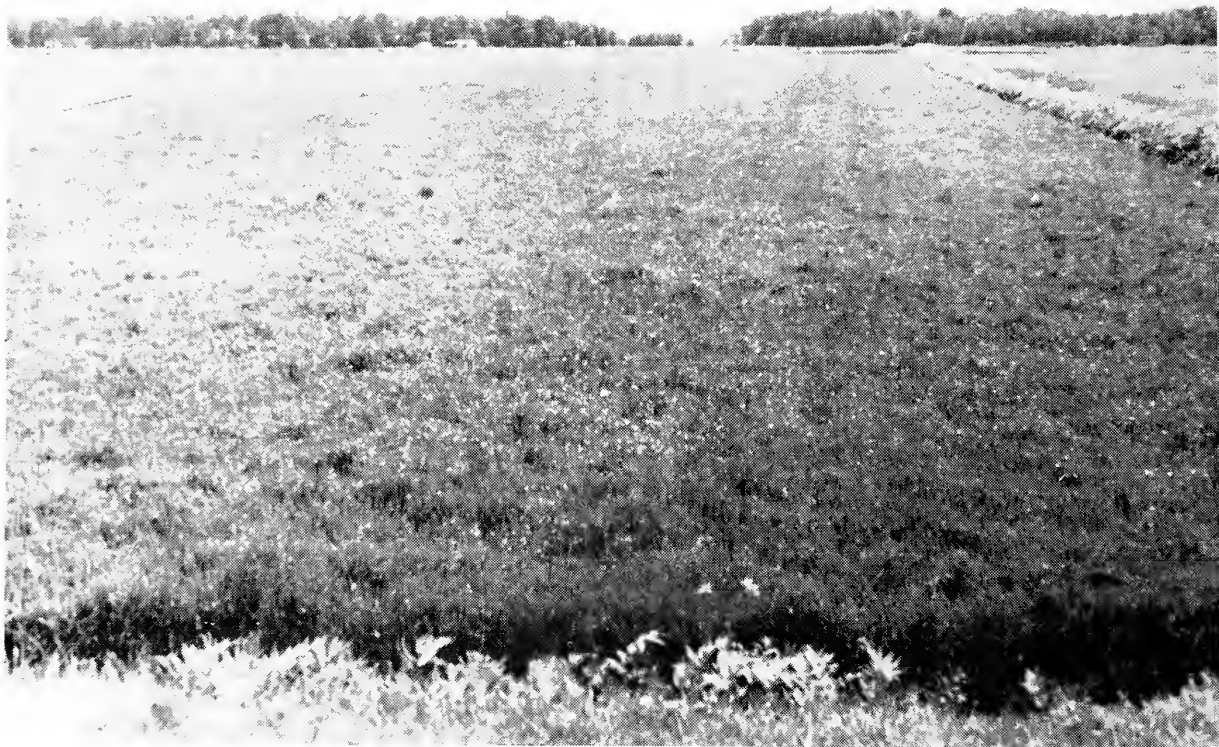
The building of DuBay was conceived by a group of men of Wisconsin Rapids, notably Roy M. Potter, a well-known Wisconsin cranberry grower, Albert E. Bark, the late Theodore Alson (whose family now own stock), and the late Ralph Cole. Today Potter and Bark are the active ones in its management.

## *Started in 1945*

The marsh was started in 1945, and incidentally, German prisoners were used in part of the construction. The marsh was set



**"Al" E. Bark and Roy Potter, chief owners of DuBay Cranberry Marsh. (CRANBERRIES Photo)**



**Vast DuBay, with some of the buildings in the far distance.**

**(CRANBERRIES Photo)**

up for 100 acres, but this plan was increased to the present acreage.

DuBay is planted mostly to Searles, plus 18 acres of McFarlin and last year there has been planted 10 acres of the new hybrid of Stevens.

Also have been planted 8000 trees of Black Hill Spruce and several thousand of Norway Pine on the property.

In the building of DuBay no necessary cost to achieve the finest possible cranberry marsh was omitted and there were consultations with experts, such as Dr. Malcolm N. Dana of the University of Wisconsin and others. Ten acres of the marsh were built on sand and the others on raw peat. At DuBay all the beds are larger than the Wisconsin average of 100 wide by

800 feet long. 3½ beds are 150 feet wide by 900 and four are the same width but a majestic 1500 feet long.

#### *Water Supply Excellent*

DuBay's water supply is very, very good. The supply from the lake is handled by two 25,000 gpm Peerless pumps and one Murray. There is also a supplementary reservoir with a pump-house to pump the water in and off again, giving one flood for the back 18 beds to assure quick coverage for frost protection. All of this was planned at the start.

At present there are Rain Bird Sprinkler heads on 25 acres, and more are planned to replace the former method of covering by flood.

At what might be called the head of the huge marsh is a

little village of attractive white structures with the surrounding grass clipped. One is a large warehouse, 60 by 160 feet of two stories. There are two homes for the foreman and another worker.

DuBay, like many other Wisconsin marshes has a complete machine shop, this one 40 feet by 120 feet. There any kind of repair work and building of new equipment can be done. The maintenance work is supervised by Harry Kees, who has been at the marsh since its inception.

Manager at DuBay is Harold Mezera, who has been on the property since 1949. He is considered thoroughly competent to make decisions and to operate the big enterprise under direction of the owners. He is from



DuBay Marsh, showing the wide dikes separating the beds.

(CRANBERRIES Photo)

Eastman, in the dairy country of Wisconsin. He is a graduate of the agricultural school of the University of Wisconsin and after graduation he came to DuBay to assume charge.

Another all-year round worker on the marsh is Arthur Neimi, who also assists in the actual flooding work.

A partial list of equipment includes a Koehring shovel, a Carge bulldozer-tractor, cleaning equipment, two driers, a Hopto front end loader, steel float boats for harvest, two being used behind each picker and built in the shop from an original of the Case model; four trucks, a pickup, a ground spraying machine and one duster, a Koebling shovel and a large tractor. The separators are Baileys, six in

number. Three or four of the harvesting machines are riding models. There are two Spec-Dee packers for fresh fruit.

#### *The Spectacular "Bridge"*

The most spectacular piece of equipment is the huge so-called "bridge," one of three in Wisconsin. No other cranberry area except Wisconsin has this ingenious piece of equipment. The bridge is 186 feet long, both ends being mounted on trucks on the opposite dikes. At its highest point in the center it is 13 feet high, the ends slope to five feet. About 13,000 pounds of steel went into its construction, which was done at DuBay.

Below the bridge itself there is a working platform, which traverses the width of the bridge. From the bridge, clipping weeds

and grass, application of spray materials and fertilizer are accomplished. The bridge trucks, as the operations progress, move down the width of the bed. The object of the huge contraption is to prevent any stepping on the vines of the beds. The day the writer saw it, the bridge was being used in clipping, but at the moment the photograph was taken the men were not at work.

In addition to the two year-around workers at DuBay there are nine during the summer and twenty-one during harvest.

Like many growers everywhere hives of bees are kept for pollination.

#### *Production*

The average production at DuBay, according to Mr. Bark is

125 to 150 barrels per acre, which considerably exceeds the state average. One year there were 200 barrels per acre on 92 acres. Severe frosts for the last two years have cut production.

#### *Quality Objective*

Quality fruit is one of the aims of Mr. Potter and Mr. Bark. Harvest is late at DuBay to enable berries to attain full size and especially color. Neither man has much consideration for growers who pile on excess quantities of fertilizer to achieve the utmost in production at the expense of good quality.

#### *Mr. Bark*

The DuBay marsh is the first venture into cranberries for Mr. Bark. He was born in Wauwatosa, a suburb of Milwaukee. During World War I he was in service. He saw service in the latter part of the war.

For ten years he practiced as a certified public accountant. Later he became secretary-treasurer of Preway, Inc. of Wisconsin Rapids, manufacturers of cooking, heating appliances, and other items. He retired from Preway in 1960.

Since his retirement from Pre-

way, Mr. Bark has devoted his time to the DuBay marsh. However, he still remains a director of Preway, Inc. He is at present a director of Ocean Spray. He is a director of the Hospital Association of Wisconsin Rapids, a member of the Rapids Board of Appeals; a member of the water and light commission of Wisconsin Rapids. He has been a Rotarian for 34 years and a past president.

Mr. Bark is an example of a successful business man who has added the strength of his business experience to the cranberry industry in Wisconsin.

#### *Mr. Potter*

(Cranberries, Nov. 1943)

Roy M. Potter is a veteran of the Wisconsin cranberry industry, being the son of the late M. O. Potter who began his cranberry career in 1870—one of the pioneers. Since that time the distinguished Potter name has been among the leaders in Wisconsin cranberries.

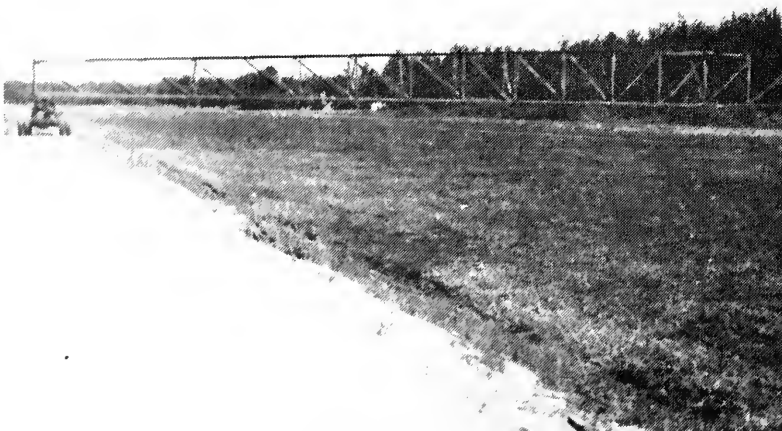
Roy operates, besides DuBay, a marsh of 120 acres at Cranmoor. This is under the name of Potter and Son. The son is Melvin, who has a rather fabulous reputation as a calf roper, being considered one of the ten best in the country. He is a graduate of the University of Arizona, where he majored in animal husbandry. He is married to a girl from Arizona and has one daughter. Mrs. Melvin Potter shares her husband's enthusiasm for horses and rodeo exhibitions. At the time of this interview Melvin had just purchased 170 head of horses, steers, bulls and calves in Minnesota for use in travelling rodeos in which he takes part.

Roy, three or four miles from his marsh at the old Potter homestead at Cranmoor, has large tree forests of spruce and pines at Port Edwards. For years he has also grown mink for fur at the Cranmoor homestead, now having as many as 8,500.

Roy's other son is John M., was formerly District Attorney of Wood County and a former Wis-



**Manager Harold Mezera of DuBay. (CRANBERRIES Photo)**



**The gigantic "Brooklyn Bridge" at Dubay over a bed. (far end merges into the wooded background.)**

**(CRANBERRIES Photo)**

consin State senator. He is now very active in the legal profession and is a member of a Wisconsin Rapids firm of attorneys. He was also a director of Ocean Spray a few years ago, and is currently hearing master of a committee which is studying Wisconsin water resources, a subject vital, of course to Wisconsin cranberry growers.

Roy's brother is Guy, now retired from active cranberry work but for many years one of the leading Wisconsin cranberry growers with large holdings at Camp Douglas, now managed by his grandson, Bruce.

Finally it can be said that a visit to large DuBay with its enormous beds, mostly free from weeds, its well-balanced water system and general sound enterprise is a "treat" to anyone interested in the cultivation of cranberries.

### NEW WASHINGTON WATERWAY SHOULD NOT INJURE OYSTER AND CRANBERRY GROWING

A second hearing was held recently concerning the proposed 110 mile intra-coastal waterway from near Olympia, Washington to a point near Ilwaco and Grayland cranberry areas at Olympia. At this hearing at the state capital, State Representative Julia Butler Hansen, endorsed the project. However, she made a reservation on her endorsement that the waterway would in no way hinder the cranberry and oyster industries.

### "BILL" DUFORT RESIGNS AS OCEAN SPRAY BANDON MANAGER

William T. Dufort, Southwestern Oregon cranberry area manager for Ocean Spray Cranberries, Inc. has resigned his post. His resignation became effective November 30.

Mr. Dufort, who is a grower in his own right, and one of the ablest men on the West Coast had been associated with Ocean Spray for the past 12 years.

## Mass. Crop Up To 715,000; U. S. Total Up 8%

The big surprise of the 1965 yield was the size of the Massachusetts crop, which is estimated by the USDA crop Reporting Service as 715,000 barrels. This was in spite of the prolonged Southeastern Mass. drought now called the worst since 1817, or when records were first kept.

"Yields were highly variable due to water shortages for some bogs and also because of scattered frost and freeze losses. Bogs with sprinkler systems or adequate conventional water flowage, however, generally realized very heavy crops. Size of berries was particularly good for the Howe variety."

It now seems clear if it had not been for the drought and to a lesser extent frost, the 800,000 barrels or the largest production ever, which seemed in prospect early last summer before the drought struck, would have been realized.

This production is 8 percent more than 1964 and the third largest of record.

The U.S. total is 1,380,000 barrels, as compared to that of last year of 1,314,500 and the five-year average of 1,281,560; and 8 percent larger than average.

New Jersey, also hit by the general Eastern drought is up to 159,000, last year 153,000 and average, 93,360.

Report said Jersey turned out heavier than expected crop although there was considerable loss in some bogs because of frost damage. A lack of water for protective uses was noted as a contributing factor to the frost damage. An ever increasing number of growers are converting to the "wet-pick" method of harvest; this coupled with frost-free springs the past two years has contributed to better yields. The crop was the largest

since 1937 when 175,000 barrels were harvested.

Also up is Oregon with 40,000 barrels, down from that of last average 30,060.

Wisconsin produced, 400,000 barrels, down from that of last year of 430,000, and down from the average of 412,400. Wisconsin had too much water, hail, frost and a generally bad growing season.

Washington also is down to 66,000 slightly lower than 1964 with 67,000 and down from the average of 90,340.

### Cranberry Labels

Wanted as a gift or trade, "labels" from Eatmor, Ocean Spray and independents from all cranberry-growing regions; with the exception of one label, can, in return, furnish all copies of all Wisconsin brands to any interested parties.

Like the Silver Dollar, these labels are fast disappearing, and should be garnered for museums and such.

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### READ CRANBERRIES

# SOMETHING "CRANBERRY NEW;" IT IS "CRANBERRY COLOGNE"



Kenneth Rochefort (left) and Warren Fournier, in their "home" factory.

(CRANBERRIES Photo)

## Two Young Men, Start in Small Way a Different Cranberry Product — One a Worker at Mass. Cranberry Experiment Station

There is a brand new cranberry product out—even though it will take none of the cranberry crop. This is a delightful "Cranberry Cologne," put out by the Cranberry Cologne and Perfume Corporation of America. This is a new firm, located at 39 View Street, Agawam Shores, East Wareham, Mass. P.O. Box 257, telephone 295-9147.

It is now in its second year of operation, and is doing a thriving business, small so far, but it is expected to grow. The reason the new business will take none of the cranberry crop is because no fruit is involved. The basic oil used in the cranberry cologne is made from the cranberry vine stems, leaves and flowers. This is done by a firm in New Jersey, so it very likely the vines used are Jersey vines. However, the product will spread the word "cranberry."

The founder of the new enterprise is Warren Fournier, a young bachelor. His co-worker in spare time is his cousin, Kenneth J. Rochefort, also a bache-

lor. Rochefort has been engaged in the cranberry business for some years. He is laboratory assistant to Dr. Bert M. Zucker- man at the Massachusetts Cran- berry Experiment Station. Roche- fort also assists "weather man" George Rouns-ville in the vital work of preparing frost warnings and sometimes issues these re- ports himself.

Both the Station and the work- ing place of the Cologne company are on Glenn Charlie Road, and are within walking distance of each other. The two young men make their home at the 39 View Street address.

Fournier is a native of South Windham, Maine, and got his idea of the Cranberry Cologne when he arrived in Wareham about two years ago. He says he found everything to be "cran- berry this and cranberry that."

In addition to cranberry co- logne he put out various per- fumes and began doing this in Boston about four years ago after working at various jobs in the Massachusetts capital. When he

was at Windham High, taking a business course he found that he was very much interested in chemistry. While in Boston he met a graduate chemist of Yale, who was familiar with colognes and perfumes. "From that I guess I just stumbled into the cologne- perfume business." Anyway he started making perfumes, with the chemist friend working for him. He started with a capital investment of \$25.00.

The perfume goes out under the name "Marquis de Fournier," and using his French background the bottle has a signet, a large scrolled letter "M," across the background of a picture of Eiffel Tower in Paris.

While the "Cranberry cologne" is put out by the corporation, the perfume business, which is not incorporated uses some rather unusual ingredients such as oils of mint, essence of foin (cucum- ber, lime, tulip, tangerine and celery). He has even added es- sence of tobacco to bring out a flavor for men.

What he does in practice is to think up a scent he wants, like his "Cranberry Cologne," or May- flower and instructs the firm in New Jersey to make him the basic oils. Then he and Roche- fort bottle it, adding the alco- hol used in perfumes. This is done at the house at Agawam Shores at present. The firm pro- duces scents in perfume to order.

With a product developed, Fournier "goes on the road," and distributes the product to retail outlets. There are some in Bos- ton, and more on Cape Cod such as gift shops (a prolific source in the vacation summer), drug stores and department stores.

As to the corporation, Roche- fort is president, Fournier, treas- urer, Rochefort's stepfather, Leo Carney, who is a former mayor of New Bedford is a director, and a New Bedford attorney, An- thony Fiore is clerk.

Fournier when he found his way to Wareham, liked the town

and found it has few industries and so hopes to add another in the "Cranberry Cologne" Corporation. Fournier hopes as his business expands nationally, with the "magic" name cranberry, to build or rent a larger building than the house at 39 View Street, perhaps to hire a registered chemist and become a manufacturer of colognes and perfumes, rather than merely "idea man" and distributor.

### **Possible Cranberry Development in State of Minnesota**

**Meeting Last Month by State Department of Agriculture;  
Three from Wisconsin Attend**

Official Minnesota seems to be interested in getting into the cranberry business. November 23 saw a meeting at Minnesota Department of Agriculture, St. Paul with a large attendance.

The meeting was conducted by State Commissioner of Agriculture Russell G. Schwandt, other

representatives of State Dept. of Agriculture, Federal agencies and growers from Wisconsin.

Commissioner Schwandt is reported as being enthusiastic about cranberry growing in that state, which at present has about 5 acres in cranberries as compared to Wisconsin's 5,000 plus, yet has many of the necessary natural resources, and perhaps even more acreage suitable to cranberry growing than has Wisconsin. Purpose of the meeting as expressed by Donald M. Coe, State director of plant industry was to "encourage the cranberry industry of Wisconsin to make known the background of the industry, its trends and its needs for possible expansion into Minnesota."

Attending from Wisconsin were Tony Jonjak, large Wisconsin grower and a director of Ocean Spray; Vernon Goldsworthy, president of Cranberry Products of Eagle River and also a large grower and Richard Indermuhle, president of Wisconsin Cranberry

Growers' Association and large grower of Manitowish Waters.

Others attending included: Commissioner William T. Ferrell, Minnesota Department of Business Development, Commissioner A. M. Deyoannes, Iron Range Resources and Rehabilitation, James Clark, OEO; Urban Ewing, ASCS; Sydney Frellesen, Minnesota Dept. of Conservation; Art Hansen, FHA; Waldo Johnson, Minnesota Department of Agriculture; Frank Murray, Attorney General's Office; Harvey Ostrander, FVC; Viadimir Shipa, ARAL.

### **U. of MASS. AGRICULTURE ENROLLMENT UP**

Is interest in agriculture losing ground in the universities this year? Not if the College Agriculture of the University of Massachusetts is any indication. There, enrollment shows a gain of 20 percent, or the highest number in the more than 100-year history of the university.

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(Photo by Vernon Blackstone, Mass. Farm Bureau Federation)

Morris Makepeace of the A. D. Makepeace Co. of Wareham was presented a certificate commemorating 25 years of membership in the Massachusetts Farm Bureau Federation.

Making the presentation was David Mann (left) of Buzzards Bay, President of the Plymouth County Farm Bureau.

The A. D. Makepeace Co. who ship to Ocean Spray, is the world's largest producer of cranberries with a total annual production of 7½ million pounds.

The Massachusetts Farm Bureau Federation is affiliated with the American Farm Bureau Federation, the largest general farmer's organization in the world.

Another cranberry grower with a 25 year record is Malcolm Ryder of Cotuit.

## Dave Mann Elected President Plymouth County Farm Bureau

David Mann, a thirty-six year old cranberry grower from Buzzards Bay, Mass. is the new President of the Plymouth County Farm Bureau. Mr. Mann also was elected to the Board of Directors of the Massachusetts Farm Bureau Federation at its Annual Meeting at Lenox, Massachusetts, November 16 and 17.

A graduate of the University of Massachusetts and a member of the Alpha Gamma Rho Fraternity, Dave received his Bachelor of Science degree in 1951. Following a tour of duty in the U. S. Navy, he turned his attention to the business of farming. Confronted with economic problems in the industry, Dave has innovated to reduce his per unit production costs through mechanization and increased production. This includes being a

member of Ocean Spray Cranberry Cooperative through which he ships his entire crop.

Dave is married to the former Marjorie Tatlow of Point Independence. They have two children, Susan, age six, and Gordon, age three.

In addition to his many Farm Bureau affiliations, he is Supervisor of the Plymouth County Soil Conservation District, a member of the Cape Cod Cranberry Association, Chairman of its New Variety Committee and serves on the Advisory Committee of the Ocean Spray Cooperative.

Dave is a member of the Bourne Methodist Church, the Wampatuck Lodge of Masons and the Pilgrim Royal Arch Chapter in Abington. To fill in his spare time, David holds the rank of Lieutenant Commander in the Naval Reserve.

## FARM BUREAU IN ACTION

by Vernon Blackstone

(EDITOR'S NOTE: Through the courtesy of Vernon Blackstone, staff assistant of the Massachusetts Farm Bureau Federation it is expected notes of this association of farmers, will be carried each month, or frequently under the heading "Farm Bureau in Action.")

The 1965 Legislative Program of The Massachusetts Farm Bureau Federation was most successful. We filed in our name or had filed in our behalf twelve bills. Nine of these bills were signed into law by the Governor.

However, this is not the total Legislative Program of Farm Bureau. The Legislative Program is not only what you accomplish for your people. Quite often the most important Legislative Acts are to prevent something happening to Farm Bureau members and other farmers. One has to be constantly alert to having farmers brought in under bad pieces of legislation

such as the in-land Wetlands bill. Farm Bureau was successful in having the bill amended to give those exclusively engaged in agriculture an exemption from this legislation. It was Farm Bureau's feeling that this would affect farmers who use water from streams, rivers, marshes and other wetlands. This is especially true of cranberry growers.

## Ocean Spray Fresh Fruit Cleaning Up

Ocean Spray announced to the trade November 19 that it was completely sold out of fresh fruit except for Massachusetts Late Howes. These were being quoted at \$5.00 a quarter.

At that time it announced that all plants were packing night and day for completing Thanksgiving orders. It was said also that the supply of Massachusetts Howes, while good, would be shipping to all areas, United States and Canada.

### CHARLEY GOLDSWORTHY, WIS. BRIEFLY VISITS MASS.

Charley Goldsworthy, sales manager of Cranberry Products, Inc. of Eagle River, Wisconsin was a recent brief visitor to

the Massachusetts cranberry area.

As the result of new research by Prof. Kenneth Weckel of the University of Wisconsin a new process has been invented by which cranberries can now be candied. They are in candy bars and Cranberry Products is packing them in glass, the only firm in the country to do so.

The Eagle River firm now puts out 33 products, all but nine of them cranberry based. It is reported a cranberry chili sauce is in the works.

## Hoelting Named Indian Trail General Manager

Ben G. Pannkuk, former president of Indian Trail, Inc., of Wisconsin Rapids, Wisconsin has announced that Joseph P. Hoelting has been named general manager of Indian Trail Division of Green Bay Foods Company, a wholly-owned subsidiary of Dean Foods of Chicago, which now owns Indian Trail.

Mr. Hoelting will continue as manager of fresh cranberry sales for the new division. His new post will include supervision of canned, juice and frozen product marketing.

Mr. Pannkuk will maintain his office in the Mead-Witter Building at Wisconsin Rapids, and will engage in long-range planning and grower relations for the cranberry division of Dean Foods.

At present Indian Trail markets cranberries from about 25 associate growers. Hoelting joined Indian Trail in 1954 as sales manager. Mr. Pannkuk joined in 1953 and later became president and one of the owners before its sale to Dean Foods.

## Cape Cranberry Bread Sent To Vietnam

Cape Cod Cranberry Bread for Christmas went to Vietnam this month from a campaign put on by the Dennis-Yarmouth (Mass.) Jaycees. The move be-

gan with a resolution approved and signed by selectmen and police chiefs of the two towns of Yarmouth and Dennis and Jaycee officials.

A drive was launched to collect a ton of home-baked Cape Cod delicacies, including the cranberry. (It resembles fruit cake, if you do not know this.)

Housewives brought these products (which had to be long lasting) to the Community Building at Yarmouth on Sunday, December 7th. From there the goodies were taken to Otis Air Force base, for forwarding to Vietnam.

## Dean Foods, With Indian Trail Berries, Heavy Fall Ad Plan

Dean Foods Company has scheduled the most extensive advertising effort in its forty year history this fall in support of the company's expanded line of dairy and convenience food products including Indian Trail Cranberries.

National magazines, newspaper supplements, spot television and radio will be used through Dean's nine-state marketing area in the Midwest and Upper South, it was announced by John Rockwood, executive vice president. The overall program runs from late September thru December.

Double-page spreads in full color will be used to feature five new comers to the Dean convenience food line, along with three long established dairy products, in the December issues of Better Homes & Gardens, Ladies Home Journal, Look, McCall's, Parents and Redbook. The "newcomer" products are Dean's Indian Trail frozen Cranberry with Orange and bottled cranberry juice; Flavor Charm Powdered Non-dairy Coffee Creamer; Peter Piper, Heifetz and Bud-long pickles; and Dean Prepared Foods. The newcomers are products of recently acquired companies which now operate as Dean divisions or were developed in the Dean research laboratory. The "old friends" are Vim (2%

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milk); Dean cottage cheese; and Dean sour cream.

Single pages and two-page spreads in color have been set for nine Sunday Supplements in Chicago, Indianapolis, Louisville, Detroit, Milwaukee, Cleveland, and Memphis, during the nine weeks between October 24 and December 19. Some insertions will be omnibus ads featuring all products, but the majority will focus on single brands and separate products.

News and weather shows on seven television stations in three cities will be used during the same period, with each station carrying multiple spots on various dairy products, September through December.

During the same period radio stations in four markets will carry Dean Country Charm dairy products commercials, Rockwood said.

"Our vigorous expansion into other food lines is enabling us to present many fine new products to our established customers," Rockwood said. "The Dean Country Charm label has come to represent a certain kind of dependable quality to thousands of customers. We think housewives will be glad to put the same confidence in these top quality convenience foods as they have had in our primary dairy products."

## FRESH FROM THE FIELDS

*Continued from Page 6*

### Meetings

A meeting of the West Coast Advisory Board of Ocean Spray was scheduled to be held at Bandon, December 18.

The Southwestern Cranberry Club was to host Washington growers at a pot luck dinner and social hour December 17.

### After Season Work

Growers are looking forward to a busy winter of resanding, weed control, hand pruning and setting vines on some new acreage.

## READ CRANBERRIES

## WASHINGTON

### Nov. Rain 12.76

The November weather was typical with 12.76 inches of rain, which was less than that of 1964 November, but ample. There were only three days without precipitation.

### Nov. Mild

The temperature was mild with a mean high of 54.06 and a mean low of 45.63. Some days were almost springlike, while others blew a gale. On the 19th the wind was clocked at 85-90 at North Head light. There was one cold period on the bogs from the 22nd to the 26th with a low of 23 degrees on the 24th.

### Bogs Look Good for 1966

The bogs in the Long Beach and North Beach area look especially good with good tip growth. It is better than a year ago. This is believed due to the better-than-average weather last summer.

## WISCONSIN

### November Normal

November turned out to be quite normal with no records broken and conditions, allowing much needed fall work to be completed. Both temperatures and precipitation averaged slightly above normal with 2 degrees above and one half inch above. Temperature extreme was 70 degrees in the south on the 3rd, to near 0 degrees on the 14th and 17th in the far north. On the 26th a very low pressure system passed over the state resulting in winds up to 55 miles per hour, general heavy precipitation and the low readings in 25 years. This storm brought an additional foot of snow in the far north and in excess of one inch of rain in the central and south. As of the end of the month the far north counties had from six to 22 inches of snow, south counties had none. Snow on the 24th had brought four inches of snow to the central cranberry areas, but this

melted with the rains on the 26th. The total rainfall in the central area now totals a whopping 39.34 inches to December, which is almost 10 inches above the long time normal of 30 inches. The outlook for December calls for near normal precipitation and below normal temperatures.

### Three-Quarters Processed

At month's end only slightly in excess of 1000 barrels of cranberries remained in the state to be packed fresh. Final figures will probably show less than 100,000 barrels shipped fresh or by far the smallest total in modern times. Total crop figures still are listing the state at 400,000 barrels, with  $\frac{3}{4}$ ths of the total going processed. Shrinkage was heavy on late held berries, mainly Searles, and marked the 3rd consecutive year of excess shrinkage.

### Winter Flooding

The mild weather during November had developed little frost in the old cranberry beds. New plantings were flooded primarily to prevent heaving of vines from the alternate freezing and thawing. Some growers winter flooded the last week of November with deep floods and were starting to pull out the water from under the ice due to the slow freezedown and to remove any chance of oxygen deficiencies.

## WINTER ADVICE

### WASHINGTON GROWERS

Avoid leaving any trash in your bogs and get rid of dead leaves and rotten fruit as soon as you can. This trash could be a very good medium for fungus infestation. Keep in mind to treat your bog this winter with a dormant spray such as liquid sulfur at the rate of 6 gallons per 100 gallons of water (18 gallons per acre) plus 1 to 2 ounces of a wetting agent. This treatment will control fungus diseases and it will reduce disease spreading early in the spring. (The Cranberry Vine, South Bend, Washington).

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it's cranberry flavored!"

by Bill Shelly

### A MERRY CHRISTMAS

This is the Christmas Time—the time to be jolly.

This was not an easy year for the cranberry industry, but it was a good year for the industry as a whole. The crop was large, the marketing was good, a good clean-up and prices received by the growers for both canned and processed fruit higher than they have been. It was a good year for the growers as a whole.

Of course, individually this was not true by any means. Some growers lost out through drought in the East, and also because of bad frosts. Wisconsin had more than its share of frosts and hail. Some growers individually did not fare well at all. This was not a good year for these.

And, in general, this is a world-wide troubled Christmas. If not in name, but in actuality we are at war in far off southeast Asia. There are many very troubled spots the world over. Mankind today is in a great state of change and unrest.

But, Christmas is the time to be Jolly—and reverent.

So, CRANBERRIES extends its sincere greeting and its wishes for a merry, merry Christmas to all within the cranberry industry.

### MINNESOTA, APPLES and CRANBERRIES

That is a bit of interesting news in this issue that the State of Minnesota may go in for large-scale cranberry growing. A new cranberry growing state?

This would mean more cranberries. But whether Minnesota goes in for cranberry cultivation or not, the cranberry industry is growing all the time.

The last two years have brought bumper crops, in spite of many adverse conditions, such as the great Eastern drought. We are going to have more cranberries each year to dispose of. It seems not at all impossible that the Massachusetts crop may total a million barrels by itself.

That means we have got to sell more cranberries. This can be done. We have good leadership and good advertising, chiefly by Ocean Spray in the latter.

This can be done because another old "standby" than cranberries is doing it in

CLARENCE J. HALL  
Editor and Publisher

EDITH S. HALL—Associate Editor  
Wareham, Massachusetts

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in Horticulture  
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#### Massachusetts

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

#### New Jersey

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

its field. That is the sale of apple sauce and apple juice. Apple sauce consumption has increased six times faster than the population. Apple juice nine times faster. If apples can do it so can we.

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An article in a recent issue of Agricultural Marketing, publication of the USDA tells how "Cranberry Growers Solved their Marketing Problem." This is an account of the cranberry marketing agreement and order of 1962. It tells of part of the USDA, Ocean Spray, the Cranberry Institute, and independent handlers played in this.

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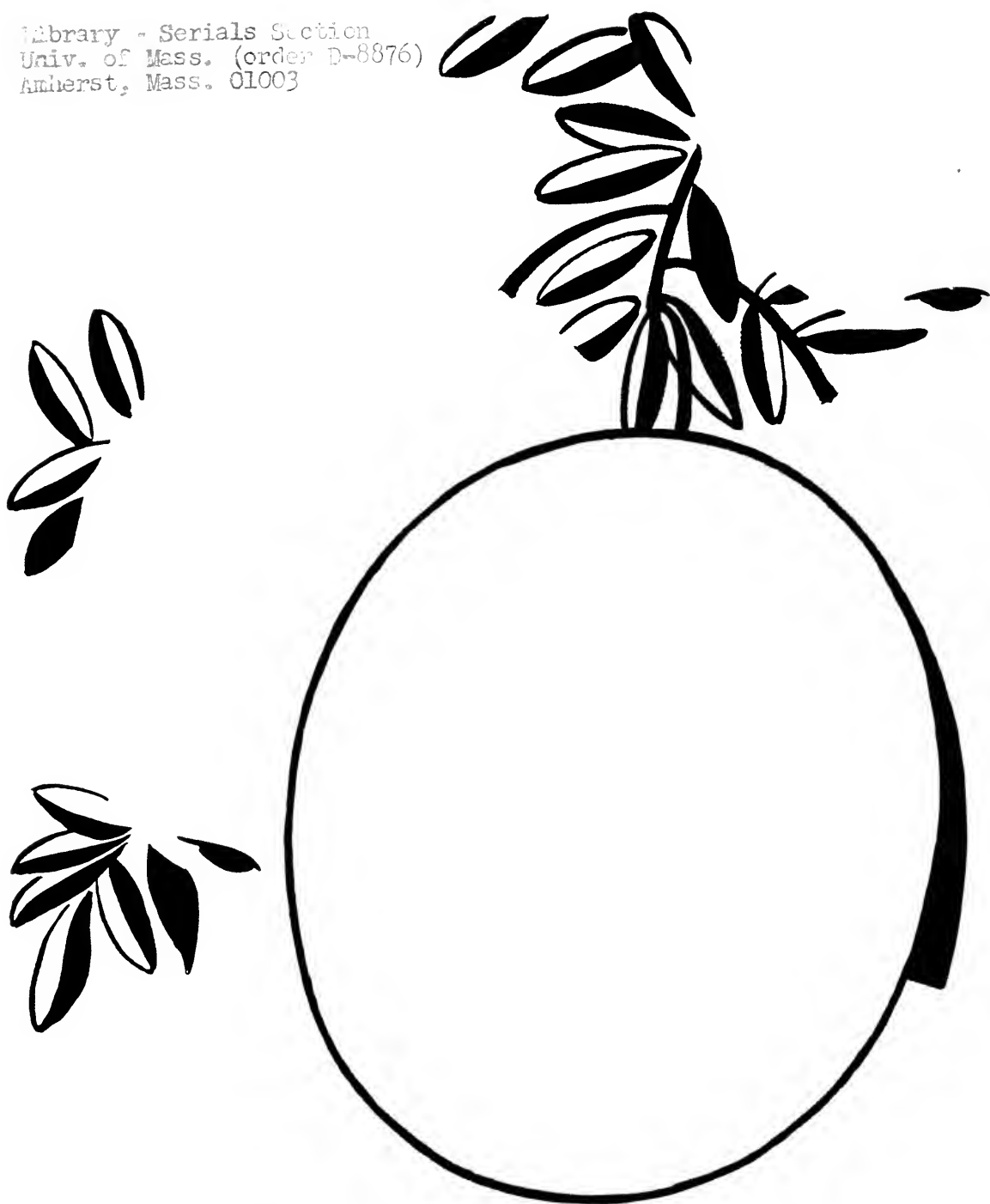
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VIVIAN KRANICK, Oregon cranberry growing widow among her famed rhododendrons.

(Photo, Western World, Bandon)

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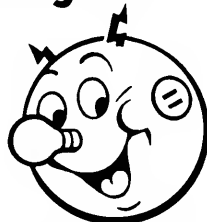
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United States production of cranberries in 1965 totaled 1,422,000 barrels, up 6 percent from last year and 11 percent above average. Sharp increases in Massachusetts and Oregon and a moderate increase in New Jersey accounted for the large crop. Wisconsin and Washington had

slightly smaller crops than last year. Massachusetts led with 745,000 barrels, accounting for more than half the United States total.

There was little winter injury or spring frost damage to the Massachusetts crop. Bloom and set were heavy and evenly distributed. Berries sized well despite the dry weather throughout most of the season. Moisture in late September helped late harvested fruit to size. Although

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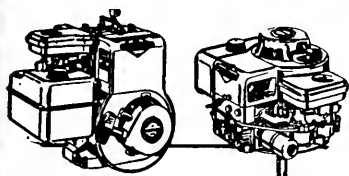
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general harvest began a few days later than in 1964, losses from fall frosts were small. Most bogs produced better than expected crops. Acreage harvested was down 100 from last year to 11,600 acres. The yield per acre at 64.2 barrels is up 7.8 barrels from 1964.

The New Jersey crop of 159,000 barrels was up 4 percent from last year and 70 percent above average. The final output was above earlier expectations. Spring frost damage was minimal and another good crop was raised from the marginal, poorly protected bogs. There was little damage from fall frosts and berries were generally of good quality and medium size. Acreage harvested was down to 2,000 acres this year, from 3,100 in 1964 but the yield per acre

increased to 53 barrels per acre in 1965 from 49.4 barrels in 1964.

Wisconsin produced 410,000 barrels of cranberries in 1965, down 5 percent from last year and slightly below average. Winter damage was about usual, but frost in the north plus hail in the west damaged the crop. Harvest began about a week later. The acreage harvested in Wisconsin was 4,600 acres, up 300 from last year, but the yield per acre dropped to 89.1 barrels per acre, off 10.9 from 1964.

Production of cranberries in Washington was 66,000 barrels, down 1,000 barrels from last year and 27 percent below average. A severe winter, and spring frosts caused damage in the bogs and the wet spring caused a poor berry set. Continued cool weather limited sizing and harvest

was late. Cranberry production in Oregon totaled 42,000 barrels, 22 percent more than last year and 8 percent above average. Quality and size were good. Harvested acreage in Washington was unchanged from 1964 at 1,000 acres, but was down to 560 acres in 1965, 10 acres below 1964.

## Farm Bureau In Action

By VERNON A. BLACKSTONE  
Farm Bureau Staff Assistant

One major area of Farm Bureau concern and activity is that of Economic Services for farmers. A very important Economic Service is the Farm Family Insurance Companies which are owned and operated by the Farm Bureau members for their benefit.

This past year the Farm Family Mutual Insurance Company paid a 10% dividend on auto insurance for the second year in succession. Recently, it declared a 10% dividend for the third year. This is a CASH dividend on all liability coverages including compulsory coverages. Farm Family Mutual Insurance Company is the only Insurance Company in the state of Massachusetts to pay a dividend on these coverages. In 1966, it will pay its first fire insurance dividend which will amount to a 7% dividend on all Fire, Extended Coverage and Inland Marine insurance. This is a clear indication of financial savings through the Farm Bureau's Economic Service Program.

The Massachusetts Farm Bureau Federation has provided the Accounting and Income Tax Service to its members for many years. This provided competent, specialized low cost Accounting Service. Currently, Farm Bureau is studying changes in methods of accounting as they relate to Farm Management programs in order to maintain the best possible Accounting and Income Tax Service to its membership.

As farmers request additional economic services, Farm Bureau will explore the possibilities of developing additional programs.

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# Mass. Cranberry Station and Field Notes

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

## Personals

Drs. Bert Zuckerman, "Wes" Miller, Karl Deubert, Surindar Paracer and "Bob" Norgren attended a meeting of NE-34, the northeastern regional group of nematologists, from November 30 through December 2. The meeting was held at Rutgers University in New Brunswick, N. J. Each presented a progress report on their various projects.

The author spent three weeks, from December 6 through December 23, as a juror during the Civil Session of the Superior Court in Brockton. It was a most interesting and informative experience and I was most happy to be there as a member of the jury rather than a participant in a legal wrangle. The jury duty gave an excellent excuse to stop in and visit "Dom" Marini, an old friend, who has his office in the courthouse. "Dom," who is no stranger to cranberry growers in Plymouth County, is now a regional agent for fruits and vegetables in the new four-county Southeastern Massachusetts area. Matter of fact, one of the court officers is also a cranberry grower and we had time for some "shop-talk" on occasion.

## Advisory Committee

The Cranberry Advisory Committee held its annual meeting at the Cranberry Station on the afternoon of December 14. This meeting assists the Extension Service in appraising its educational program for the past year and in the 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 or-

ganizations, regional agents, University of Massachusetts and Station staff.

Dr. Cross filled in for the Cranberry Specialist, and from reports, did an excellent job. The committee discussed a number of items, with quality receiving the most attention.

The suggestions and advice of this committee are most helpful and are sincerely appreciated. The following members were present. Dr. Chester Cross, Oscar Johnson, Arnold Lane, John Decas, Robert Hammond, C. E. Morse, Maynard Holmes, Paul Morse, Robert St. Jacques, William Atwood, William Crowell, Arthur Handy, Lawrence Cole, Robert Devlin.

## Weather

December went into the records nearly three degrees a day above normal, only the second month in all of 1965 to do this. Total precipitation for the month was 1.76 inches, less than 50 percent of normal. Snowfall for December was only 0.3 inch accruing in the early morning of the 26th. This is far below the average for the month, but there have been nine years in the past thirty-five when no snow was recorded at the Cranberry Station in December.

For the year 1965 the temperature was a total of -623 degrees, or more than a degree and one-half a day below normal, this is really cool. Total precipitation was 27.82 inches which is slightly more than 19 inches under the thirty year average at the Cranberry Station. This is the least amount recorded since records have been kept at the Station. Snowfall was 37.6 inches about forty percent above the mean. Highest temperature was 89 degrees on July 15 and again August 13 and the lowest -8 degrees on January 19 as recorded in the weather shelter at the

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Station. Largest single snowfall was 9.1 inches on January 16-17 and largest 24-hour precipitation 1.36 inches on April 15-16.

#### Club Meetings

The tentative dates for the 1966 cranberry club meetings are as follows:

#### Barnstable County:

Barnstable—Feb. 17, 7:30 p.m.

Barnstable—March 17, 7:30 p.m.

#### Plymouth County:

Kingston—Feb. 15, 7:30 p.m.

Rochester—Feb. 16, 2:00 p.m.

Kingston—March 15, 7:30 p.m.

Rochester—March 16, 2:00 p.m.

#### YEAR'S RAIN 486 INCHES IN PAKISTAN

Cranberry growers in the drought-stricken east envy the high rainfall the Pacific West Coast has been receiving—14 inches plus in Washington in December. But even this is nothing to the rainfall which occurred in Pakistan last year. There was a total of 486 inches, most of this falling in a period of three months. It was in the Jafflong area.

Yet one-third of the days of the year were reported as being clear. At the same time as all

this precipitation, the first sprinkler systems were being installed by a British firm. Even there rain did not always fall just when needed.

### Cranberry Labels

*Wanted as a gift or trade, "labels" from Eatmor, Ocean Spray and independents from all cranberry-growing regions; with the exception of one label, can, in return, furnish all copies of all Wisconsin brands to any interested parties.*

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of January 1966 — Vol. 30, No. 9

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

#### Week of Bad Weather Adds One Inch

Light rain, followed by snow began on December 13th, making this the first real snow of the winter in the cranberry area, although it did not last long. The weather continued rainy on the 14th and 15th. In fact, until the 19th there was scarcely a break in the clouds or a glimpse of the sun. The result of this long spell was that there was about one inch of rain accumulated, not enough to do water supplies much good.

#### Mid-December Warmer

The middle of December in fact, reversed the trend of colder than normal temperatures. These turned to the plus side and on the 19th there was a plus of 19 degrees.

#### "Winter" Starts Cold

This was of short duration, however and on the 21st, the first official day of winter, temperatures were averaging 10 above, or not quite that much. The official winter came in with cold, but there was no snow on the ground in Southeastern Massachusetts.

#### Green Christmas

It was a green Christmas in the cranberry area, with all but record high temperatures on Christmas Day and the day before. But Christmas Day also brought a gift in the form of a very substantial rain during the afternoon and night. A total of .62 inches was recorded at the State Bog.

Weather turned very cold Christmas night and the 26th and 27th were bitterly cold with

rather high winds. Temperatures at the State Bog were as low as 12. It was not believed there was any winterkill as the winds were not too high and the drop was of short duration.

#### December a Warm Month

December reversed the long trend of colder - than - normal months by ending with a plus of 90 degrees or about three a day. The final day of 1965 was all but a record breaker, with temperatures up into the low 60's in the cranberry area and New Year's day itself was equally balmy. December really went out almost as spring. However, the story for the year was a minus 625 degrees.

#### December Continued Dry

Rainfall for the month, as recorded at the Cranberry Station was only 1.76 inches. Normal is

3.80 inches. The deficiency for the year at year's end was about 19 inches in precipitation, in this fourth year of below normal rainfall. And the drought continued on.

January second brought a sudden change in temperatures and there was snow, sleet and rain. The total for this storm, according to Cranberry Station reading was .99 inch. This was the first really bad storm of the winter, making roads treacherous with the snow, sleet and freezing rain and for the first time snow plows were put into use.

#### No Winterkill in December

At the end of the year it was generally thought there had been no winterkill. For one thing there was practically no frost in the ground, so vines were not fro-

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zen in. While there had been a few occasions when for brief spells there had been cold and high winds these spells had been of short duration and not long enough to do much, if any harm.

#### **Much Sunshine in '65**

With so little rain it naturally followed that sunshine had to be high. The sunshine factor was well over 200 hours.

#### **Vines Wanted**

It was reported at the Cranberry Station that there had been many calls to find out where cranberry vines could be bought. The call was not particularly for the new hybrid varieties, but the old standbys, especially Early Blacks. This indicates that there is considerable expansion intended for Massachusetts acreage this coming spring. The demand is from those who are already growers, and not newcomers.

#### **January Starts Balmy**

January fortunately started warm and balmy, almost springlike. The plus for the first four days was

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46 degrees. This was well for the drought situation, as January and February are the months most likely to bring winterkill, and every warm day was another day without the damage.

## **WASHINGTON**

#### **Pacific Coast Storms**

Late December brought a series of great storms to the West Coast, including the coastal cranberry area. It was almost exactly a year ago that the Coast suffered a similar bad storm. The storms brought sleet, snow, rain, and high winds.

Wind on the 27th was clocked at 120 miles an hour when the Coast Guard recording machine at Cape Disappointment was broken. Gusts of 70 and 80 miles an hour continued, but resulted in only considerable damage in minor incidents.

#### **Dec. Precipitation 14.52 Inches**

While the East Coast continued in the great drought the precipitation for the month was recorded at the Coastal Washington Experiment Station at Long Beach as 14.52 inches. There was 1.97 of rain on the 26th and 1.80 on the third. There was

some snow and Christmas was a white one for most of the area, where snow is a rarity. The Long Beach Peninsula was almost cut off from the mainland due to snow for the New Year weekend.

#### **Temperatures**

The mean high of the month was 47.03 and the mean low was 35.32. The Station bog low was 16 degrees on the 14th and 17 on the 15th. Below freezing temperatures were registered on the 9th to the 16th, the 20th to the 29th and 31st. It was an unusually severe month for the Peninsula.

#### **Bog Activities**

Bog activities were just about at a standstill due to the weather, but what pruning could be done was accomplished, and there was "inside" work going on.

## **NEW JERSEY**

#### **Drought Worse**

December brought no alleviation but an intensification of the drought. Only 1.75 inches of rain fell during the month, adding another 1.28 inches to the year's deficiency which totaled 13.39 inches.

The year 1965 was the driest in the 37-year weather recording history of the Cranberry and Blueberry Lab at Pemberton and New Lisbon. The total precipitation was only 29.77 inches, easily breaking the previous low rainfall record of 33.21 inches in 1930.

Drought of serious proportions have now occurred in each of the 3 past years. The total deficiency from January 1, 1963, through 1965 is 28.58 inches, or roughly the equivalent of 8 months of normal rainfall. The water shortage is causing apprehension amongst cranberry and blueberry growers. Some cranberry properties have a serious water shortage and the ground water resources in some blueberry areas are reaching marginal levels.

#### **'65 Rain Well Distributed**

Fortunately the distribution of

*Continued on Page 18*

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# "Valiant Vivian" Might Be The Designation of Oregon Cranberry Widow, Mrs. Martin Kranick of Bandon

She Operates 22½ Acres in Two Locations

By ETHEL REICHENBACH

Ocean Spray Cranberries, Inc. is made up of many fine hard-working growers, among which are quite a few widows who have fallen heir to their bogs due to the death of their husbands.

Among the several widows in Coos County, Oregon is Vivian Kranick. This is her story:

Vivian was born in Wapaca County, Wisconsin on a farm. In 1936 her parents moved to the city of Milwaukee where she attended school and business college. Her urge to travel led her first to Colorado and later to the west coast where she had relatives to visit. While on this trip she was offered a position as secretary in the Coquille cranberry cannery. Here she became acquainted with the cranberry business first hand. She visited several cranberry bogs and through these visits met Martin Kranick, son of Leslie and Ethel Kranick, pioneer cranberry growers.

Martin Kranick

Martin was a graduate engineer from the Oregon State University and a Veteran of World War II, having served in the 8th Air Force based in England. As a navigator, he flew some thirty missions over enemy territory and thereby won the Distinguished Flying Cross. Their first date was in a chartered plane in which they flew over the entire cranberry area of Coos County and got a good view of the geography of the cranberry business.

In 1951 Vivian and Martin were married in a garden setting at the Kranick bog. To this union were born four sons, Douglas, Gordon, David and Ronald.

When the war was over, Martin worked for a time with the Bureau of Reclamation, but being an only son, he decided to accept his parents' request to return home and take over the cranberry business so the senior Kranicks could retire.

In 1959 Leslie Kranick died of

a heart attack and the day following Arthur Flemming's edict hit the headlines and the business took a terrific beating. Along with this disaster Martin became ill and spent some time in the hospital.

On October 12th, 1962, one of the worst storms to ever hit the Pacific coast made shambles of the beautiful property that Martin and Vivian had developed. Shortly after, the worst tragedy of all, Martin's untimely death.

Faced Tough Future

Vivian faced a future with four small boys to rear, and a cranberry property that was almost ruined with storm, insects and the Flemming disaster. She had two choices, the farm or back to the office. She chose the farm with all its frustrations, hard work and worry so that her boys would learn work and responsibility.

With determination, she began treating the bogs with insecticides, she has used Parathion,



A walk along a dike at the the Kranick Bogs. (Photo, Western World, Bandon)



The whole family helps at harvest time, including Mrs. Kranick's father from Wisconsin.



A new sump hole at the Kranick Bog.

Malathion, and Diazinon according to directions specified by the County Agent and the more successful growers.

The irrigation pipes were old and the rust in the sprinklers had long been a problem, so she began to gradually replace with aluminum and plastic. She applied to the Agricultural Stabilization Committee for funds to develop a new source of water. Now she has two new ponds plus a long irrigation canal with enough water for full frost control. On some occasions the two oldest boys help with the sprinkling by keeping the sprinklers free from rust. For this she pays

them the same as for any other worker.

Labor has been a big headache as she has to compete with high wages paid the lumber industry. Good workers were already at work and workers who would accept minimum wages are scarce.

Vivian has two properties, the old Kranick home bog of some 13 acres to which, with the help of the boys and neighbors she has added another two acres since her husband's death. She also has 7½ acres on highway U.S. 101 which was originally planted by the late M. L. Urann

and sold to L. M. Kranick. This second property is under complete underground irrigation with an automatic shut-off. However the old Kranick bog is largely handled by personal supervision. Vivian plans to eventually replace all the overhead irrigation with either aluminum or plastic pipe placed underground.

#### Cuts Harvest Costs

This past fall Vivian changed her harvest method to use elevators in both wet and dry harvest. She has two Westerns and one Darlington. After dry picking, the berries are taken to the warehouse, put through a shaker, then elevated to an elevated bin from which the berries can be poured directly into tote boxes onto an International truck she bought last summer. She also uses elevators in the field for wet harvest to load them into tote boxes.

By these changes she cut her harvest from six weeks to four and so of course cut harvest costs as well.

#### Other Activities

With this formidable load Vivian still takes time to be a pianist for the Rebekah Lodge (of which she is a Past Noble Grand) and secretary for the Business and Professional Woman's Club of Coquille. Every Sunday she attends the Presbyterian Church in Bandon with her sons.

She is among the very few growers who contributed to the Bandon Cranberry Festival Parade with a float entitled "Kranberry Kidz Shangri La" which won 3rd place in the commercial division of the 1964 parade.

Douglas, her oldest boy is eleven and in the 6th grade. Gordon is in the 4th grade and David is in the second grade. They attend school in Bandon, traveling the six miles by bus. Douglas plays in the school band. Ronald, the youngest will start to school next fall.

Vivian is trying to give her sons every opportunity that city boys have. She surrounds them with library books. They get swimming lessons and plenty of fun swimming in the home ponds



Mrs. Kranick and her four sons, taking third prize in a Bandon Cranberry Harvest parade.

(Photo, Western World, Bandon)

after they do their weeding allotment. The boys collect stamps, coins, rocks and belong to the 4-H Forestry Club.

#### Large Rhododendron Collection

One of the greatest attractions at Kranberry Acres is the large rhododendron collection of which the whole family is very proud. These plants usually bloom from February to July, depending on the variety.

So much has been accomplished under the most trying circumstances that considerable credit goes to a valiant and determined widow and her four healthy little live wires.

Mrs. W. H. Reichenbach is the former Mrs. Leslie Kranick and for a number of years was the Bandon area correspondent for CRANBERRIES.

#### OCEAN SPRAY DIRECTOR RESIGNS AS SELECTMAN AFTER 33 YEARS SERVICE

Victor F. Adams of Osterville, Mass., who is a director of Ocean Spray has announced he will no longer be a candidate for selectman of the town of Barnstable, of which Osterville is a part. He has served as selectman, much of the time as chairman, for the past 35 years. He plans to devote more time to his cranberry growing.

#### JERSEY CROPS UP, INCLUDING BLUES AND CRANBERRIES

Production of all crops in New Jersey in 1965, according to the New Jersey Crop Reporting Service were up 12 percent and was

the highest since 1960. Even though harvested acreage of all crops decreased 1 percent, while the overall yield level increased 13 percent.

The Garden State's production of cultivated blueberries was 1,976,000 12-pint trays, 11 percent above last year and 18 percent more than the 1959-63 average, with a preliminary value estimate of \$5,829,000, the highest since 1960.

The production included 159,000 barrels of cranberries, 4 percent above last year and 70 percent above the 1959-63 average. This was the largest cranberry crop since 1937 when 175,000 barrels were produced. Crop value is estimated at \$2,306,000, 4 percent above 1964.



Dean's Indian Trail Distinctive Packaging.

## Major Cranberry Push by Dean's Indian Trail '66

The rapidly expanding cranberry product line of Dean Foods Company's Indian Trail Division will be supported in 1966 by year-round advertising, new packaging and label design, and continued research. Details of the program were told by John Rockwood, Executive Vice President, Dean Foods Company.

The Indian Trail Cranberry Company, which was purchased by Dean in March, previously produced and sold fresh cranberries, frozen cranberry with orange, and canned cranberry sauce. The line now includes cranberry juice cocktail, apple cranberry drink, and frozen cranberry apple with walnuts.

The marketing program includes four color advertising in regional editions of top consumer magazines and week end newspaper supplements in major Midwest markets. The magazines currently scheduled are Better Homes and Gardens, Ladies Home Journal,

Look, McCall's, Redbook, Woman's Day and Family Circle. Other media are under consideration.

New labels have been designed for the entire cranberry product line which include the "Bird-on-the-Mailbox" as a symbol of Dean quality in the company's growing line of grocery store products.

Cranberry packages and labels provide serving suggestions, developed by the Dean Research Kitchen in Rockford, Illinois and private laboratories. The Rockford Laboratory is also working on the expansion of cranberry into other food lines.

### U. S. OVERSEAS PRODUCTS UP

Food has been the fifth most active U. S. industry in terms of new foreign business activity for the past five years, a survey shows. And the trend is still up. It is reported U. S. agricultural exports may hit \$6.2 billion this year as compared to \$6.1 billion last year. Among the food items going up are fruits.

## West Coast Advisory Board At Bandon

Directors and advisory board members of Ocean Spray held the semi-annual meeting at Bandon, Oregon last month. Main purpose was to unify the four or so cranberry-growing areas of the West Coast into an effective unit.

"These meetings help to make better growers' relations between the two states (Washington and Oregon)," Ocean Spray Director Jim Olson explained in an interview with the *Western World*, weekly Bandon newspaper.

"Growers get a better understanding of what is going on in the various West Coast areas, at Bandon, here in Oregon and Grayland, Long Beach and North Beach in Washington, a total of about 450 growers, producing some 150,000 barrels of cranberries," he continued.

He added: "Recommendations are also made at these meetings of West Coast Advisory Boards, to be taken by the Ocean Spray director to be presented at the meetings at Hanson.

There was a discussion concerning a new Ocean Spray plant at Bandon, and the West Coast plant at Markham, Washington where most of the Coast fruit is processed under the supervision of West Coast Production Manager Robert Lucas.

Olson said that West Coast production this year amounted to about 197,000 barrels, 87,000 more than last year. The Bandon area produced approximately 41,000 barrels on 478 acres of bog. The remainder of the crop was grown on 665 acres in Washington.

For the first time in cranberry history, Olson said Bandon growers produced no fruit for the fresh market, all being used for processing. Also about 30 per cent of the West Coast production went for cocktail juice.

Those present for the meeting included: Pete Hull, L. A. Williams, Mr. and Mrs. Ray Bates, Director Olson and William T.

Dufort from the Bandon area; from Washington, Director Norman Brateng and Mrs. Brateng of Long Beach, and Director Cecil Richards of Grayland. Those present from Long Beach, besides Director Brateng were: Mr. and Mrs. E. O. Chabot, Frank O. Glenn, Jack Karjala, Robert Quinby, Matt Warra, Arnold Pertula and Harold Johnson of Grayland; from North Beach, Mr. and Mrs. Hugh Well, Mrs. Maude O'Brien and Mr. and Mrs. Ed Frazier of Grayland; from Long Beach, Mr. and Mrs. J. Wilson Blair and Mr. and Mrs. Ed Lucas.

## CRANBERRY POLLINATION

by PHILIP E. MARUCCI

This article presents results of some of the work on cranberry pollination conducted in New Jersey by Professor Robert S. Filmer, independently and in collaboration with the writer and Harry J. Moulter.

In 1949, Filmer<sup>1</sup> presented data to show that wind and mechanical jarring of blossoms were ineffective in promoting pollination of cranberries. He also showed that the then new organic fungicides, Fermate and Zerlate, did not interfere with pollination but that D.D.T. induced considerable mortality of bees and greatly reduced bee activity for at least two days. He obtained excellent set of cranberries by concentrating honeybees at the rate of a hive per 2.5 acres—which was at the time more than was generally used commercially. He also noted

that wild bee populations were inadequate and that the set of berries decreased as the distance from the hives increased.

In 1953, Filmer<sup>2</sup> showed that yield of cranberries could be increased from 12 to 34 barrels per acre by increasing the population of honeybees from 1 hive per 2 acre to 1 hive per acre. His study of a large mass of data indicated that high yields were associated with high numbers of blossoming uprights per unit area. The wide range of blossoming uprights and blossoms per square foot which he found on individual bogs and from bog to bog on the same property led him to believe that factors other than pollination which reduced blossoming were of great importance in cranberry production.

In 1953 and 1954, Filmer<sup>3</sup> made a detailed study of the blossoming and fruiting habit of the Early Black variety in New Jersey. The characteristics of the Early Black, summarized below, have not varied appreciably since 1954.

a. 30% of the crop was obtained with only 3 blossoms; 33% on uprights bearing 4 blossoms and only 17% on uprights with 5 blossoms.

b. Approximately 30% of the crop is borne on uprights with only one berry, 40% on those with two berries, and only 20% were borne on uprights having three berries.

c. 80 to 85% of the bloom is borne on uprights with 3, 4 and 5 blossoms.

d. The percentage of blossoms set tended to be lower as the

number of blossoms per upright increased; the efficiency of the blossom to convert to fruit was greatest on the single blossomed uprights.

e. The uprights with the larger number of blossoms were more efficient producers of berries than uprights with lower numbers.

f. Blossoming uprights in Early Black in New Jersey produce an average of from 1.35 to 1.51 berries per blossoming upright.

Filmer, Marucci and Moulter<sup>4</sup> obtained data in 1956 and 1957 which demonstrated that the size of Champions, Early Blacks, Howes, and Jerseys were directly related to the seed count. In a cage test in which bees were excluded, only 1 per cent of the blossoms set and these were all small in size and had an average seed count of only 2.71 seeds. Pollination of vines in the open, subject to visitation by bees, was much greater and the berries much larger. Berries having only one of the four carpels with seeds were almost always small. Large berries had maximum seed counts ranging from 32 per berry on Champions to 20 per berry in Howes and Jerseys, and averaged about 12 for Early Blacks, Howes and Jerseys, and 17 for Champions. Only one berry in 8,000 examined contained no seeds.

In 1956 and 1957, Marucci and Filmer<sup>5</sup> studied cranberry blossom blast. Cranberry blossoms which fail to set fruit, unlike those of deciduous fruits such as apple or peach, do not drop

TABLE 1.  
*Effect of Proximity of Cross Pollen on Set, Size and Weight of Berries*

	Berries Blossoming Per Upright	% Blossom- ing Uprights with Berries	% Bloss- soms Set	Average Berry Wt. in Grams	Average Seed Count
<b>CHAMPIONS</b>					
Caged vines with cross pollen	1.48	92	50	1.29	10.6
Open pollination outside cage	1.00	76	30	0.97	7.2
Open pollination at junction of Shaws Success and McFarlin	1.74	98	60	1.47	11.1
<b>HOWES</b>					
Caged vines with cross pollen	1.40	77	40	1.00	9.5
Open pollination outside cage	1.03	48	27	0.85	8.8
<b>EARLY BLACKS</b>					
Caged vines with cross pollen	0.94	98	32	0.67	13.5
Open pollination outside cage	0.52	79	17	0.60	14.1

but dry up and remain conspicuously affixed to the stem. These are called "blasts" and the fact that they almost always greatly outnumber berries is a condition which can understandably be of concern to a grower. It was concluded that "blasted," or dead blossoms which fail to set fruit, are result of natural attrition or overproduction of blossoms. This was evidenced in the fact that uprights with smaller numbers of blossoms had a smaller percentage of them blasting (or a larger percentage setting) than those with larger number of blossoms. Artificial pruning of blossoms which reduced the blossoms on uprights resulted in a higher percentage set of fruit or a lower rate of blast. Blossoming and fruiting data showed that the well managed properties had significantly more blossoms per square foot and more berries per square foot, but they did not have significantly more berries per blossoming upright and they did not have less blossom blast. Oddly, the highest producing bog studied had the most blossom blast as well as the most blossoms.

Filmer and Marucci<sup>6</sup> studied blueberry pollination in New Jersey. The clear advantages of cross pollination in promoting larger and more quickly maturing blueberries spurred a consideration of this factor in the cranberry which is closely related to the blueberry. Milton Stricker<sup>7</sup> had speculated in 1943 on the advantages of cross pollination in cranberries when he observed an unusually high set of fruit (72%) in vines containing several "Jersey" varieties. In regard to the percentage of blossoms that form berries in Massachusetts, Bergman<sup>8</sup> states that "records of many years show that seldom do more than 40% of the blossoms set fruit." He gave the range as from 30 to 39%.

Filmer and Marucci<sup>9</sup> observed similar sets in New Jersey excepting in areas where the vines of several different varieties grew intermingled, in which an extremely high percentage of the blossoms set fruit. In preliminary

cage tests, the results of which are tabulated in Table 1, better sets of berries were obtained where cross pollination occurred. These studies are continuing.

New Jersey cranberry growers are now using honeybees more intensely than ever before. Close to one hive per acre is being used on many properties. Yields in excess of 100 barrels per acre, unusually high for this state, were obtained in 1964 on several bogs which used high concentration of bees. Growers are convinced that better pollination is one of the factors helping to bring about better production. As evidence of this and in appreciation of Professor Filmer's work they passed the following resolution at the Annual Summer Meeting of the American Cranberry Growers' Association on August 27, 1964:

*"Professor Filmer has made excellent contributions to the cranberry industry of New Jersey. His studies of cranberry pollination have given growers a better understanding of the relationship of bees to fruit set. This has brought about a more intensive use of bees on cranberry bogs, which is undoubtedly one of the factors accounting for our steadily increasing yields in New Jersey. "Professor Filmer will be retiring soon. I am sure that we all appreciate his fine work and want to compliment him as a group for his efforts on our behalf. I want a motion that upon his retirement we transmit to the Experiment Station an expression of our respect and admiration for Professor Filmer and his work. I further move that the Experiment Station be urged to appoint an apiculturist to succeed Professor Filmer so that this important work on pollination can be continued."*

(Professor Filmer died on October 25, 1964.)

Dr. Alan W. Benton, an apiculturist recently awarded the Ph.D. degree from Cornell University, is now on the staff of the Rutgers Department of Entomology and Economic Zoology and will conduct studies on cranberry pollination.

mology and Economic Zoology and will conduct studies on cranberry pollination.

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## Recap of Oregon For 1965

EDITOR'S NOTE: *The following article recaps the 1965 production year of cranberries in Oregon. The article was written by Fred Hagelstein who is Coos County Extension Agent, Coquille, Oregon.*

The 1965 Oregon cranberry crop reached nearly 41,000 barrels surpassing 1964 production by about seventeen percent. Crop quality was generally good. In light of present cranberry prices,

1965 will be remembered as a good cranberry year for most Oregon growers.

There are probably two primary reasons for the larger Oregon crop this past year. First is the increased attention growers are giving to frost control. Contrary to the "banana-belt" reputation of southwestern Oregon, where most of the Oregon crop is grown, frost can occur on bogs into late June. Establishment of frost forecast warnings by the U. S. Weather Bureau and provision for frost protection by means of sprinkler systems has done much for Oregon growers in the last few years.

A late frost had much to do with the lower yields in 1964. More attention to frost control could undoubtedly raise the total Oregon crop even more.

### Fireworm

Losses due to fireworm damage were also less in 1965 than in 1964. Here, again, is where attention by the grower must be timely. For the past several years the local Extension office has kept

cranberry weed problems that should not be overlooked, however. Dichlobenil has great potential in Oregon for cleaning up some very low producing weedy bogs.

### New Bog

Several acres of new bogs are being established in Oregon and the trend continues toward more water harvesting. Lower harvest costs is the primary reason. Cost of hired labor in the cranberry producing areas of Oregon usually run a minimum of \$2 an hour.

A cost of production study on cranberry production in Oregon was made this past year by the Coos County Extension Office and extension farm management specialists from Oregon State University. A nine member cranberry advisory committee, which assists OSU extension and research worker regarding pro-track of fireworm activity during the early spring and notified growers when the first hatch was observed. Even so, the individual grower, if he suspects fireworm

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activity in his bogs, must watch for activity in his own bog and time his own spray program for maximum effectiveness. Although there was considerable fireworm activity this past year, losses due to this insect were less than in 1964.

There was extensive use of dichlobenil (Casoron) for weed control on Oregon bogs this past year as in other cranberry producing areas. The results have generally been good. There are several other good herbicides that do an excellent job on certain grams with the cranberry industry, provided cost data on their cranberry operations which was used in the cost study.

#### **Cost Production Study**

The study itself was divided into three parts: 1) cost per acre of establishment of a cranberry bog under Oregon conditions, 2) annual cost during the pre-production period, and 3) average cost of production once the bog is in production. Of particular interest was an average cost figure of \$3,000 to establish an acre of bog and nearly a like investment cost to care for an acre of bog during the pre-production years until it comes into production. Once in production, the annual total cost of producing a barrel of cranberries ranged from \$5.93 to \$11.02 depending on yield.

### **CHINESE CRANBERRY WORKER HANGED — 65 YEARS AGO**

An interesting article appeared in a recent issue of the Longview Daily News, Washington State telling of the trial and execution of a Chinese cranberry worker. According to the article, Lum You was well known and well liked.

His capital punishment was carried out at the Washington county seat of South Bend, and 500 invitations were issued for the hanging, including children to show that crime does not pay.

(This however, all took place about 65 years ago at a time when Chinese were employed in the building of bog on the West Coast.

## **OCEAN SPRAY BREAKING RECORDS IN SALES AND RETURNS TO GROWERS**

### **So Stockholders are told at Annual Meeting—New Proucts Assure Bright Future — Increased Facilities Urgently Needed — Officers and Directors re-elected**

"Cranberrying should continue to be wonderful business," grower members of Ocean Spray Cranberries, Inc., were assured by officers of the national cooperative at the 35th Annual Meeting held Wednesday, January 12, in the Wareham, Massachusetts, Town Hall.

"New records in sales and dollar volume were reached in the fiscal year closing on August 31, 1965, and the calendar year, 1965," President George C. P. Olsson reported.

"The return per barrel to the grower, which is the main reason for the company's existence, has increased each year for the past four years. This year the return is one of the highest on record.

"Factors responsible for this present healthy condition in the cranberry industry are," President Olsson said, "first, the elimination of a surplus in 1962, by means of the Marketing Order and placing each pool on a 12-month basis.

"The next and most important step was bringing new and aggressive leadership to Ocean Spray including an entire new concept in the marketing and sales field. The introduction of Cranberry Juice Cocktail to the national market, backed by national advertising, has been the biggest single factor in our forward progress. The introduction of other new products such as Cranberry Orange Relish, plus constant and diligent search by our Research and Development Department for other new products should help us to expand the market and keep abreast of the ever increasing production

of cranberries by our growers across the country.

"Adequate plant facilities and production conditions continue to be our major problem and challenge.

"Preliminary steps have been taken to acquire new sites in the other areas and to research and plan for plants that can both handle the volume of production and manufacture efficiently the variety of products, which must be our first concern to enable us to maintain an adequate return to our growers."

Ocean Spray, grower members were told, receives and handles about 80 per cent of the national crop, some 1,400,000 barrels in 1965, or more than double the annual average production of cranberries for the ten year period, 1935-44. But plant facilities, built to handle some 400,000 barrels, remain at the 1949 capacity.

Emphasizing the need for expanded facilities, Edward Gelsthorpe, Executive Vice President and General Manager of Ocean Spray, urged that the "time to make changes is when things are going well."

Ocean Spray's plants "are bursting at the seams," he said. "Plant expansion is most important."

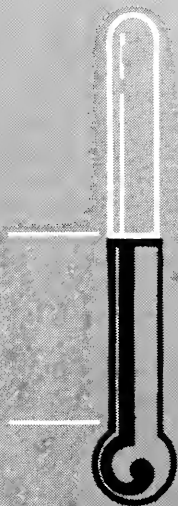
Sales of Ocean Spray Cranberry Sauces in the period of September through December 1965, he reported, are far and away the largest in the company's history. Cranberry Juice Cocktail "is going like a house afire," and the Low Calorie Cocktail, recently introduced nationally, is rapidly becoming a very major product. Low Calorie Sauce sales have about doubled and part of the increase is due to the Low Calorie Jellied Cranberry Sauce now in national distribution. Fresh Cranberries were sold out before Christmas.

But, Mr. Gelsthorpe said, "Not to bring out new products, is to stand still."

*really the berries for...*



*frost control*



*temperature control*



*sprinkler irrigation*

*John*  
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Black River Falls, Wisconsin



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**JOHN BEAN DIVISION**

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Having launched Cranberry Orange Relish and with a new fruit drink, Cranapple, in test markets, Ocean Spray is moving into the frozen food market with a new Frozen Orange Cranberry Concentrate and Frozen Cranberry Juice Cocktail Concentrate.

The company is extending distribution in England under an aggressively planned program.

"Our first foreign market is England and business there is on the increase. We know there is a good foreign market for cranberry products.

"Ocean Spray has expanded its operations in Canada and sales there are up some six per cent."

The new Cranberry House in Orleans, Massachusetts, second retail outlet for Ocean Spray, and first Cranberry House in Onset, Massachusetts, are carrying out a very successful promotion of cranberries for the industry.

"Ocean Spray anticipates a 56 million dollar goal, Mr. Gels thorpe told the grower members, "and each of you is a large part of this closely held big business."

Treasurer Chester W. Robbins reported the company to be in a strong financial position. Counsel John R. Quarles and Secretary Russell Makepeace also reported. The invocation was offered by Rev. Roland V. E. Johnson, pastor of the First Congregational Church, Wareham, Massachusetts.

#### Officers and Directors Elected

The incumbent Board of Directors and Officers were reelected by Ocean Spray members during the meeting which was open only to holders of common stock, officers, and some employees. The Press was excluded for the first time.

George C. P. Olsson of Plymouth, Massachusetts, a member of the Board since 1957, was reelected to his eighth term as President. Lester M. Gordon of Tomah, Wisconsin, elected Vice President in 1962, was again returned to office as First Vice President. Edwin F. Lewis, of Centerville, Massachusetts, who joined the cooperative in 1963 as

Director of Marketing, was reelected Vice President. Russell Makepeace of Wareham, Massachusetts, Board member since 1941, was returned to the Secretary's office and Chester W. Robbins of Onset, Massachusetts, on the Board since 1957, was reelected Treasurer.

Ocean Spray's General Manager, Edward Gelsthorpe of Cummaquid, Massachusetts, was reappointed Executive Vice President and Chief Executive Officer, and Edward J. Gaughan of Marshfield, Massachusetts, was reelected Assistant Secretary-Treasurer.

The 24-member Board of Directors follows. From Massachusetts: Victor F. Adams of Osterville, Frank P. Crandon of Acushnet, William E. Crowell of Dennis, David W. Eldredge of South Carver, Carroll D. Griffith of South Carver, Richard A.

Heleen of Middleboro, Russell Makepeace of Wareham, George C. P. Olsson of Plymouth, Elmer E. Raymond, Jr. of Braintree, Chester W. Robbins of Onset, Alvin R. Reid of Hanson, Miss Ellen Stillman of Hanson and Marcus M. Urann of South Duxbury.

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

From Washington: Norman I. Brateng of Long Beach, Cecil G. Richards of Grayland.

From Oregon: James Olson of Bandon.

From Wisconsin: Alfred E. Bark of Wisconsin Rapids, Donald S. Duckart of Wisconsin Rapids, Lester M. Gordon of Tomah, Harold D. Gross of Manitowish Waters, and Tony Jonjak of Hayward.

## Leo A. Sorensen Wins Suit In Wisconsin

### Verdict May Be Appealed

EDITOR'S NOTE: *The following is reprinted from the Wisconsin Rapids Tribune, Wisconsin Rapids, Wisconsin.*

Sale of 6,000 shares of stock in the Thiele Cranberry Co. has been decided in favor of Leo Sorensen, 449 Greenwood Dr., a private consultant to cranberry growers.

Circuit Judge Merrill Farr of Eau Claire, who presided at the trial of a lawsuit brought by Sorensen against Indian Trail, Inc., ordered Indian Trail to turn the stock certificates over to the Wood County National Bank by Jan. 17.

#### Jan. 27 Deadline

Sorensen was given until Jan. 27 to raise the \$90,000 which was the agreed upon sale price for the stock (\$15 per share). He told The Tribune today that he intends to buy the stock. If he does not do so by the deadline date, it will be returned to Indian Trail.

The Thiele cranberry marsh is located near the Wisconsin River, northeast of Wisconsin Rapids. The property consists of 1,100 acres, with approximately 50 acres of cranberry vines. It was reported at the trial that the 6,000 shares represent two-thirds interest in the marsh, with Clarence Searles, town of Cranmoor, owning the other 3,000 shares.

#### Option Held Binding

Judge Farr ruled that an option agreement signed by Sorensen and Mrs. Villa Thiele on April 22, 1964, was binding. A prior oral agreement between Mrs. Thiele and Ben Pannkuk, president of Indian Trail, was unenforceable because there was no written contract and no payment, the judge ruled.

At the time of the stock transactions in 1964, Indian Trail was a cranberry marketing agency with headquarters here. It has since been sold to Dean Foods Co. of Chicago.

Pannkuk said today that he had not been officially notified of the decision and did not know if it would be appealed to the Supreme Court. Atty. Richard Brazeau, a witness at the trial and formerly a one-quarter owner of Indian Trail, said the decision

on an appeal rested with the company's legal counsel, but added that "I assume it will be appealed."

#### Criticizes Actions

Judge Farr was critical of Brazeau, Pannkuk and Atty John Cole for their actions at a conference with Mrs. Thiele on April 23, 1964, the day after she had signed the option agreement and accepted a \$500 check from Sorensen.

At this conference, Mrs. Thiele was advised by Brazeau that her oral agreement with Indian Trail was binding, and she subsequently turned over the shares of stock which she controlled to the marketing agency.

Judge Farr termed this "a procedure which was most unusual, if not shocking." He concluded that "the actions of the defendants is designated a species of fraud."

Judge Farr decided that Mrs. Thiele, a 75-year-old widow, "was completely free at all times from any desire or intent to avoid her lawful obligations; that she breeched her contract with Leo Sorensen because she honestly believed it was her legal duty to sell to Indian Trail."

The Thiele stock obtained by Indian Trail was subsequently sold to Charles Laramie, Jr. and Joseph Hoelting, who were also named as defendants in Sorensen's legal action.

Judge Farr explained that he was ordering the stock returned to Indian Trail in the event Sorensen did not decide to buy, however, "because there is nothing in the record to indicate the proportion of ownership by Laramie and Hoelting." The two individuals had signed an indemnity agreement with Indian Trail to protect them in the event of a lawsuit, it was brought out at the trial.

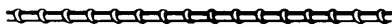
#### Orders Statment Filed

In addition to awarding the stock to Sorensen, Judge Farr ordered the officers of Indian Trail to file with him a detailed statement of all business transactions by the Thiele Corporation from April 24, 1964, to the date judg-

ment was rendered in the case.

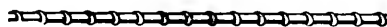
"The court reserves jurisdiction to determine irregularities in the management of said corporation which may affect the value of the stock," the judge added.

Sorensen, Judge Farr ruled, may recover his legal costs from all of the defendants except Mrs. Thiele, and Mrs. Thiele may recover her costs from the other defendants. The trial was conducted here in early December and Judge Farr's decision was filed Wednesday. Circuit Judge Herbert A. Bunde had disqualified himself from the case.



## READ

## YOUR MAGAZINE



## John D. Roberts, Of Wisconsin, Wins Insecticide Suit

The Wisconsin Supreme Court at Madison has upheld a jury report that the Perry Creek Cranberry Corporation, Black River Falls, Wisconsin, John D. Roberts, president, is entitled to damages from a chemical supplier.

The plaintiff maintained charges that its crop was damaged in 1964 after treatment with 3 percent malathion, even though in its application, instructions on insecticide label were followed.

The corporation maintained that the insecticide manufacturer should have warned that the dust would be harmful to cranberry vines if applied when the vines were wet.

Justice E. Harold Hallows in upholding the unanimous opinion



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## COMING UP

# 1966

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found that Wisconsin laws require labels to "contain instructions for use which are necessary for effective results and adequate for the protection of the user, besides adequate for the protection of the public."

The award was in the amount of \$24,000.

#### CRANBERRIES IN UK FOR CHRISTMAS

Cranberries promoted for Christmas in the United Kingdom was an illustrated article in the December 22 issue of *Foreign Agriculture*, publication of the USDA. Cranberries were on display in the U. S. Trade Center at London. There was a contest sponsored by Ocean Spray Cranberries, Inc. offering free turkeys each week to consumers who correctly identified something unusual in a turkey carving picture, appearing in British magazines. To be eligible, contestants

had to send in two labels from cranberry sauce cans.

The Cranberry Institute and the Foreign Service in overseas promotion cooperated.

#### Peanut and Cranberry Relish

1 cup cranberries

$\frac{1}{3}$  cup sugar

$\frac{1}{4}$  cup chopped peanuts

$\frac{1}{4}$  tsp. salt

1 small orange

1 small apple

Put cranberries through food chopper and mix with sugar. Cut the orange and apple into quarters, remove seeds and put through chopper. Combine nuts with all ingredients. Makes  $1\frac{1}{2}$  cups.

#### FRESH FROM THE FIELDS

*Continued from Page 6*  
the rainfall in 1965 was such as to prevent maximum drought

damage to cranberries and blueberries. During the normally hot growing months of June, July and August, the deficiency of the rainfall was only about 3 inches as compared to the  $5\frac{1}{2}$  inch deficit in the last 3 months of the year. Almost normal rainfall from January through April provided enough soil moisture to keep blueberries growing normally through the important pollinating period. Size of both cranberries and blueberries was affected adversely by the cool dry summer but these condition promoted a good keeping quality of the berries.

#### Year Ended Warm

In regard to temperature, December was relatively mild, averaging 37.4 degrees F., about 2 degrees warmer than normal. Christmas Day and the last day of the year were almost balmy, with the temperatures reaching 63 and 67 respectively. There were several other days in the 60s and high 50s and severe cold snaps were infrequent and of short duration. Water on cranberry bogs remained open throughout most of the month with the ice never getting thick enough to support skating.

The annual temperature for 1965 was 52.8 degrees F., which is 1.6 degrees F. colder than normal. It was the sixth consecutive year and the tenth in the last 11 years of below normal temperatures. June, July and August were cooler than normal and it was the fifth straight year during which these warm summer months averaged below normal in temperature. Only May, September and December were warmer than normal.

The hottest day of the year was June 23rd when the thermometer reached 97 degrees F. The coldest day was January 18th when the mercury dropped to 7 degrees below zero.

### OREGON

#### Storms

The Oregon cranberry area did not escape the storms and gales which have bothered the West

*Continued on Page 20*

## A PROSPERING INDUSTRY IN 1966

Like the United States economy is rocketing, as emphasized by the President in his State of the Union address, so is the cranberry industry at this start of 1966. But unlike the U. S. economy, which may have some "soft" spots, the cranberry industry appears to have few. The continued and prolonged drought in Massachusetts and New Jersey, with its damaging effects may be one but there seems to be few others.

The 1965 crop has turned out to be a record, and it sold at the best returns to the growers in years. This would attest to the demand for cranberries in the market and to sound marketing on the part of the industry, and especially Ocean Spray, which handles such a large proportion of the entire yield. The 1964 crop was also a big one selling at only slightly less returns.

Indications seem to be that marketwise, 1966 will also be a satisfactory year. The industry, with ever increasing efficiency in all phases of cultivation is in good condition. We are learning a little more each year how to produce a big crop of cranberries.

"Think Retail," should be the motto of the cranberry growers as time spins along. Each grower, in looking at his product should ask himself: "Will it sell at retail?" For the satisfaction of the consumer is the final answer. Pleasing the customer creates continued demand.

A sale is really never completed until the customer comes back for a second time.

Cranberries, like every other product are in a constant competition for sale in the market place. There are more and more items in the supermarkets every year. The cranberry products must be well packaged and sound in itself.

Color and ripeness are important as well as flavor in such a product as cranberries. They must all be there if Mrs. Housewife is to return again and buy more cranberries.

The industry has advanced much in the tools for a good cranberry harvest. These tools include more effective chemicals, for weed and insect control. The increasing use of sprinkler systems in the past two or three years has been one of the most important of these.

There seems to be a generally good feeling among cranberry growers that this is

CLARENCE J. HALL  
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, Massachusetts

### New Jersey

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

a good time to be a cranberry grower. We believe we may look for continued expansion in the years to come. There is a great demand for vines for planting by Massachusetts growers right now, that is for spring planting. A survey indicates that Wisconsin will increase its acreage by 25 percent by 1970. New bog is going in in other areas. The goose seems to hang high at this start of 1966 and to all our readers we wish a most prosperous 1966.

## FRESH FROM THE FIELDS

*Continued from Page 18*

Coast for some time now. Winds up to 95 miles an hour were clocked at the Bandon Coast Guard Station. There were heavy rains and rather extensive flooding. The Coquille River overflowed the highway, Bandon to Coquille bridges were washed out.

There was considerable damage, but on the whole losses were minor.

## WISCONSIN

### December Warmer, Wetter

The above normal temperatures and precipitation continued into December making the month one of the highest in both phases on record. Monthly mean temperatures were 6 to 10 degrees above normal throughout the state. Precipitation was heavier than the average 1½ inches with some areas receiving up to 4 inches. Coldest readings were on the 7th and the 31st when zero or below was reached in the

north. Warmest reading was on the 30th when record breaking readings in the 50's was reached over the entire state. The first general snowfall over the entire state occurred on the 19th and 20th when 2 to 4 inches fell. This general snowfall over the south arrived about 3 weeks later than normal. The warm weather on the 30th melted the snow cover in the south, leaving the north with an average of nine inches at the end of the year. The outlook for January calls for temperatures to be below normal and average precipitation.

### 1965 Rain Up

The yearly total precipitation in the cranberry areas totaled 40.42 inches making it the 3rd wettest on record and 10 inches above average. Temperatures for the year averaged about three degrees below normal, with frost in every month of the growing season. There were only 7 days with temperatures over 90 degrees. The excess precipitation resulted in the rise of the ground water table and brought on record flow of water. Growers were experiencing some difficulty in win-

ter flooding their marshes as to freezedown. More than ample water supplies in all areas assured adequate winter water. At month's end water had been pulled out from under the ice and snow and most marshes would recap their floods on the next outbreak of Arctic air. For the first time in many years there would be no sanding done before the 1st of the year.

### Cold Spell

January 8th brought a low of 20 below and the following night was almost as cold. This was expected to freeze the winter flood down good and allow ice sanding to begin.

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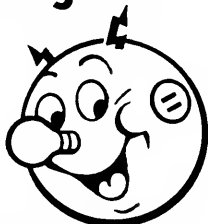
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## Ocean Spray New Plant at Middleboro Under Consideration

Middleboro, Massachusetts is being considered by Ocean Spray Cranberries, Inc., as the site for the cranberry cooperative's new Massachusetts receiving and processing plant, according to an announcement from Edward Gelsthorpe, Executive Vice President and General Manager.

The town, long an important center for the cranberry industry,

has available the acreage needed and meets more of the requirements essential to the operation of the new plant than do the other nine sites Ocean Spray has carefully reviewed, Mr. Gelsthorpe said.

"Chief among the reasons for making Middleboro our Number One choice are rail and road facilities available there, power and the water supply and general topography.

"In addition, Middleboro fulfills some 15 other criteria that must influence our decision on the new plant location."

The major factor, now, in determining Ocean Spray's selection of this plant site as compared to two other almost equally desirable sites is whether the town of Middleboro is willing to provide certain improvements at the location being considered.

Ocean Spray's present plans for the new plant call for a receiving, screening and fresh fruit packing facility to be in operation by the fall of 1967 and the processing facility for all Ocean Spray products to be in operation by the fall of 1968.

Whether this new plant will replace that at Onset, or the packing and process department

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at Hanson does not seem to be certain at this time. Nor has the cost been officially mentioned as yet, but there are reports the expenditure will be about \$6,000,-000.

It is said the business and executive offices will remain at Hanson.

The above announcement, issued January 27, is all that has been officially released.

## Dean Foods Company Acquires New Dairy Firm

Sam E. Dean, Chairman of the Board of Dean Foods Company announced that the purchase of the operating assets of Bowman Dairy Company by Dean was concluded this afternoon at the time for closing previously agreed to by the parties. The closing of

the transaction followed the entry of an order by the Court of Appeals today dismissing the proceedings instituted before it by the Federal Trade Commission and dissolving the temporary restraining order which that Court had previously entered.

The time for closing originally designated to be 2:00 P.M. Monday, January 10, 1966 had been postponed by agreement of the parties on a day to day basis pending the Court's ruling and while the stay order was in effect.

## THERE ARE TWO CRANBERRIES

The postal guide lists Cherry in Illinois, Plum in both Pennsylvania and Texas; Strawberry in Arkansas and California; Orange in California, Massachusetts, New Jersey and Virginia; Lemon in Missouri and Cranberry in Pennsylvania and West Virginia. But there is no Apple, Grape, Avocado, Pear, Raspberry, Current or Blueberry (American Fruit Grower).

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# **Mass. Cranberry Station and Field Notes**

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

## **Personals**

Prof. "Stan" Norton attended the Annual Meeting of the Executive Committee of NE-44 in New York City from January 3 to 5. This is a regional project on mechanical harvesting of fruits and vegetables.

Dr. Chester Cross was also in New York City on January 3. "Chet" attended the organizational meeting of a proposed Northeastern regional aquatic weed research project. Dr. Robert Devlin was appointed Executive Secretary of the committee and will also be project leader for the Massachusetts section, assisted by Dr. "Wes" Miller and the Extension Specialist. The objectives of the project are to study the growth and development of selected submersed aquatic weed species.

Dr. Robert Devlin attended the Northeastern Weed Control Conference in New York City from January 4 to 8. Dr. Devlin presented a paper on "Effects of Indole-3-Acetic Acid and Parachlorophenoxyisobutyric Acid on Abscission in *Phaseolus vulgaris*." How's that for a mouthful! Actually this was an important piece of basic research having to do with using the two chemicals to control the normal separation process of plant parts, which occurs as falling leaves or fruit drop, using beans as the experimental plants.

## **Weather**

January was 1 degree a day below normal in temperature. The month gave us a very pleasant surprise by ending up with a total of 4.48 inches of precipitation, slightly above the 30 year average at East Wareham. This

was the first month with average or above average precipitation since December 1964. Snowfall totalled 15.8 inches or a little more than double the average. We are all hoping that the January precipitation was not a freak and that it will keep falling in good amounts for quite a few months. We sure need it.

## **Charts**

The cranberry pesticide charts have been revised and are 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 are always greatly appreciated. Plans do not call for a revision of the fertilizer chart, so growers should not discard their copy. There is a sup-

ply of these charts still available at the Station. Anyone who needs one should send us a request. 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 1965 weed control chart.

## **Odds & Ends**

A few interesting bits of information not necessarily about cranberries.

Insects chew up three billion dollars worth of food and fiber in the United States each year.

Losses to weeds in the United States exceeds four and one-half billion dollars annually.

It is estimated that by 1975 the American farmer will have to supply 47 percent more beef, 28 percent more poultry, 27 percent more lamb, 27 percent more fruits and vegetables, 24 percent more pork, 13 percent more eggs and 12 percent more milk to feed our expanding population.

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From the time a new pesticide is born in the laboratory to the time it can be marketed, a minimum of four to five years has elapsed.

The above information was taken from the N.A.C. *News and Pesticide Review*.

### FRESH CRANBERRIES TO EUROPE BY AIR

Fresh cranberries were included in a recent Fresh Fruit and Vegetable exhibition at the Hotel Olympic, London, England. The Department of Agriculture and two of America's international air

carriers (Pan American Airways and Trans World Airways), contributed to the success of the exhibit which was attended by large numbers of British and European food buyers.

It is reported in *Foreign Agriculture*, publication of the USDA that orders for the airborne products were placed, especially for lettuce and strawberries.

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### ISAIAH HAINES OF NEW JERSEY, GROWER, CANDIDATE FOR 24th TERM ON SCHOOL BOARD

Isaiah Haines of Whitesbog, New Jersey, veteran grower and vice president and general manager of the J. J. White Company bogs is a candidate for the Pemberton Township school committee. He has already held this position for the past 33 years. He has seen the Pemberton school system develop from two schools with about 300 pupils and a \$25,000 budget to its present budget of \$3.4 million. That was in 1932 and Mr. Haines is still going strong in his interest in the schools.

A new 21-classroom building is presently nearing completion and plans are underway for another 26 classroom building. Today 2,200 school lunches are served daily.

### Cranberry Labels

Wanted as a gift or trade, "labels" from Eatmor, Ocean Spray and independents from all cranberry-growing regions; with the exception of one label, can, in return, furnish all copies of all Wisconsin brands to any interested parties.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of February, 1966 — Vol. 30, No. 10

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## FRESH FROM THE FIELDS

Compiled by C. J. H.

### MASSACHUSETTS

#### January Starts Balmy

January 6th brought a fairly substantial rain to the cranberry area, not enough to do the drought much good, but it helped a little. Also the first week of January was mostly continuing warmer than normal; ponds were not frozen over anywhere, nor were such bogs as were flowed.

But on the 8th came a driving and cold rain, followed by snow. Total precipitation as recorded at the Cranberry Station was .41 inches; however, at some points in the cranberry area there was considerably more, particularly to the north, Boston getting its worst snow of the winter so far. This was followed by winds up to 40 and 50 miles an hour with temperatures as low as 9 and 10 being registered at the State Bog. It was a touch of real winter.

#### Coldest of Winter, So Far

January 11 and 12 were the coldest of the winter, so far, with temperatures only a few degrees above zero. There was also a cold wind. For the first time, the ground really began to freeze and there was substantial ice on ponds, and salt water was freezing along the coastline. The cold continued to the 19th, with bright sunny, but breezy weather. The month which had begun warmer than normal, turned to minus degrees.

The Cranberry Station was of the opinion that there had been no or only slight winterkill, as it was figured the weather, although cold, had not been quite severe enough to cause injury.

Also, bogs which had planks in since last fall were flooding, or mostly so in a great many instances. Not nearly as much acreage was out, and there has been a tendency on the part of growers to leave vines out more in the cold months, and hence the vines were tougher.

#### Snow and Warmer

The night of the 19th and 20th brought snow into much of the cranberry area, and warmer weather. The snow turned to rain on the 20th, but added little to the drought relief so badly needed. As a matter of fact, the rain deficiency in 1965 was continuing into 1966 at that time.

The 21st was exactly normal in temperature and this was followed by warm weather, bringing the figure to a plus for the month.

#### Worst Snow of the Winter

On Sunday, the 23rd, came the first real storm of the current winter. A howling Northeaster swept into New England, bringing up to a foot of snow at places, but not so much to the cranberry area, as the snow was mixed with rain and sleet. The snowfall at the Cranberry Station at East Wareham was recorded at only 3½ inches. This, melted down, brought a total precipitation of 1.41 inches, enough to help the drought situation considerably. The snow continued lightly into the next day.

This was a roaring, howling storm that raised tides along the coast a height to five feet above normal, did some coastal damage, plunged a number of communities into darkness because of power failure; but it did help to

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bring the precipitation to above normal for January for any month in a long, long while in the drought area.

The great storm handicapped air and highway travel, but picked up rail traffic to the greatest extent in months.

#### **Coastal Storm**

A second coastal storm roared in on the 27th, on the heels of the first northeaster. This blizzard started in the south, dumping 16-18 inches on the mid-Atlantic states such as Virginia and North Carolina, which weathermen called the worst snow storm in that area in 34 years. This missed most of New England, but did clobber the Massachusetts south shore, or the cranberry area. The brunt of the storm clipped the Cape, but in Boston there was only a dusting of snow.

There was a reported 2 to 4 inches on the Cape, there being recorded 2-8/10 at the Cranberry Station at East Wareham. This was accompanied by gale winds and there was much drifting. This snow with the previous heavy fall afforded some protection to the bogs.

It was followed by high and

arctic winds, the temperature at the Cranberry Station, being only 8 above. The high winds, however, made it appear much colder and it was a bitter day.

#### **Still Another Blizzard**

Still another blizzard blew in from the south on January 30th. This storm, like the others was partly rain in the cranberry area, and it was accompanied by winds up to 50 miles an hour. There were high tides along the coast. Several Boston weathermen likened it almost to a hurricane in pattern, with an extremely low barometer reading.

#### **January Wetter Than Normal**

Although January had started warm and dry, the month ended slightly colder than normal, by less than two degrees, and also wetter than normal, this being the first such month with above average precipitation since December, 1964. Total precipitation, as recorded at the State Bog was 4.48, normal being 4.12 inches.

This was not much, but it was a change in the right direction and weathermen felt that something of a beneficial dent had been made in the extended drought. January was the snowiest month since 1948 in the state

as a whole and when this snow melts it can have no other effect than to help the drought situation.

#### **Month Cloudy and Much Ice**

However, January brought a lot of cloud cover and there was much ice on the bogs and these conditions are not conducive to large crops in Massachusetts. Dr. Cross, director of the Cranberry Station felt there had been no winterkill in Massachusetts despite the cold weather and high winds, as many bogs had some flowage and were snow covered.

#### **Some Ice Standing**

In fact, ever since the middle of January there had been sufficient ice to enable growers to sand on the ice and considerable was accomplished.

February began in the cranberry area with the ground snow-covered and temperatures about normal, but the weather cloudy and with frequent snow squalls.

#### **Oxygen Deficiency**

The Cranberry Station sent out a flash card signed by Irving E. Demoranville, Extension Cranberry specialist which read:

"Cranberry Station personnel have been making representative samplings of winter floods and analyzing them for oxygen content. On January 31, a few bogs show oxygen levels too low and many are near the critical level.

Shallow-flooded bogs probably have most of the vines embedded in the ice. These should not be touched. Deep-flooded, unlevel bogs should be fully drained if the grower can replace the flood later to prevent winterkilling.

Growers without reflooding capacity must make the difficult decision of (1) pulling off the flood to avoid oxygen-deficiency injury in hopes the present snow and ice will last into March, or (2) leave the flood on, protecting from winterkill but taking the chance of leaf-drop. Chances seem better than 50-50 that the snow and ice cover will last."

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**FRESH FROM THE FIELDS**

*Continued on Page 21*

# Young Massachusetts Man Gets Into Cranberries with Good Start by Buying One of Bay State's Top-Producing Bogs

**Harry T. Fisher Bought the Isaacson Bog in Carver — Is Distributor for AGWAY, Inc. — Had Done Trucking of Cranberries Previously — He is a Pilot, Owns Plane and Has Done Work in Air Treatment of Bogs**

by CLARENCE J. HALL

A young Massachusetts man is getting into the cranberry business with the good start of buying one of the best small bogs in the Bay State. He sort of got into cranberry growing through the "back door." He is Harry T. Fisher, Jr. of Purchase Street, Middleboro.

Fisher is an independent distributor of AGWAY, Inc., this huge new firm being made up of Eastern States and GLF. AGWAY, as did Eastern States before it, supplies cranberry growers, among others with pesticides, weedicides, fungicides and fertilizers. Agway's field includes all of New England, New York, New Jersey, Pennsylvania and Ohio.

Fisher is a licensed pilot and sometimes uses his plane to check up on bogs which have been treated by Plymouth 'Copters, Inc. (Thomas S. "Whitey" Weitbrecht) which works in a form of cooperative effort with AGWAY, although Plymouth 'Copters does independent spraying. Fisher owns a metered truck which he drives to the bog to be treated, and loads the 'copter or straight-wing plane with the desired materials.

As a truck owner he has also hauled cranberries to Ocean Spray plants in the fall for a number of bog owners including the Rocky Meadow bog owned by George C. P. Olsson, president of Ocean Spray.

It was through these two contacts with cranberry growers that he got to know the business and decided to go into it himself.

The bog he purchased was that of the late Mrs. Isaac Isaacson at Rocky Meadow and Purchase Street. Fisher lives only a short distance from this bog.

The Isaacson bog, as stated before, is considered one of the very top small bogs in Massachusetts. Mrs. Isaacson gave it the most intent personal care, seeing to it there was scarcely a weed and keeping insects under control and keeping ditches always cleaned out. The bog is set entirely to Early Blacks. The

bog was purchased in the fall of 1964 together with two dwellings.

But it is production which really tells the story of how good

a bog is. "Mrs. Isaacson averaged between 125 and 150 barrels to the acre. She usually picked between 1600 and 1800 barrels and has gone as high as 2200 barrels, which, of course, is doing all right for a bog of 12½ acres."

Fisher harvested his first crop last fall. In spite of the great Massachusetts drought he picked about 1500-1600 barrels, or about the same average Mrs. Isaacson maintained.

Fisher was born October 4, 1930 in Braintree, but went to school in Weymouth, where he was graduated from Weymouth High in 1948. Shortly after that he did a stint of two years in the United States Marines, from 1952 to February of 1954. He trained at Parris Island, South Carolina and was then assigned to the U. S. carrier *Franklin Delano Roosevelt*. The carrier was attached to the 6th fleet and saw duty in the Mediterranean.



**Mr. and Mrs. Fisher at Bogside.**

**(CRANBERRIES Photo)**

After this service he and his wife went in for dairy farming on Purchase Street, this farm being an old family homestead. He had farm trucks, which he began to use in hauling cranberries in the fall. One of those he hauled for was Mrs. Isaacson, taking her fruit to the Ocean Spray plant at Onset.

Mr. and Mrs. Fisher operated the dairy farm for about 12 years, and although they still live at the old farm homestead

they rent out the dairy end of the farm.

Harry has known something about cranberries since his high school days, when he worked some summers and at vacation time for United Cape Cod Cranberry Company of Hanson. He picked berries by hand in the fall.

He has been a representative of AGWAY for about eight years.

The Isaacson bog, as it was so long known is not a new bog,

but formerly belonged to the Shaw family of Carver. Mr. Isaacson bought the bog in the early thirties and completely rebuilt it. Harry resanded it in the winter of 1964-65. There is plenty of good sand on the bog property.

The bog is flowed from its own reservoir, which is fed by springs, and Harry says there is a sufficient water supply. The bog, all in one beautiful piece, is flowed by gravity. It takes about four hours to put the bog under for a good frost flow. After use the water is pumped back into the reservoir and this can be done in five or six hours. The water is handled by a gasoline pump made by Henry Guiron of Wareham and the power is a V-8 Ford.

Fisher is keeping the bog up in the tradition of Mrs. Isaacson. He had a little trouble with girdler in 1965, but treated it with dieldrin. He sweeps every week for possible insects.

Fisher does all the bog work himself, including frost flowing, but in the summer he has part-time help of a local high school youth. Harvest is by two Darlington's, which Fisher finds very satisfactory. Vines on the bog are short and there are no runners, so no need to prune.

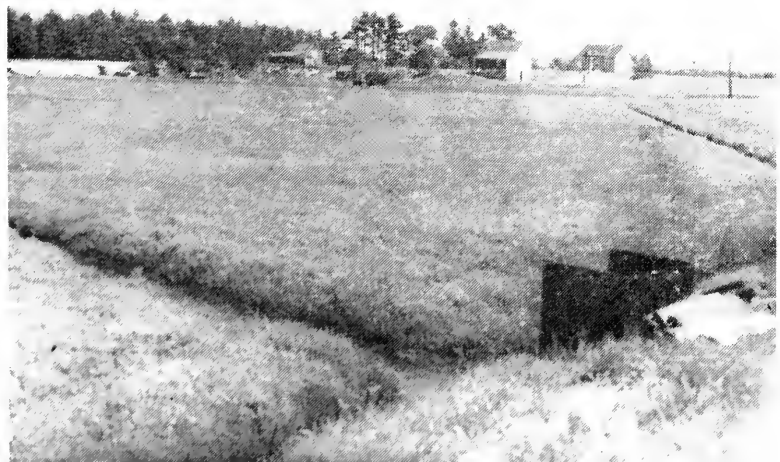
Mrs. Fisher, who keeps books for her husband helps out in general on the bog; she was Miss Joan Giddings of Quincy. She attended North Quincy High School and she and Harry were married in 1950.

They have three sons, Gid Allen, 14; Jeffry, 10 and David, 4.

Fisher learned to fly a plane under Everett King at the Taunton air field. He has a 170 Cessna, a four-place machine. The Fishers keep this on Purchase Street and have developed their own air strip in a meadow.

As to hobbies, Fisher asys he has none except flying. "My work and flying take all the time I have." Mrs. Fisher does not pilot, but goes along she says as "merely a passenger."

She has relatives in Vermont and they have flown there and



Two Views of the Present Fisher Bog, lower showing the Isaacson Buildings on Rocky Meadow Road.

(CRANBERRIES Photo)

to New Hampshire, Maine, New York and to Florida.

Does Harry intend to stay in cranberries? "I sure do, with this bog I've got to, and anyway I like being a cranberry grower.

## David Mann Featured in 'New England Farmer'

Dave Mann, cranberry grower of Head-of-the-Bay Road, Buzzards Bay, Massachusetts was the subject of a two-page spread with photographs in the January issue of the "New England Farmer," publication of the Massachusetts Farm Bureau Federation. Mann was recently elected president of the Plymouth County Farm Bureau and is also a director.

The article is chiefly concerned with mechanization of his bog operations and especially his water raking methods, and his sprinkler irrigation system.

"Dave" has previously been featured in CRANBERRIES, once as a leading young grower and once in regard to his water raking. He is the son of the late Gordon Mann, for many years sales manager of Ocean Spray.

## "A-Team Farm Labor"

Secretary of Labor Willard Wirtz has launched another program to ease the farm labor shortage. Called A-Team (Athletes in Temporary Employment as Agricultural Manpower), the program's aim is to recruit between 15,000 and 25,000 boys to work on farms where labor shortage exists. To promote A-Team, Wirtz has set up an advisory committee composed primarily of well-known athletes. The youths will be paid a minimum of \$1.15 to \$1.40 an hour—wage levels fixed by the Department of Labor that growers must first offer domestic workers before they are eligible for foreign workers.

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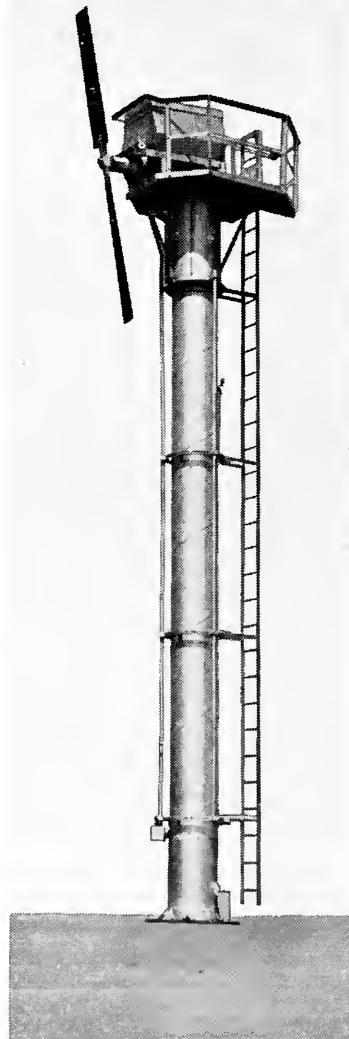
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## Casoron Retention in Cranberry Soil

By C. W. Miller, I. E. Demoranville and A. J. Charig

University of Massachusetts (Cranberry Experiment Station),  
East Wareham, Mass.

The widespread use of Casoron for weed control during the past year has prompted investigations as to the fate of the chemical after application. Tests with this chemical have been in progress here at the Experiment Station for three years and thus affords us an excellent opportunity to study the situation in advance of grower usage.

Soil samples were collected from various treated sections of the State Bog to a depth of 12 inches. The samples were divided into three increments representing the 0-4, 4-8 and 8-12 inch soil levels. Analysis for Casoron, and its breakdown product 2,6-dichlorobenzoic acid (2,6 DCBA), was made by gas chromatography using an analytical method developed by the Thompson-Hayward Company. The results of the analysis are listed in Table 1.

The persistence and stability of Casoron is evident by the fact that detectable quantities could

be found on section 20, almost two years after initial application, and it is only in sections treated that year (1963) that the breakdown product could be found, and then only in limited quantities. Of prime significance was the fact that the major portion of the residue was localized in the upper four inches of the soil profile, in the area where it would be most effective against germinating weed seeds. It is not possible, however, on the bases of this evidence to ascertain if the chemical is active or held ineffective by the organic matter present. Organic matter comprised between 2 to 10% of the soil matter and results of other residue investigations has demonstrated that the organic composition of a soil is directly related to the amount of chemical which the particular soil will retain; the higher the organic content, the greater the amount of chemical. In addition, absorption sites in the organic matter may bind

Table 1. Casoron residues in cranberry soils at depths of  
0-4 and 4-8 inches.<sup>1</sup>

Section <sup>2</sup>	Date of Application <sup>2</sup>	Casoron <sup>3</sup>		2,6-dichlorobenzoic acid	
		0-4"	4-8"	0-4"	4-8"
1	October, 1963 October, 1964	0.20	0.01	T <sup>4</sup>	0.0
4	April, 1963 October, 1964	0.39	0.01	T	0.0
15	April, 1964 April, 1965	.36	0.02	0.0	0.0
5	April, 1964	0.31	0.00	0.0	0.0
13	October, 1964	0.17	0.00	0.0	0.0
20	October, 1963	0.12	0.00	T	0.0
8	April, 1965	0.21	0.00	0.0	0.0
9	June, 1965	0.12	0.00	0.0	0.0
Ditch Soil		0	0.00	0.0	0.0
Pond Soil		0	0.00	0.0	0.0

<sup>1</sup>—Soil samples collected August 18, 1965.

<sup>2</sup>—Rate of application=4 lbs. actual/acre.

<sup>3</sup>—Figures represent lbs./4 inch acre.

<sup>4</sup>—T=Trace amounts. Presence of compound detectable but quantitation not feasible. The 8-12 inch layer was negative for both casoron and 2,6-DCBA.

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has come up because of the daily delivery aspect of the Farm Plate law. This question has not been fully resolved at present but Philip N. Good, Executive Secretary of the Massachusetts Farm Bureau, is working on this and I will report through this column a final determination on this question.

An issue which is being widely discussed at present is Section 14B of the Taft-Hartley Law. Bill H-2595 is a bill which would memorialize Congress to enact legislation to repeal Section 14B of the Taft-Hartley Law. Farm Bureau is opposed to this memorial. There are many arguments in support of retention of Section 14B. Three very significant reasons are: (1) The people of a state should not be denied the right to decide this issue for themselves; (2) To compel any individual to be a member of and to support financially an organization with political objectives is an infringement on personal liberty in violation of the spirit of the Constitution; and (3) Voluntary membership is the best guarantee that unions will not be controlled by undesirables and that its policies and programs will be those supported by the membership. The most effective way to prevent abuse of power by leaders of any organization is to permit members to resign when they can no longer support its policies or conduct of its leaders.

This a petition of the Massachusetts Farm Bureau Federation which would permit the assessment of open lands used for agriculture at a value related to its use. As an example, a Cranberry grower who is using land in the production of cranberries would have his property assessed as farm land and not as potential house lots or industrial sites. Bill S-82 provides for counties to acquire land for conservation purposes by use of "eminent domain." Farm Bureau is opposed to this bill. We are for conservation but we are against use of eminent domain as a method of acquiring land except where it is absolutely necessary.

Bill number S-177 would extend the distance a vehicle bearing Farm plates could travel from 20 miles to 50 miles. Farm Bureau submitted this bill to the General Court and also submitted bill number H782 which would permit vehicles bearing Farm plates to cross state lines. Farm Bureau favors an unlimited mileage on Farm plates. However, it makes good sense to go after what is obtainable and 50 miles will solve most farmer's problems. It is Farm Bureau's contention that even though farmers have the right to travel more miles on their plates or even to cross the State line, they will make use of this extension only as it is necessary to their farm business use. With Ocean Spray moving their processing plant many cranberry growers will be outside a 20 mile radius. In addition to the mileage restriction there has been some indication that the Registry of Motor Vehicles is making a drive against the misuse of the "Farm Plate." One question asked by Cranberry growers about Farm Plates is the legality of using them to deliver cranberries from the field to processing station? This question

A major bill of interest to all citizens is bill number H-1, the Sales Tax bill of Governor Volpe. At present the Farm Bureau has not studied the bill but it appears to be worthy of support of Farm Bureau members in Massachusetts.

As action on various bills takes place throughout the year I will report to Cranberry growers all items that will affect your farming operations through this column.

READ CRANBERRIES

By VERNON A. BLACKSTONE  
Farm Bureau Staff Assistant  
Soon the Great and General  
Court of Massachusetts will be



Frank P. Crandon of Acushnet, left, was reelected a Director of Ocean Spray Cranberries, Inc., at the 35th annual stockholders meeting on January 12 in Wareham. Talking cranberries with Mr. Crandon are Mr. and Mrs. Alden Brett, Cape Cod grower members.

Mr. Brett is a former Treasurer of Ocean Spray. Mr. Crandon is also Treasurer and Clerk of Cranberry Credit Corporation. Mr. Brett too, is a trustee of the University of Massachusetts and for a time was executive secretary of the Cranberry Institute.

## Water Rights Chief Topic at Wisconsin Meeting

Water, the lifeblood of the cranberry industry, held the attention of members of the Wisconsin State Cranberry Growers Association at their annual meeting at the YMCA Community Center, Wisconsin Rapids, January 19.

There were conflicting opinions on whether the industry should join other irrigators in a massive state program to protect the rights of agricultural water users.

Roy A. Menzel of Stevens Point,

partner in the public relations firm of Menzel-Williams & Associates, told of the \$35,000 annual program his firm has planned to educate the public to irrigators' needs and to provide year-round lobbying service for the industry.

### Caution Advised

But John M. Potter of Wisconsin Rapids, attorney for the association advised the growers to "proceed with caution in aligning yourselves with others."

Potter noted a "basic conflict" between the potato growers and the paper companies. He said cranberry growers have long had a good working relationship with paper firms in spite of conflicting

demands on the same water sources, suggesting that an alliance with other irrigators might invite trouble.

At the same time, Potter spoke of the "political sex appeal that water problems have right now." Although he is chairman of the governor's committee on water resources which is planning new legislation in the field, Potter warned the cranberry men that they should be wary of other regulatory bills which might be proposed.

### Solicits Support

Menzel, speaking for the Water Resources Development Association, asked for support of indi-

viduals rather than cranberry association backing.

He said irrigators who join the association his firm represents are assessed \$50 per year per well, up to a maximum of \$500. There is a minimum of a \$100 annual contribution for banks, agricultural suppliers and others who may have an interest in the program.

Menzel said approximately \$5,000 has been raised, with a similar amount already pledged for 1966.

Anticipating that some water legislation will be adopted, Menzel said "our people do not think controls are necessarily bad, but they want a voice in establishing these controls."

#### **Elect Officers**

Elected president of the Cranberry Growers Association was Craig Scott of the Scott Cranberry Co., Warrens. Stewart Peterson, also of Warrens, was named vice-president, and Lloyd Wolfe, Wisconsin Rapids secretary-treasurer.

Directors of the association, in addition to the officers, are Charles Goldsworthy, Eagle River, and James Schnabel and Wayne Duckart, Wisconsin Rapids.

Bruce Potter of Camp Douglas reported on the state marketing order for cranberries which is in effect this year. The first assessment of two cents per barrel is due March 1 to finance the frost warning service and University of Wisconsin research on cranberry problems. Potter said the UW is already spending \$30,000 annually in behalf of the industry and will match the estimated \$8,000 to be raised by the growers for additional studies.

#### **Seek Tax Ruling**

Al Bark of Wisconsin Rapids proposed that the association seek a determination from the State Department of Taxation on whether sprinkler systems should be taxed as real estate improvements or are considered farm personal property. Although Potter made an immediate telephone inquiry, he was informed that the department did not have enough facts to make a ruling.

Speakers included Dr. Donald Boone, Madison, who reported on fungus studies and the shrinkage of cranberries under various storage temperatures. He advised storage at between 39 and 46 degrees to reduce spoilage, and at the lower temperature to control shrinkage. Tests showed the Howe variety produces the least shrinkage, Dr. Boone noted.

District Forester Martin Kodrich urged the growers to consider tree management as an off-season occupation and income source. Ben Hubbard, district game manager, advised the growers on the techniques of pothole blasting for waterfowl feeding and nesting.

Installation of sprinkler systems and their use was discussed by Art Kowitz, a state engineer. He said these systems are the only ones for which cost-sharing practices have been approved by the ag department.

### **Sorensen Buys Thiele Stock in Wisconsin**

Leo Sorensen, 449 Greenwood Dr., has gained control of the Thiele Cranberry Co. marsh northeast of Wisconsin Rapids through purchase of 6,000 shares of stock for \$90,000.

Circuit Judge Merrill Farr of Eau Claire ruled in January that Sorensen's option claim to the stock was valid, and that an agreement which Indian Trail, Inc., had with Mrs. Villa Thiele was unenforceable.

Indian Trail had gained control of the stock prior to Sorensen's lawsuit, but Judge Farr ordered the shares turned over to the Wood County National Bank, giving Sorensen until Jan. 27 to complete purchase arrangements.

Sorensen said that he had been informed the defendants were not appealing the decision to the Supreme Court.

He said he will continue as a private cranberry consultant, leaving active management of the marsh operations to Art Cote, who has been marsh manager.

The 6,000 shares give Sorensen two-thirds ownership of the marsh. Another 3,000 shares of stock are held by Clarence Searles, town of Cranmoor cranberry grower.

## **NOTES ON FROST FORECAST AND FROST PROTECTION**

**Editor's Note:** The 1966 spring frost season is now not far ahead; hence we are publishing a paper on "Notes on Frost Forecasts and Frost Protection" as given by George B. Rounsville, at the Cranberry Seminars last year, from the publication "Research into Action," No. 435, Cooperative Extension, University of Massachusetts. Rounsville is the forecaster at the Massachusetts Cranberry Station, East Wareham.

A frost night with perfect radiation continuing throughout the night and next morning occurs but rarely, especially during the spring frost season. More often than not at the time of our forecasting, noon and evening, the weather factors are such that it is necessary to issue a "conditional" warning. Also, many nights that appear to be ideal for a frost often end up with clouds or winds keeping the minimum temperature above the danger point.

A frost warning with winds, clouds, or both, possibly becoming the determining issue makes for a tricky night, especially so *if the minimum predicted is two or more degrees below the tolerance.*

No matter what the evening forecast might read with reference to winds, start water moving, have the sprinkler system ready, at least be around your bogs. A time element enters here, for if winds become calm during the evening or early the following morning there is no slow temperature drop of about a degree an hour. Within an hour of calm you can be hurt by frost, and the resulting damage is very likely to be more severe from such an occurrence than it would be after a night that has been calm throughout, everything else

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being equal. There have been nights when all factors are such that winds should have continued all night and failed to do so.

As for cloudiness, if it persists until after midnight the danger is much reduced and many bogs will get by without protection. The exception to this might be when an extremely low minimum is forecast. Even then, time is in the growers' favor for temperatures drop at a much slower rate when clouds disappear.

In Dr. Franklin's bulletin where the formulas are given, there follows some few notes which must be considered in issuing a forecast minimum for the coming night. As much as two degrees can be added or subtracted at times.

I have inserted the following note for future forecasting:

"A conditional warning should be issued to growers when prolonged drought conditions exist, either in the spring or fall, and the average of the formulas is at or near the tolerance of the plants or berries."

The past has shown that under drought conditions, in the frost seasons, ensuing minimum temperature can be below the computed minimum, principally on the Cape bogs but sometimes in other areas.

I can visualize this leading to problems for some growers, especially in the spring. As it has happened in the past, the time of issuing such a forecast could well coincide with that when the cranberry plant cannot tolerate flooding for more than a few hours. Growers with sprinkler systems have the advantage here, whereas those who protect by flooding must decide whether it is best to take some frost loss or chance water injury. The following are observations, explanations and suggestions that may be helpful to you in the frost seasons.

These terms are a very important part of the forecast and should be given due consideration by the grower.

Following both the great spring frosts of 1944 and 1961, it was

written and said that growers observed frost damage on vines over a frost flood.

A few days following the frost of May 30, 1961, I was shown a bog where the grower let water through a flume into ditches that had stop waters in them. Where this procedure forced the water over the bog and through the vines, it saved the crop. The continuous movement of water throughout the night is thought to have been the saving element in this case. Dr. Franklin stated that two or three inches of water everywhere under the vines is enough to keep vines from freezing. The exception might come on rare occasions in April or October, when ice forms on the protecting flood.

At a previous meeting the question was asked, "What happens to vines if the sprinklers are started with the temperature at the danger point or below?"

I relate this only as an observation made last spring on three frost nights. It was not an experiment, I was simply late in starting



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the sprinklers. One night the temperature was below that which I considered was the tolerance on this particular bog. The other two nights the temperature was at the danger point. The vines suffered no damage and the crop was good. However, the length of time that the vines endured the low temperatures was of short duration.

From heresay and observations, there seems to have been a marked tendency among many growers to start the sprinklers a little late in the past. Experiments to date have not shown any benefit from protecting for 32°, either by sprinkler or flooding, in the spring frost season under normal conditions.

I believe this to be a practice that some growers indulge in; namely, that they use the temperature readings of a thermometer on the side of their house as a measure of the temperature on their bogs. This should not be relied on to the extent that it determines whether or not you get to your bogs on nights in the frost season. Whatever the temperature difference between such a location and that on a bog might be, over a long period of time, there is a certainty that under the right conditions a variation will occur and chances are you will be late with frost protection.

Upon removing the "late water" flood, the buds will be at the same tolerance as those of early water.

Fresh sand on a bog should be good for +2°, especially if moist.

There have been many cases where bogs have been frosted in the spring up-towards to 20% and still borne a respectable crop.

If a grower feels he must gamble with frosts for one reason or another, it seems best to do so in the first part of the spring frost season. The buds are then in various stages of tolerance and many will come through a rather severe frost.

The terms "Balance against," "Balance for," "Balance even," are always incorporated in a frost warning.

If the balance is against, it means that the dew point is low, allowing a greater chance that

temperature will fall to the minimum forecast.

Conversely, if the balance is for, the fall of the temperature is often slowed to the extent that growers with average to warm bogs can get by without protection. Dew points here are usually high.

Occasionally the balance is even.

This does not seem to point one way or other to the type of night coming. In this case, the minimum forecast should be the deciding factor as to whether protection is necessary or not.

Kerosene still has a place on the weed chart and, if applied especially as a broadcast treatment,



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every caution should be used to keep frost away from a bog so treated. Severe damage results if not fully protected, and at temperatures above the general tolerance.

Prior to our afternoon forecast of minimum temperature, growers can get an early indication of the minimum to be expected by subtracting 20° from the Weather Bureau's forecast minimum for Boston. Their morning forecast is given at 7:40 a. m.

Generally the more positive frosts follow when a high is directly over or slightly south and west of this area. Before their arrival at such a position we usually experience a night of cold temperatures accompanied by winds, inland bogs being the exception. The day following often finds winds becoming light and shifting into the southwest in the afternoon. Such a sequence is not an indication of a change to warmer. This "sea breeze" will calm toward sunset and the fol-

lowing morning will likely find temperatures at frost levels on the bogs.

It was estimated that water damage caused a loss of 50,000 bbls. in the spring frost season of 1964. Periods of threatening frosts continuing from one day to another have not been common in the past decade, and it may be possible that many growers are unaware of the damage that water can do when held over from day to day in the last part of the spring frost season. In a normal year, the risks of damage become increasingly great with the holding over of a frost flood after May 10th. Even though experiences will vary from bog to bog and year to year as to the amount of damage one receives when doing so, it can result in a complete loss of the crop.

In that it is necessary to keep the forecasts concise as sent to the telephone distributor and radio stations, I try to include a few more details in using the answering

service. This also is limited to the length of message that can be taped on our machine.

Joking, of course, but I would like to see the term "possible but not probably frost" added. Believe me, there are times when the weather conditions are such that a warning using that term would be desirable, at least it would keep me off the hook if it were used.

#### PERSONALS

Mr. and Mrs. Vernon Goldsworthy and Ralph Sampson of Cranberry Products, Inc. of Eagle River, Wisconsin were recent visitors at Jamaica, B.W.I. While on the trip to the Carribean they attended a canners' convention.

Also vacationing on the island at the same time were William Decas of the Decas Bros. distributing agency and large growers, and Mrs. Decas and Herbert E. Dustin, Massachusetts grower and Mrs. Dustin.

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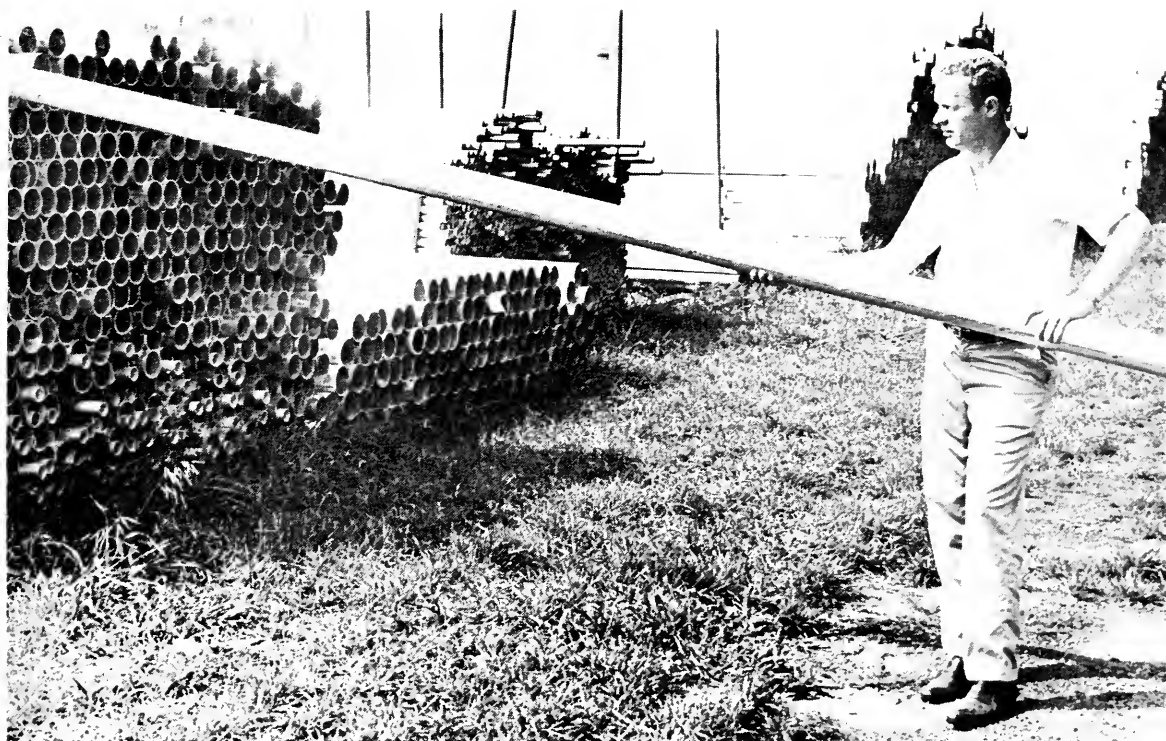
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## OF INTEREST TO

### CRANBERRY GROWERS

U. S. turkey growers intend to produce more turkeys in 1966 than last year, according to the Crop Reporting Board of the USDA. The 1966 turkey crop according to present plans of the men should be about 112.1 billion birds, compared with the revised estimate of turkeys grown in 1965 of 104.7 billion.

However, the USDA release points out that turkeys actually raised in 1966, may vary somewhat from this January 1966 estimate, depending upon a number of factors.

Of course, a good crop of turkeys should be good news to the cranberry growers as the two food items are so closely allied in popular impression, and a good crop might indicate reasonable prices to the birds that go with cranberry products.

### AGRICULTURE IN MASSACHUSETTS

"Agriculture is a five billion dollar asset to the economy of Massachusetts," says a recent pamphlet from the University of Massachusetts.

The realized gross farm income totals 170 million dollars. The agricultural industry provides 185,000 jobs, or 9 percent of all employment in the Bay State; goods and services worth 140 million dollars are purchased and used annually for the production of agricultural products and the processing of agricultural products accounts for 350 million dollars or 8 percent of all value added by manufacturers in Massachusetts.

### Cranberry Institute Elects Officers

**President Colley Says  
Foreign Sales Prospects  
"Encouraging"**

The Cranberry Institute held its Annual Meeting January 11, in Duxbury, Mass. Directors and officers re-elected are Gilbert T. Beaton, Secretary-treasurer; Orrin G. Colley, President; George C. P. Olsson, all of Massachusetts; Leon April, Vice-president of New Jersey; and Behrend G. Pannkuk and Clarence A. Searles of Wisconsin.

The 1965 activities of the Institute were reviewed by Mr. Colley. These fell primarily into two categories.

The first: liaison with members of the cranberry industry, government agencies, and other trade groups concerning the factors affecting and influencing the cranberry business. He said, "This industry does and must expect to face new challenges, but there is no reason to believe that problems will not be resolved successfully as they have been in the past."

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The second: supervision of the foreign market development project for U. S. cranberries. He stated, "This project is progressing at an encouraging rate, sales opportunities continue bright and our industry can have its share of the overseas market by building an image, based upon a fine product, from the grass roots upwards."

## FRESH FROM THE FIELDS

*Continued from Page 6*

## WISCONSIN

### January Sleet-Freeze

January lived up to its reputation as the coldest month of the year with temperatures averaging almost ten degrees below normal. The first week of the month brought a continuation of the mild December weather with some light wet snows in the south half. Highs of 40's were reached in the south

on the 4th and 5th. On the 8th Arctic air entered the state from Canada and temperatures dipped to minus thirty or more in the northwest. This weather pattern continued for the rest of the month with some readings forty below or more the latter part of the month. There were some stretches during the period when the maximum temperature was minus ten below and for a week the temperatures never rose above zero. This was indeed a deepfreeze. Snow fell over the entire state on the 2, 6 and 12th giving the entire state a blanket lasting throughout the month. On the 12th as much as a foot fell in the south. At month's end the north had over two feet, the central about one foot and the south about 8 inches. The outlook for February calls for temperatures about normal and precipitation below normal.

### Three Feet of Ice

Most of the larger lakes and streams finally froze over during the cold and calm night early on the 8th. At month's end as much as three feet of ice was reported on the cranberry reservoirs. The snow cover in advance of the real cold weather prevented deep frost penetrations. This was especially true in the north. Deepest frost penetrations in the state were about 30 inches in the central part of the state.

### Sanding

Needless to say the cranberry beds were completely frozen in with the sub-zero weather and sanding started in earnest around the 10th. However, temperatures were so severe the latter part of the month that operations had to cease. Most marshes are planning some sanding of beds and custom applicators are also doing a part of the work.

## WASHINGTON

### Weather

High and cold winds of December continued into January in the coastal cranberry area. Precipitation for January was 12.07 inches, with the most rain on the 5th, with 2.02 inches. This was less than January of a year ago.

The mean high for the month was 47.16 and the low was 36.55. The bog low at Long Beach Station was 19 degrees on the 18th. There was no snow for the month.

### Basic Work Pruning

Activity on the bogs was basically pruning.

Also many growers have been taking bog soil samples and having them analyzed at the University of Washington at the soil testing laboratory. These tests should show what each bog needs in its fertilizer program.

### Two Meetings

January 12 and 14 were meeting dates for the Grayland and Long Beach areas, respectively. The growers heard reports on fungus survey and research work being done by Dr. Maksis Eglitis of the Puyallup Station. He has been working for the past two years

*Continued on Page 24*



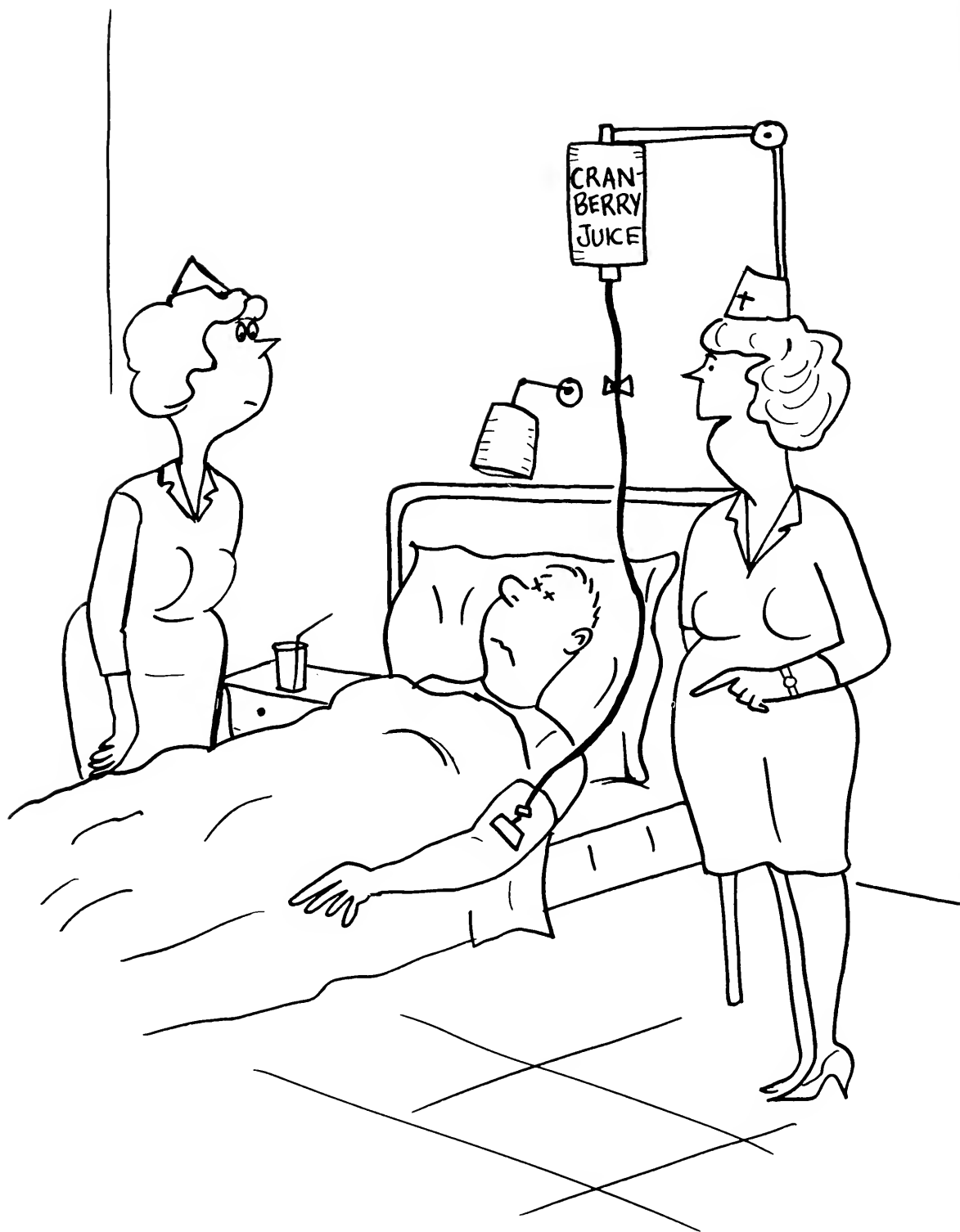
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by Bill Shelly

## OUR LARGER CROPS

It was not so many years ago that the thought of a million barrels of cranberries in the United States was scarcely believable and was a terrifying spectre. The late Marcus L. Urann, president of Ocean Spray, was one of the first to talk of a "million-barrel" crop.

That figure was first achieved a little more than a decade ago, in 1953, according to a chart in a bulletin of the Massachusetts Department of Agriculture we have in our files. The crop then was 1,023,000.

Production last fall was the top, 1,244,000 barrels, almost a million and a half. And we breezed through that like "nobody's business." Will we achieve a figure of 2 million eventually? This seems more than possible. What with today's advances in technology it would seem this might be achieved. Today we have more effective chemicals of all sorts, better and faster harvesting equipment, such as the picker with a 6-foot swath, now developed in Wisconsin, efficient pest control from the air and the advent of more use of sprinkler systems and the increase of water harvest, which saves the estimated 20 per cent or so lost in dry picking.

Plans are being made to handle larger crops and to handle them more efficiently, as in the proposed new processing plant in Massachusetts by Ocean Spray at a reputed cost of 6 million dollars. The industry is looking ahead and forward.

Never, it appears, especially from the talks at the annual meeting of Ocean Spray have the prospects been better for the cranberry industry. We mention Ocean Spray, in particular, because that big cooperative represents somewhere around 85 percent of growers and production.

We do not expect to see a harvest of 2 million barrels next year, or in a couple of years. But it does seem to be definitely on the horizon. When this tremendous production does take place, we believe we will be ready to market it successfully.

From New Jersey comes the exciting prospect of another new development. That is the possible use of a "hover-craft" for the application of fungicides. This craft, as you may know is a new device, developed in England, which rides neither on the ground,

CLARENCE J. HALL  
Editor and Publisher

EDITH S. HALL — Associate Editor  
Wareham, Massachusetts

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New Lisbon, New Jersey

or yet is not an aircraft in the true sense of the word. Jets of forced air, make it float just above the surface of the ground or the water.

This was discussed at the meeting of the American Cranberry Growers' Association at Mount Holly this month. There is such a craft at Princeton University and apparently available.

This breakthrough in cranberry use was mentioned in the January issue of "Farm Journal."

Continued on Page 21

on cranberry projects, the work being supported by a special fund provided by growers from both the Long Beach and Grayland areas. Recently, Ocean Spray agreed to take over this project through its research department in conjunction with the Washington State University research program supervised by Dr. Folke Johnson. The works so far have been very rewarding to the Washington growers and when reports are made should be of benefit to all cranberry men.

## NEW JERSEY

### January Very Cold

The weather records at the Cranberry and Blueberry Weather Station at New Lisbon show that January was extremely cold and wetter than normal. The average temperature was 29.6 degrees, which is 4.3 below normal. This marked the 13th out of the past 14 Januaries during which the temperature has been below normal. It was the ninth coldest January on record at New Lisbon. The latter half of the month was particularly cold. The

temperature did not go above freezing during the last 8 days of the month. The extremes varied from 4 degrees on the 29th to 62 on the 1st.

### Drought Broken

The long spell of drought was finally broken. Precipitation totaled 3.73 inches, which is .42 above normal for January. This was the first month in the past 6 months during which a large deficit was not recorded. It was only the 3rd month in the past 19 months of above normal rainfall.

Snowfall totaled 14 inches during the month. Converted to rainfall, this accounted for 1.14 inches. The snow on the 29th and 30th measured 7½ inches. This was a big snow but far below the record snowfalls which have occurred in this area. On March 19th, 20th and 21st of 1958, 16 inches of snowfall occurred. There have been several other snowfalls of more than 10 inches over the past 40 years.

### Phenomenon

A peculiar phenomenon occurred in the Chatsworth area

during Saturday's and Sunday's storm, Jan. 30 and 31. The temperature rose to well above freezing at the height of the storm Sunday morning. This was noticed by several cranberry growers and residents in that area. Earl Kerschner, Cooperative Weather Observer at Chatsworth, recorded 38 degrees. The maximum was only 32 degrees at the New Lisbon Station, which is just six miles due west and about eleven miles northwest of Chatsworth. Apparently some warm air came in from the ocean temporarily, only to be pushed out again by the heavier cold mass.

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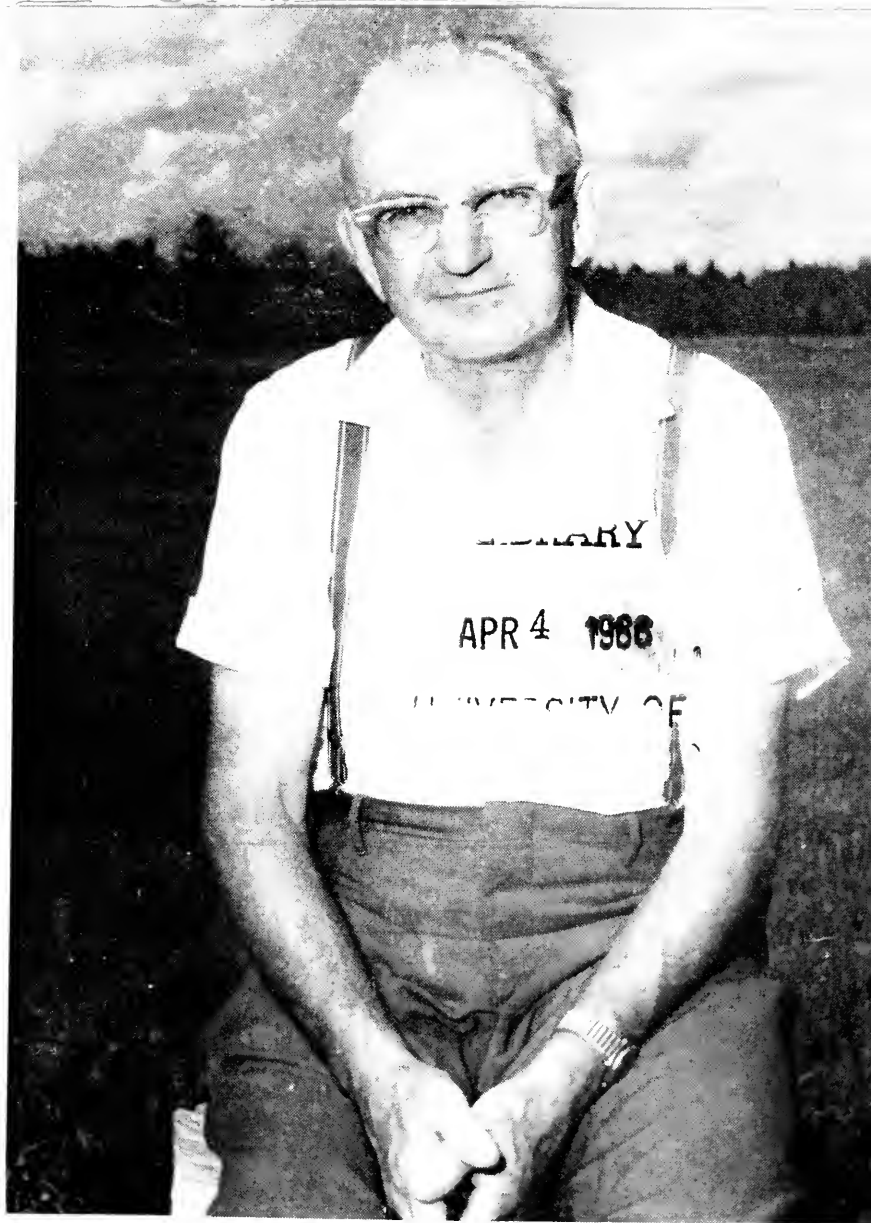
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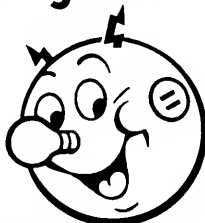
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"Bob" A. Gottschalk, Donald and Wayne Duckart, Debs Olson, George Dana and Harold Roberts, all of Wisconsin have been visiting the West Coast. They report they found the bogs very "clean" and the growers more than friendly in showing them around.

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## PERSONAL

Ralph Sampson and Charlie Goldsworthy of Cranberry Products, Inc. of Eagle River, Wisconsin have been on a business trip to the West Coast with stops in L. A. and San Francisco.

## PURPLE ASTER IN WASHINGTON

(EDITOR'S NOTE: The following notice was sent to Washington cranberry growers on February 28th by Azmi Y. Shawa, Extension Agent in Horticulture, South Bend, Washington.)

If you have a problem with purple aster, treat them very soon with a mixture of 100 lbs. bulk casoron plus 20 lbs. bulk 2,4-D granular per acre. Asters are sprouting now and it is easy to kill them in this stage.

The area you will treat now cannot be treated again later.

The information given herein is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Cooperative Extension Service is implied.

# Mass. Cranberry Station and Field Notes

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

## Club Meetings

The February series of cranberry club meetings were held at Kingston on February 15, Rochester, February 16 and Barnstable, February 17. Mr. John MacDonald of the American Plywood Association presented a film on "Bulk Handling Equipment" showing various fruits and vegetables being harvested and stored in bulk bins made of plywood and how these bins have been modified and adapted for use in specific crops. Dr. Bert Zuckerman presented "Fungicide and Variety Studies" which consisted of progress reports of fungicide tests and also tests of certain processing characteristics of the new varieties. The variety work is being sponsored by Ocean Spray Cranberries Inc. Dr. Karl Deubert

talked on "Development of Agriculture in East Germany After World War II" in which he gave details on the changes in the agricultural climate and community of East Germany under Russian influence. After listening to this, it sure made one thankful for our system of agriculture and the large amount of freedom of action that we do enjoy. Dr. Surindar Paracer had as his subject "Is Famine Inevitable in India," this is another frightening and ugly aspect of agriculture in the world today that we have not had to experience in this country, which is certainly a tribute to our farmers and agricultural scientists. Dr. Cross presented "Cranberry Production Prospects For 1966" in which he discussed weather factors influencing the

potential crop, management practices to promote maximum yield and some thoughts on water harvest.

## Frost Warnings

The Cape Cod Cranberry Growers Association is again sponsoring the telephone frost warning service. Applications were mailed to 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 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

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to growers subscribing 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 210 subscribers last season, let's hope there will be an increase this season.

#### Charts

The 1966 cranberry insect and disease and weed control charts have been printed and mailed to the growers. These charts should have been received by mid-

March. Growers are reminded to carefully read the notes at the top of each chart, there is a great amount of valuable information included in this section.

Changes in the insect chart include the addition of gypsy moth to the list of troublesome insects. This pest had been reduced to such small numbers that it was not considered a problem and was removed from the chart years ago; now it is increasing and could be a danger to bogs in Plymouth County and Cape Cod. Diazinon, 3 pounds per acre, has been added for fireworms, cut-

worms, sparganothis fruitworm and gypsy moth, 10% DDT plus 2% malathion dust at 50 pounds per acre for green spanworm and tipworm and a special note on the girdler flood in the fall.

Changes in the weed chart are minor having to do mainly with changes in timing for casoron and chloro-IPC applications in the spring and casoron applications in the fall. The simazine recommendation for morning glory and cinquefoil has been deleted.

#### Weather

February was slightly more than one degree a day above normal in temperature with cold spells from the 6th to 9th and 20th to 22nd and the last week of the month on the warm side. Precipitation totalled 2.68 inches or almost an inch below average with two storms on the 13th and 25th accounting for 90% of the total. Snowfall was 8.2 inches which is close to average for the month.

#### Odds & Ends

Five states produced 63% of the U. S. apple crop in 1965 — Washington, New York, Michigan, Pennsylvania and Virginia.

Five apple varieties accounted for 62% of the U. S. crop. Red Delicious was first with 24% of the total, followed by McIntosh, Golden Delicious, Rome Beauty and Jonathan in order of importance.

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of March, 1966 — Vol. 30, No. 11

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## FRESH FROM THE FIELDS

Compiled by C. J. H

### MASSACHUSETTS

#### February Starts Snowy

The end of the first week in February saw "freak" weather with snow showers almost every day. These storms varied greatly from area to area and town to town in Southern Massachusetts, some towns getting considerable accumulation, while the next town to it a few miles away received none. The weather was cloudy, therefore with very little sun, and temperatures were almost exactly normal. Little, if any bog work was possible as most bogs were snowed in with egress roads thick with drifts.

Temperatures to the 9th were a little below normal in average, the departure for the month to the 9th being a minus 5 degrees.

#### Warm Change

On the tenth came a drastic change in the temperatures for the warmer. Winds began to blow from the southwest, bringing up tropical air into New England. Weather casters were calling this a "February Thaw," and even a "February Heat Wave." There were temperatures into the low 50's. The snow cover which had existed so long began to disappear rapidly. Fog came in nights along the coastal cranberry area and was "eating" the snow.

The 13th brought a day-long soaking rain, of from one to 2½ inches in the cranberry area, total at the Cranberry Station, 1.29 inches. This helped the crushing drought situation to some extent, but did not make

up for the five-year New England dry spell.

The weather continued mild and on the 15th the temperature plus of the month was 48. A considerable rain developed on the 16th and the "spring in February," ended as the weather turned much colder.

#### Arctic Cold

This spell brought a dusting of snow to the cranberry area on the 19th and the coldest weather of the winter, according to the weatherman on February 20 and 21. Lows of around zero were common all over Southeastern Massachusetts. Recording in the shelter at State Bog on the 20th was one above and on the 21st exactly zero.

Another storm of snow, rain and sleet blew in from the

South on the night of February 24th, continuing over the 25th into the 26th. This storm, while bad in many parts of New England, depositing more than a foot of snow in some parts was more kind to the cranberry area, leaving only a few inches of the white stuff. Precipitation for the entire storm as recorded at the Cranberry Station was only 1.10 inches.

#### Month Short in Precipitation

Thus February ended as another month with precipitation less than normal the total as recorded at the Station, being 2.78, normal for February is 3.67. There has been only a single month above normal, January, since December 1964.

#### February Warm, Too

The second month of the year

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was a bit warmer than normal, also with a plus for the month of 27, or nearly one degree a day above the norm.

Although the cranberry area in general probably got a little less rain than normal, Boston and some other points reported precipitation above normal, due mostly to snow fall. And for these areas the precipitation for 1966 was above average.

## March 1, Rain

March first started with beautiful warm weather, and for the night before and continuing into the morning there had been substantial rain. A total of .69 inches was recorded at the Cranberry Station, thus getting March off to a good start in the field of precipitation.

Dr. C. E. Cross, director of the Massachusetts Cranberry Experiment Station has declared in his opinion, February was a favorable month for the prospective 1966. There was no winterkill reported as had been feared last fall and neither was there any oxygen deficiency loss.

The first week of March was unusually warm, with a plus of 35 by the 5th. It was a typical March start with high winds, at time gale force. There was a steady and beneficial rain on the 4th and 5th.

## NEW JERSEY

### Water Situation Better

Cranberry reservoirs are quickly filling up and most properties now are near normal as a result of plentiful precipitation during January and February. For the second straight month—and only the fourth in the past 20 months—there has been greater than normal precipitation. The total for February was 4.33 inches, which is 1.56 above the norm. Our total for January and February was 8.06 inches, almost two inches more than normal. Most of the precipitation during February fell as either gentle rain or a snow which melted down gradually, thus very little of the

*Continued on page 23*



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# Frederick E. Gebhardt is Steeped In Knowledge of Wisconsin Cranberry Growing

**Is a Member of Philanthropic and Pioneer Cranberry Growing Family — Operating 30 Acres at Black River Falls**

*By CLARENCE J. HALL*

Steeped in knowledge of early cranberry history in Jackson County, Wisconsin, is Frederick E. Gebhardt, 215 North 5th street, Black River Falls, Wisconsin. Gebhardt operates a marsh of about 30 acres in a nearby town of Brockway. His grandfather, Frederick Johann Gebhardt, born in Newstadt, Germany, in 1834, was one of the Wisconsin pioneers. He built a bog about 5½ miles northeast of Warrens about 1878, which had grown to around 40 acres by 1910.

Following his death in 1882, his widow, Susan H. and his eldest son, Frederick W. Gebhardt, carried on the bog activity. Frederick W. was the father of the present Frederick E. Gebhardt. The marsh Frederick E. now operates was built by his uncle, Herman J., in 1900, not far from the marsh owned by Henry H. Gebhardt and family. This marsh is now operated by the Perry Creek Cranberry Company, John D. Roberts, president.

Frederick Johann Gebhardt was destined to spread his cranberry growing influence thorough three generations. He had nine children and in one way or another six sons and two daughters were involved in cranberry growing.

The Gebhardts were of a philanthropic turn of mind and today there is a Herman and Alma Gebhardt school in Brockway, which family funds made possible and also a swimming pool in Black River Falls. A part of Highway 27 is named Gebhardt Road and joins with "Cranberry Drive." This road leads to the marsh Frederick E. Gebhardt now operates 4½ miles southeast of Black River Falls.

In 1890 Frederick W. Gebhardt's widow sold her interests to Frederick W., her eldest son. He was considered an excellent grower and for a time he was known as the "Champion cranberry raker" in Wisconsin.

Frederick W. in 1912 built a new marsh east of Millston, which he later sold. He sold frozen cranberries in the winter to farmers and others, south and west to see the value of the frozen of Tomah, being the first grower fruit.

In the summer of 1894 the Gebhardt brothers dug a ditch by hand shovel one and one-half miles long, eight feet wide and four feet deep, and later added another half mile. The ditch was dug as a means of getting water from a creek, southwest of the marsh. The extra

half mile connected two reservoirs for a water supply. This was a small marsh of about 10 acres, now the property of Harkness and Sons, near Millston.

## **Present Gebhardt Marsh**

The present Gebhardt marsh has 1½ acres of Centennials, 3¾ acres of Searles and 22½ acres of McFarlins. Twenty-four acres has all sand bottom, some of it built on peat and sand. Most of this bog was built by manual labor with wheelbarrows.

Production has averaged about 95 barrels per acre.

Frederick E. has operated this bog since 1954. Since that time he has made a number of innovations and improvements. He has 7½ acres of his bog under sprinkler irrigation, the system being installed by Moulton Irrigation Company of Somerset, Wisconsin. There are also 14 acres under John Bean "Shur-Rane," irrigation, installed by Badger State, Black River Falls. Water comes from Perry Creek, and Gebhardt uses an International-Harvester engine UV\* 549 engine and a Berkeley pump.

He is planning to put the remainder of his acreage under sprinklers this spring and to buy a second International engine.



**A portion of the Gebhardt Marsh near Black River Falls.**

**(CRANBERRIES Photo)**

On the present property there is the comfortable Gebhardt home, and also a spacious two-story cement block warehouse, 30 by 120. Sorting is done by one Bailey and one Hayden separator.

He harvests with three Dana-Getsinger harvesters; there is also a berry drier and equipment for fresh fruit packing. Mr. Gebhardt ships through Ocean Spray.

He has some part-time help and uses 12 to 15 at harvest time. He has been and is employing Winnebago Indians with very pleasant relations. He understands that the last hand wet-raking in Wisconsin was done on his bogs by the Winnebagos in October 1954.

Along Highway 5 and 4 there are a number of Winnebago Indians living in modern, if mostly small dwellings. Not too far from the Gebhardt Marsh is the site of the annual Indian Pow Wow, of Council. At this site is buried Mitchell Red Cloud of Black River Falls, who was awarded posthumously, the "Pur-

ple Heart," for his injury and heroic action in Korea.

#### His Own History

It is a rather intriguing area of abrupt buttes arising from the generally flat countryside.

Gebhardt has used the weedicide, Casoron, and one section where he treated the weeds and grass appear to be gone.

Gebhardt has treated four sec-

tions for grass, including wire grass and weeds with good results.

Mr. Gebhardt was born September 1, 1903, at Black River Falls, but lived on his father's cranberry marsh at Warrens until 1912. Then the family moved to Millston then to Tomah. He attended grade and high school in Tomah.

In 1926 he moved to Milwaukee and began employment for the Milwaukee Railroad. He continued this employment for twenty-eight and one-half years, doing clerical work. In 1954 his uncle died and he came to Black River Falls to take over the operation of the marsh.

On June 29, 1935, he was married to Charlotte S. Hass of West Salem. Mrs. Gebhardt is a registered nurse and had worked at LaCrosse, Madison, and Milwaukee.

They have one child, Miss Suzanne, recently graduated from



**Framework of an Indian hogan  
at the Pow Wow Grounds  
(CRANBERRIES Photo)**



**Believed the last Indian Manual Water Rake  
(CRANBERRIES Photo)**

the University at Madison, receiving a B. A. degree in liberal arts. She is now studying in Ireland at the University of Dublin. She is furthering her knowledge of Irish arts and literature, planning to be a librarian in the future.

Gebhardt belongs to the Wisconsin State Cranberry Growers' Association and helped to organize the recently-formed Jackson County Cranberry Growers' Association, an organization to further the aims of the growers in that area.

Mr. and Mrs. Gebhardt attend St. John's Lutheran Church at Black River Falls.

The hobby of the couple is reading. Mr. Gebhardt is also an Green Bay Packers football teams; ardent follower of the famed he listens on radio and television and frequently has attended games at Milwaukee and Green Bay with his daughter, Suzanne.

The Gebhardts have always had a strong sense of public spiritedness and it was Herman J. who years ago planted more than 30,000 pine trees, which today have grown into a beautiful forest, near the Gebhardt South Marsh on the Gebhardt property which totals 640 acres. Gebhardt brothers were among the first in Wisconsin to recognize the need to reforest cut-over land and pushed plans for young-tree growing, and conservation of wild life in Wisconsin.

Black River Falls itself is an old lumber town.

Frederick E. Gebhardt is a member of the Jackson County and Wisconsin historical society and has given articles before both on Wisconsin cranberry growing.

## MASS. 1966 CROP IN EXCESS OF 800,000 IN "REALM OF PROBABILITY"

### So Dr. Cross Tells February Meetings of Massachusetts

"I think it is within the range of probability that the Massachusetts 1966 cranberry crop will be in excess of 800,000 barrels," Dr. Chester E. Cross, director of the Massachusetts Cranberry Experiment Station told growers attending the February meetings of the three cranberry clubs, South Shore at Kingston, February 15th, Southeastern at Rochester Grange Hall, the 16th, and Cape Cod at Barnstable February 17th.

He said his main reason for this was the excessive sunshine hours in 1965, due to the drought conditions. The total of excess hours was a huge 240, with good excesses in the vital months of August, September and November. He said it was unfortunate there was not more precipitation last October, which is important. "Now, what of the past winter?" he asked.

He said he believes there had been no winterkill as there was in the winter of 1964-65; that oxygen deficiency troubles were

less than other years and also of a year ago. Considerable sanding on the ice has been accomplished, which is good. February sunshine was also favorable to the crop.

### Watch Spring Frosts

He told the growers that he thought it was important that they stick close to their bogs in May and the first ten days in June. "We issue from 6 to 10 general warnings each year and this is where you can insure your crop for 1966, by making sure you do not get frosted. He said he did not consider April losses so important.

He said he felt growers were losing too much of their crop in harvest. Studies show that dry picking leaves about 25 per cent of the crop. Massachusetts is the only state still substantially dry harvested. He said four plots had been picked wet at the State Bog for the past five years and these plots had consistently shown an increase of 40 per cent over those still dry picked.

"I do not suggest that you try to go to all wet harvest at once," he continued. There are many difficulties in this. But do try to pick a few sections or a bog or two and go into wet raking. We are leaving too much of our crop on the bog after raising it."

### 1965 A "Growers" Crop

The 1965 crop, 675,000 barrels, was the third largest on record and this, he said, was a "growers' crop," not a crop due to weather. You growers had to work for it. Yet we averaged 64.2 barrels per

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acre. Wisconsin produced 89.1, but we are gradually closing the gap. We used to think 50 barrels per acre was satisfactory, but not any longer."

He told of the difficulty of the 1965 crop, the long drought, the frost losses, especially with an unprecedented August frost, which took many berries, especially in the Cape and Manomet sections.

He said the 1965 crop was a "tribute" to the ability of the growers and also to the installation and use of sprinkler systems at the right times, without which such a large crop could not have been produced.

He spoke of the present "happy circumstances" of the cranberry industry, big crops selling rapidly and at good prices. "The cranberry picture was never brighter than it is now, a total crop in 1965 of 1,422,000 barrels and our sellers begging for more fruit to keep up with the demand."

Cross also went back to the fact that growers visiting the State Bog in the last few years had commented on fewer chemical experiment plots and also fewer on individual private bogs. This was due to the drastic and confusing Federal and State regulations and rulings regarding the use of agricultural chemicals. He said that ever since the 1959 Amino Triazole scare these restrictions have been increasing, spurred on by nature groups, sportsmen and others who are "not truly informed of the necessity of pest control in agriculture."

"But don't think we at the Station are soldiering at the job. We are at work in our laboratory and our greenhouses, of which we now have two." Also, I would point out that 40 per cent of the crop on the State Bog last year was not placed on the market because of chemical experimentation."

Cross said that experimenting would continue to be done of private bogs by the Station Staff, but that any fruit raised on these plots would not become the property of the growers but would be harvested and handled by the

Station, to make sure no contaminated fruit went on the market.

#### Demoranville

Irving E. Demoranville, although not on the program, spoke very briefly, told of the greatly increased desire for vine cuttings by growers for new bog

and of a survey he is undertaking as to where vines can be obtained and how much acreage is going in. He said he had found only four growers who had vines for sale and these were only Early Blacks. He suggested growers who wished to expand acreage



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might have to go into the business of growing vines just for planting for themselves.

#### **Zuckerman**

Dr. Bert Zuckerman was scheduled to speak on "Fungicides and Cranberry Varieties," confined himself at the time to only varieties. In this he confined himself to a study of the New Varieties and their use in processing, this study being carried by the Station in conjunction with Ocean Spray. A report will be carried later in *Cranberries*.

The first consideration was naturally color, important in whole fruit sauce and especially cocktail, now so vital. He said the best color seemed to be found in the variety "Franklin" and in the yet unnamed No. 6. Second was pectin content. In this Franklin also appeared to be highest with No. 6, a good prospect. Pilgrim is the lowest in pectin content.

He said qualities in these varieties seem to vary considerable from bog to bog. He added these studies are continuing and the results are not yet confirmed. He added that the old standby Early Black is still one of the best as concerns color and pectin.

#### **Drs. Deubert and Paracer**

Dr. Zuckerman introduced two new men who are working under his direction at the Station. These are Dr. Karl Deubert, who escaped from behind the "Iron Curtain" in East Germany, going to Honduras and then to the U.S. where he is planning to become a citizen; and Dr. Surindar Paracer of India. These spoke on "Development of Agriculture in East Germany after World War II," and "Is Famine Inevitable in India," respectively. While these addresses did not concern cranberries in any way, it was thought these talks might broaden the scope of the growers and they did prove very interesting.

Dr. Deubert told of the part of Germany now behind the "Iron Curtain," was the part given over to agriculture, while the East or "Free" part was more industrialized. He said it became very difficult for farmers to get

sufficient supplies of fertilizers and other items needed to produce food, and the solutions which were tried.

Dr. Paracer discussed at some length the world population explosion and of how that related to India. He said that in his native country the mistake was made of putting too much emphasis on industry opposed to agriculture when it should have been just the other way around. He said that in India, added to the many millions of humans to be fed, there were countless cattle, "sacred" cows, monkeys and even rats all fighting each other to consume what available food there was. He said that in this respect, India was even worse off than over-crowded China.

There was a movie-illustrated talk on "Bulk Handling Equipment" by John MacDonald, an agricultural engineer representing the American Plywood Association, with headquarters at 119 A Street, Tacoma, Washington. He stressed the advantages, as he said, of using plywood pallet bins in harvest and transportation right through to the packing or processing factory. These plywood containers are used very extensively on the West Coast, chiefly California for even such a fragile fruit as pears.

## **Timely Tips on Spring Frosts in Massachusetts**

### **April Frosts Not Damaging**

By GEORGE B. ROUNSVILLE  
(Frost Forecaster at  
Cranberry Station)

With the exception of the year 1954 when "a little damage" on the inland bogs (temperature range 5 F. to 12 degrees F. April 3-4) was recorded on the Frost Chart; there had been no other estimate of frost damage in April given from 1950 through 1965.

In this sixteen year period, the practice of flood withdrawal in the winter months, has been used by an increasing number of growers in Massachusetts.

Growers for various reasons, are removing the winter flood

earlier in the spring or in late winter, than heretofore.

These practices so condition the vines and buds as to make them similar to those of a "dry bog" which have long been known to be very frost resistant in the spring.

From 1953 to 1965 observations have been made relative to low temperature both in the spring and fall and the resulting frost damage, if any.

To cite some of the temperatures to which cranberry buds have been exposed in April and early May:

On May 2, 1958, a minimum temperature of 19½ degrees was recorded on a bog in Barnstable County. No visual damage observed.

On April 29th, 1960 a minimum temperature of 17½ degrees F. reported on a bog in East Wareham. The buds were examined on April 30th with no apparent damage. This same bog had a temperature of 18 degrees F. on May 2 of the same year. The crop averaged ninety barrels to the acre.

April 19, 1961, minimum temperature of 9 degrees F. reported on a bog in North Falmouth. The buds were examined April 21st and again on April 28. No damage could be detected. The owner reported the crop as good.

April 17, 1962, temperature on bogs, examined for frost injury, ranged from 10 to 13 degrees F. No damage observed. A bog in the Wareham area, with a temperature of 12 degrees F. on this date, had a crop of nearly 80 barrels per acre.

April 24, 1962, temperature on bogs ranged from 9 to 20 degrees F. No damage observed. A crop of 70 barrels per acre was reported from a bog that had a temperature of 15 degrees F.

The above temperatures as reported to the Cranberry Station from some few bogs in the cranberry growing area. It seems safe to assume that a great percentage of the Massachusetts acreage endured similar temperatures on these dates.

The final crop figures for Massachusetts following these years with low temperatures in April are impressive, the exception being 1961 when the May 30th-31st frost took an estimated 174,000 barrels.

It is the opinion of the writer that little if any frost protection is needed on cranberry bogs in Massachusetts until the first week in May; providing a grower removes the winter flood from his bogs in late February or by the middle of March, perhaps earlier, and the daily mean temperature for April is normal or below normal.

To project then; if reservoirs, ponds, streams and farm ponds are not restored to normalcy before the coming frost season, it would greatly enhance the chances of a grower getting by with a minimum of frost damage until the middle of May by following such a practice.

Presumably the water thus saved could be used in the more critical frost period that of May 15th to the middle of June.

## Peter A. LeSage

Peter A. LeSage, founder and head of Peter A. LeSage, distributing agency, which sold under the name of "Pals," made up of his initials died suddenly in St. Petersburg, Florida March 8, where he and Mrs. LeSage were spending the winter. Death followed an operation.

Mr. LeSage, who was born in Boston, had been a resident of the Cape for many years, living at South Yarmouth. He formerly owned considerable bog acreage, which he had sold a few years ago.

His cranberry distributing business, which is located in Plymouth was one of the major cranberry distributing businesses in Massachusetts. Mr. LeSage was one of many who fought bitterly at hearings leading to the formation of the Cranberry Marketing Order in 1962.

The business will be carried on by Robert Hiller of Mary's Pond Road Rochester, Massachusetts.

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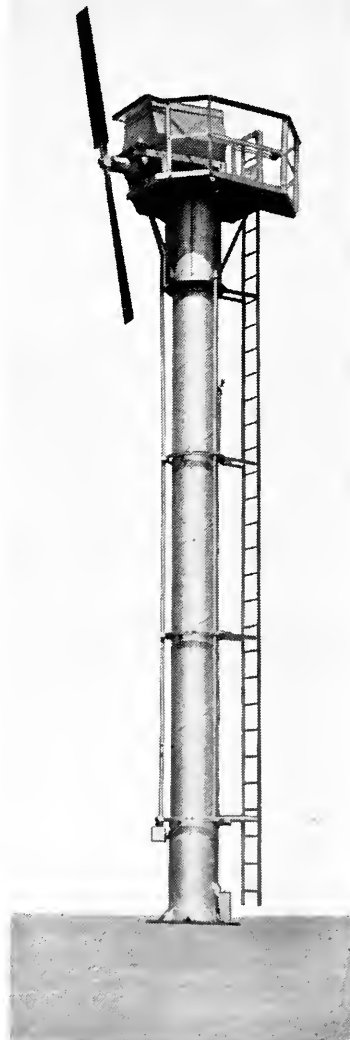
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# NEW JERSEY GROWERS HOLD A PROGRESSIVE 96th ANNUAL WINTER MEETING

Use of "Hover-Craft" Among Discussions — Walter Z. Fort  
Elected President of American Cranberry Growers Association

The 96th Annual Winter Meeting of the American Cranberry Growers' Association was held on February 10th at the Fireside Restaurant in Mount Holly, New Jersey, with President Clinton Macauley presiding. The meeting was well attended by growers as well as by representatives of various agricultural interests of the state.

Jack S. St. Pierre, of the New Jersey Crop Reporting Service, reported on a new method of obtaining crop estimates. Statistical science has been applied to enable more reliable sampling, with the probability that estimates in the future will more closely approximate actual harvest.

## New Chemical

Charles M. Mainland, of the

Department of Horticulture and Forestry of Rutgers University, reported on the experimental use of gibberellin to promote set of cranberries. Sprays of this growth regulator induced the set of almost 100% of the blossoms, although the berries were considerably smaller than normal. The total weight of the berries in the gibberellin spray plots exceeded that in the check plots not treated with the chemical. Mainland cautioned growers that this material was still only in the experimental stage, that it had no label clearance for use on cranberries, and that there was still much to be learned before it could be used commercially.

## Smaller Bog Sections

Fred Mahn, of the Soil Conservation Service reported on work that he and his colleague, William O'Donnell, have been doing on cranberry bogs. There has been much activity amongst New Jersey cranberry growers in the construction of dikes to divide their bogs up into smaller units to facilitate water harvesting. Mahn offered several tips on bog construction which he illustrated with excellent slides. Illustrations were also given on methods of leveling bogs and practical methods of installing water control structures or trunks. An interesting method of stabilizing dikes by the use of jute mesh and weeping lovegrass was demonstrated. Kentucky 31 fescue and sericea lespedeza have also been used as a plant cover on dams and dikes to prevent erosion.

## Two Pests Increasing

Phil Marucci, of the Cranberry and Blueberry Research Lab, spoke on cranberry insects and cranberry pollination. He noted that two old-time pests, cranberry girdler and blackhead fireworm, are making a comeback in New Jersey. The late Anthony

DeMarco was stated as having estimated a loss of at least 1,000 barrels as a result of black-headed fireworm attack in 1964. The resurgence of these insects is probably connected with the development of resistance to D.D.T. as well as the increasing tendency of growers to draw the winter flood earlier. The conventional Sparganothis-tip-worm treatment was shown to be a little bit too late for effective control of blackheaded fireworm. Cranberry girdler was considered to be building up much more rapidly on bogs which were not water harvested. It was also found to be less abundant on bogs which received regular ground sprays of sevin to control Sparganothis fruitworm. The more intensive use of honey bees on cranberry bogs in New Jersey was considered to be well justified. Data were presented to show that percent set was directly related to bee activity. Interesting data were also presented to show that higher sets are obtained where several varieties grow together and thus provide cross pollination.

## Bees

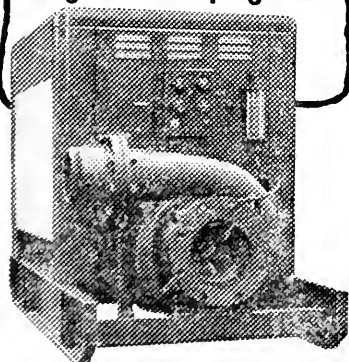
J. C. Matthenius, Supervisor of Bee Culture, New Jersey Department of Agriculture, gave a talk on how to judge a good beehive used for the pollination of cranberries. Matthenius urged closer cooperation with beekeepers to obtain maximum benefit from hives and also to prevent excessive kill of bees through careless use of insecticides.

## Water Resources

John M. Hunter, Associate Professor in Agricultural Policy at Rutgers University, gave a review of the recent Symposium on Water Resources in New Jersey. Professor Hunter reported that the water supply problem in this State was a very keen one which required long-range planning and cooperation from industrialists and the citizenry. He discussed in detail some of the plans being considered to insure an adequate supply of pure potable water for this and future generations. One of the

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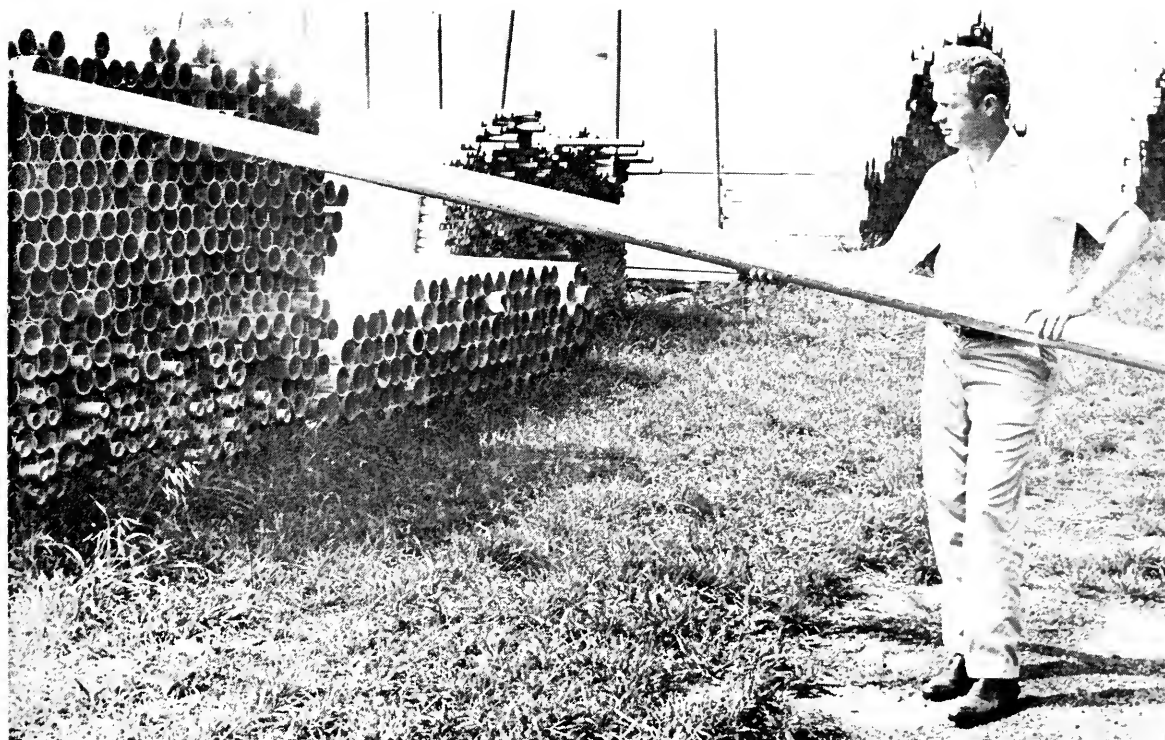
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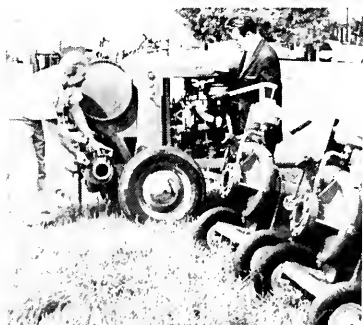
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plans entailed piping the ground water of South Jersey to the more populated northern region of the State. This method would probably adversely affect the water supply of New Jersey cranberry growers. He felt that this plan was not at present economically feasible and that it would be resorted to only if the several reservoir plans for the North Jersey area did not work out. A detailed report of the Rutgers Water Symposium was being published and would be sent to each cranberry grower in the State.

#### That Hover Craft

Dr. Allan W. Stretch, Plant Pathologist, U. S. D. A. and Rutgers University, showed a movie on the application of fungicides with a Hover-craft. This interesting equipment, which looks as though it belongs to the next generation, was developed by the Princeton University Department of Aeronautical Engineering which is cooperating with Dr. Stretch in tests to determine the practicability of applying fun-

gicides on cranberries. The results obtained, as evidenced by data presented by Dr. Stretch, indicates that this machine may have a use in agriculture.

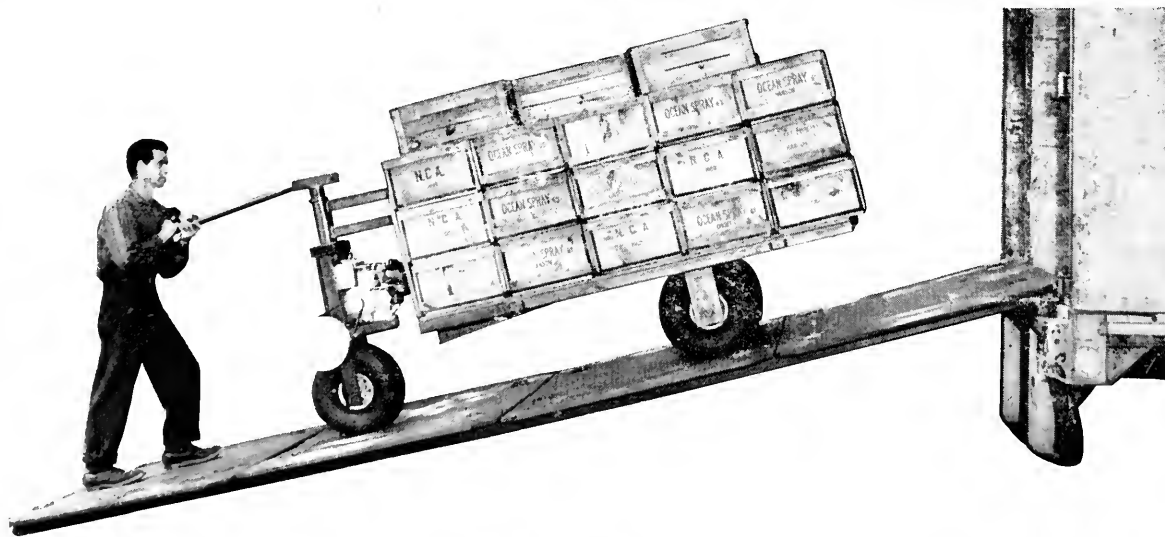
#### Frost Warning Fee to be Raised

In a business session the report of the Frost Committee was given by Co-Chairmen Isaiah Haines and Joseph Palmer. There were 29 frost calls in the spring of 1965 and 33 in the fall. An analysis of the accuracy of the predictions of the spring frost calls indicated that the evening forecasts were correct to within 6° in 65% of the warnings. The 24-hour outlook, however, was accurate to the same degree in only 46% of the forecasts. A unanimous vote of thanks was given by the membership to the Frost Committee and the Weather Bureau for their service to growers in providing frost control information. It was unanimously agreed to give the Committee authority to raise the frost fee as high as is necessary to meet the expenses of the teletype and answering services. Committee

members serve voluntarily without compensation.

#### Ed Lipman

Ed Lipman, Delegate of the American Cranberry Growers' Association to the Agricultural Convention, gave a report on these meetings. Mr. Lipman showed concern over the trend toward socialization in the Federal Government and in the compulsory nature of the recently proposed legislation on agricultural labor. The New Jersey Farm Bureau was ably representing farmers on these issues. The appropriation of agricultural lands by the State and public utilities through arbitrary use of Eminent Domain was also of great concern to the agricultural interests of the State. A thorough revision of these Eminent Domain laws in New Jersey is being actively proposed by the New Jersey Farm Bureau. The agricultural interests are also behind the Governor in his proposal of a broad based tax in New Jersey to eliminate the undue pressure on land owners and farmers. The



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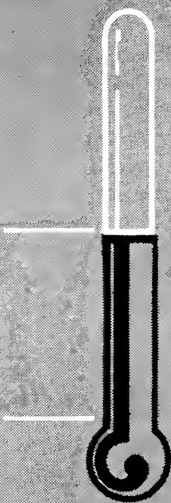
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1966 Officers

The election of officers resulted in the following slate:

- Walter Z. Fort, President
- Earl Kerschner, 1st Vice President
- Ernest M. Cutt, Jr., 2nd Vice President
- Paul Eck, Treasurer
- Philip E. Marucci, Secretary

Mr. Fort, Manager of Growers Cranberry Company, and well known for his excellent photography of cranberries and Pine Barren plants, as well as for his ability as an amateur naturalist, is the first non-cranberry grower to be president of this 97 year old organization. Earl Kerschner is the very able supervisor of the late Anthony R. Demarco cranberry and blueberry property at Chatsworth. Ernest M. Cutts, Jr., is the son of Ernest M. Cutts, Sr., youngest of the Cutts Brothers, prominent blueberry and cranberry growers. Ernest Cutts, Jr., is also the nephew of John E. Cutts, a director of Ocean Spray Cranberries, Inc., as well as Tru-Blu Cooperative Association.

Citation to Enoch F. Bills

The cranberry growers were all delighted to hear from Ed

Lipman that the Agricultural Convention had published a citation to Enoch F. Bills for distinguished service to New Jersey Agriculture. (This citation is printed in another article.)

EDITOR'S NOTE: *The use of Gibberellin, a growth regulator is also under experimental research at The Massachusetts Cranberry Experiment Station at East Wareham by Dr. Robert Devlin, pathologist.*

## Ocean Spray to Build New Plant At Middleboro

### New Project to Cost 19 Million and Will Replace Plants at Onset and Hanson

Middleboro, Massachusetts has now been definitely determined upon as the site of the new Ocean Spray plant. The entire cost of the project is estimated at about 19 million dollars. The entire amount is to be borrowed, as studies have shown this to be the most economical method. Edward Gelsthorpe, Executive Vice President and General Manager said; economic studies have shown that a new plant to replace the old ones at Hanson and Onset will enable Ocean Spray to return more to the growers than oper-

ating the present structures, so grower-members should be receiving more for their crops than at present.

It is expected construction will be started in about four months. The plant should be ready for receiving and screening by the fall of 1967 and for processing by the fall of 1968. Location is to be at the Middleboro Industrial Park off Route 28, just to the east of the town. President George C. P. Olsson appeared at a town meeting of Middleboro voters and they voted to meet every requirement that Ocean Spray desired. The town voted to borrow a total of \$300,000 for improvements at the park, including water and sewage requirements. It is expected the town will be reimbursed in part at least, by funds from Federal and State sources, in grants. An estimate of the water needed has been placed at between four and five million gallons per day.

The Onset and Hanson plants will eventually be sold. The Cranberry House lunch will continue this and next year until the new plant is finished and ready for processing.

Much of the equipment now in use at Onset and Hanson can be moved and utilized.

Mr. Gelsthorpe called a series of regional growers meetings at

*Continued on page 22*

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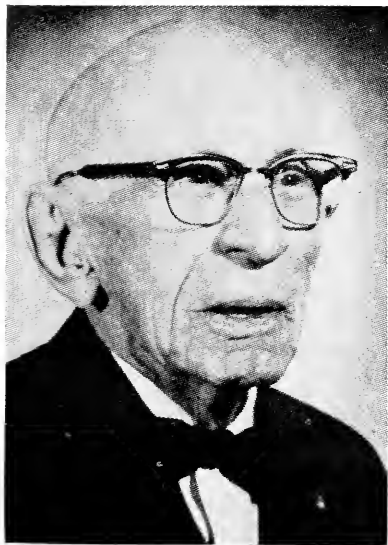
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**chloro ipc**



## Enoch F. Bills

The cranberry growers of New Jersey lost a stalwart friend and benefactor in Enoch F. Bills on February 21. Mr. Bills, aged 83, was a lifelong resident of Bordentown. He was married to the former Elizabeth Cowperthwaite who died many years ago.

He was a civil engineer specializing in structural engineering when, in 1915, he was called to New Egypt to develop the first cranberry processing company pioneered by his family. He built a factory for this purpose and soon became the principal developer of processed cranberry products in this area, using the trade name of Bog Sweets. In 1930 through his efforts a merger with the two canning companies in Massachusetts (A. D. Makepeace and Cranberry Cannery) led to the foundation of Ocean Spray Cranberries, Inc. He was a director and manager of the New Jersey division until his retirement in 1963. His services, however, were retained by the company as a consultant and advisor until his death.

He was a member of the Masonic Order for over 50 years, belonging to the Mt. Moriah Lodge No. 28, A.F. and A.M. of Bordentown, and the Scottish Rite and Crescent Temple of Trenton. He was a Charter Member and an Honorary Life Member of the Kiwanis Club of Bordentown, the

Aquatic Club of Bordentown, the Ocean County and Burlington County Boards of Agriculture, and the New Jersey Farm Bureau. He was a Charter and Life Member of the Engineers Club of Trenton and a member of the American Society of Engineers — Trenton Section.

He was a recipient of many honors. In 1964 Ocean Spray erected a bronze plaque as testimony of his many contributions to the success of the New Jersey operation. In 1962 he received a citation from the Burlington County Board of Agriculture for his contribution to that organization. Fortunately, Mr. Bills was still alive and well enough to be able to appreciate the formal citation given to him by the 1966 New Jersey Agricultural Convention. This citation, quoted below, is an indication of the worth to New Jersey cranberry growers of Enoch Bills, but it cannot begin to tell of the delightful, charming and gentle person cranberry growers knew as Enoch Bills.

*"To recognize outstanding contributions of public service toward the betterment of Agriculture and rural life in New Jersey, the State Board of Agriculture since 1932 has designated men and women who have been recommended by their colleagues for distinguished Service Citations.*

*"To be awarded at the 1966 State Agricultural Convention, the following citation serves as public commendation of the recipient, and expresses the gratitude of the State Board in the name of all farmers.*

*Charles Pratschler, President  
New Jersey State Board of  
Agriculture  
ENOCH F. BILLS*

*"Your long career of service to New Jersey agriculture, particularly to your fellow cranberry growers, has won wide acclaim. Your lifetime dedication to the betterment of one of the oldest and most important crops is well known. As a grower, distributor, processor, engineer and plant manager you have contributed*

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"Your counsel and guidance have been sought by countless growers in their efforts to master the culture of this native fruit. You have inspired many to the to build for them a strong cooperative enterprise, itself a monument to your unselfish interest and able leadership.

"Before this assembled group of delegates, the members of the State Board of Agriculture desire to express their gratitude to you

for your many noteworthy contributions, and so award to you this CITATION FOR DISTINGUISHED SERVICE TO NEW JERSEY AGRICULTURE."

He is survived by his sister, Mrs. Henry Crawford, who resided with him, and a nephew, Henry E. Crawford of Douglaston, L. I., N. Y.

"Enoch Bills was one of the elder statesmen of New Jersey Agriculture," commented State Secretary of Agriculture Phil Alampi. "We have lost one of our outstanding leaders who since 1910 had dedicated his career to the advancement of the cranberry industry. Besides becoming a successful grower, he pioneered in the processing of cranberries, thereby extending the marketing season to provide for year-round consumption."

#### NEW PLANT

*Continued from page 18*  
Bourne, Hyannis and Monponsett, explaining the new plans to enthusiastic members. He had re-

cently spoken at meetings in Wisconsin and the West Coast.

Mr. Gelsthorpe was in a very cheerful mood as to the present and future operations of Ocean Spray, as to product sales and returns to growers. He said Ocean Spray could have sold 20,000 barrels more fresh fruit last fall if this had been available. He spoke highly of the increasing sales of the new apple-cranberry product and of the ever-increasing demand for Ocean Spray cranberry juice cocktail.

#### Mrs. Robert Rezin

Mrs. Robert Rezin, Sr., 73, of Tomah, Wisconsin, widow of a prominent cranberry grower, died Feb. 23 at Lutheran Hospital, LaCrosse, where she had undergone surgery the day before. Mrs. Rezin resided in Nekoosa and Rudolph before going to Tomah.

Funeral services were held Feb. 26 at 11 a.m. in St. Mary's Episcopal Church, Tomah, the Rev. John Bigg officiating. In-

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terment was in Forest Hill Cemetery at 3 o'clock.

Mrs. Rezin, whose maiden name was Edith Herms, was born in Chicago Oct. 7, 1892, the daughter of the late Mr. and Mrs. Fred Herms. After coming to Nekoosa as a child, she lived there until her marriage to Mr. Rezin of Cranmoor, May 9, 1912. They farmed in Rudolph for

about 25 years before going to Tomah where he established the Rezin marsh.

Mr. Rezin preceded his wife in death in December 1958.

Surviving are two daughters, Mrs. Milton Hamm and Mrs. Emery Jagodzinski, both of Wisconsin Rapids; three sons, Clarence, John and Robert, all of Tomah; a brother, Albert Herms,

Wisconsin Rapids, and four sisters, Mrs. Otto Schacht, Marinette; Mrs. Arthur Murray, Nekoosa; Mrs. John Ostruske and Mrs. Caroline Voight.

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### **FRESH FROM THE FIELDS**

*Continued from Page 6*

precipitation was lost to runoff. Nine inches of snow fell in February, which is almost 4 inches more than generally occurs in this month.

#### **Oxygen Deficiency Problems**

The snow occurred after some rather severe winter weather which had caused ice thickness of the flood waters on cranberry bogs of about 7 to 9 inches. By the 8th of February an analysis of oxygen samples from several representative bogs showed oxygen contents below 5 c.c. per liter on most of them and below 3 c.c. on a few. Growers were in a dilemma as to what to do about this problem as most did not have enough water to reflow. Fortunately, on the 13th of February, very popular and will be mailed



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an unusually heavy rainfall of 2.26 inches occurred which opened up the water on most of the bogs. After this there was a spell of mild weather and the bogs have been largely open since then. It is felt that oxygen deficiency damage will not have been severe.

#### February Cooler

For the entire month the temperature averaged out slightly below normal. The mean temperature was 32.4, about 0.3 degrees below the norm.

## WISCONSIN

#### February a See Saw

February was a seesaw month weatherwise with cold and warm and cold and warm each of the four weeks. The cold temperatures prevailed with a net temperature of three degrees below normal, but warm compared to the bone chilling January. Precipitation was below normal with

very little snow, but over an inch of rain fell on the 7th thru 9th which got rid of most of the January snow in the southern 2/3rds of the state. At month end only from five to ten inches of snow remained in the far north. Precipitation was about 1.24 compared to the average of 1.45 in. Warmest was in the low fifties in the south on the 8th and 9th and coldest was minus 34 in the northwest on the 19th and 20th. The extended outlook for March calls for temperatures and precipitation to be normal. Incidentally March came in like a friendly lion with temperatures in the forties.

#### Mild Weather Break-Up

The warm weather the second

week along with the rain caused an early breakup of many creeks and rivers in the south half causing ice jams and extensive flooding in the lowlands. Widespread fog was also present the entire week. Lack of moisture and very cold weather the third week of the month halted the flooding and allowed the frost to penetrate. Frost depths averaged 22 inches at the end of the month compared to a whopping 40 inches a year ago. Likewise snow cover was almost non-existent in the southern two thirds of the state compared to 12 to 36 inches in the northern two thirds one year ago. Ice on the reservoirs was also only about two feet thick compared to last year's three foot depths.

#### Some Vine Exposure

The mild weather the second week of the month caused some vine exposure on shallow flooded

## READ CRANBERRIES

*Continued on page 28*

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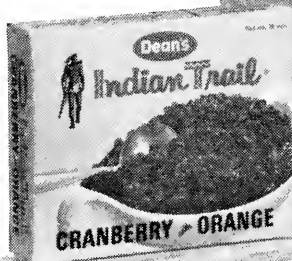
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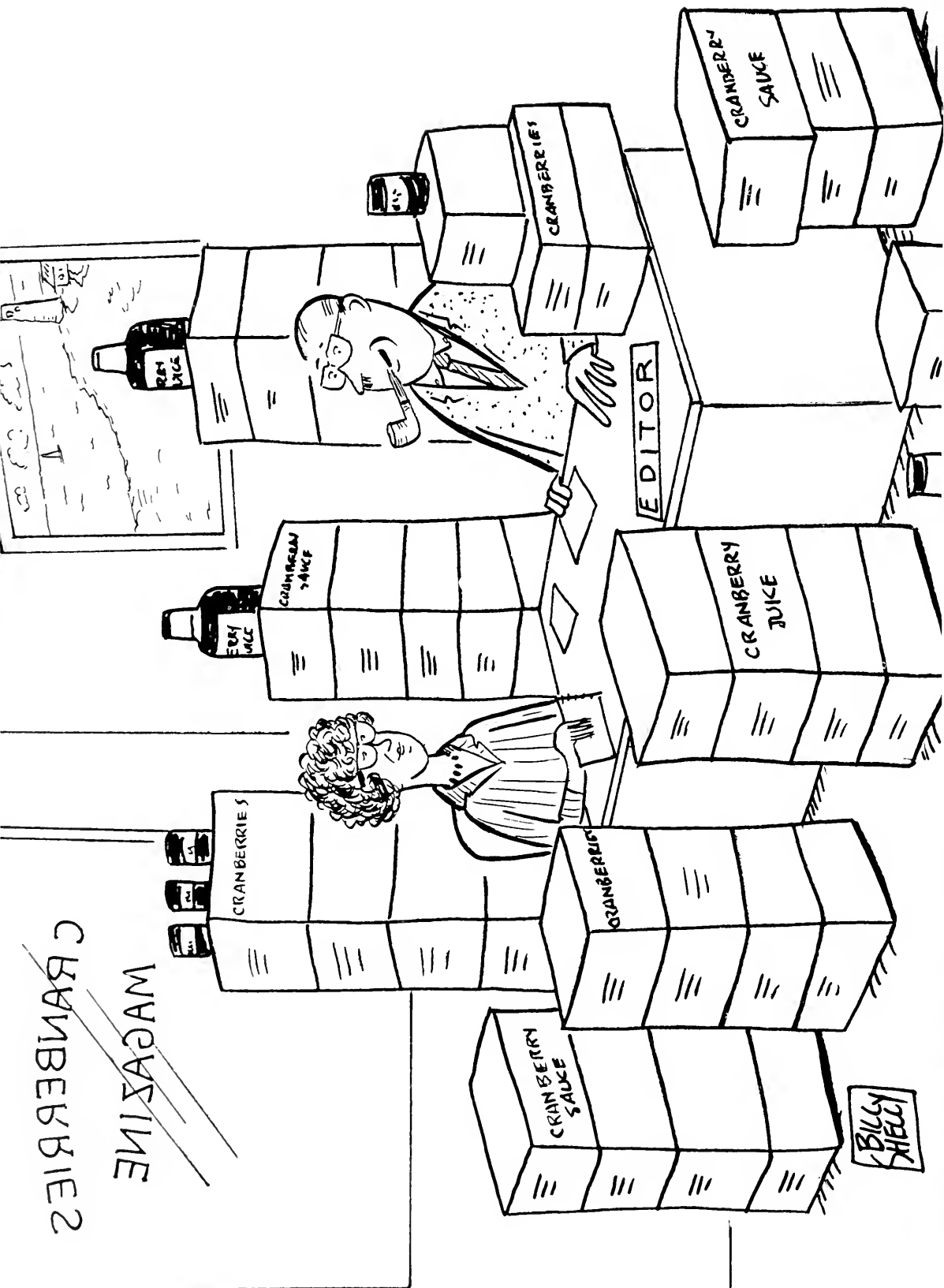


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# CRANBERRIES MAGAZINE



"Sometimes I wish our subscribers and advertisers would pay us off in cash." (Editor's Note — this is our cartoonist's tongue-in-cheek effort for this month. As a matter of fact, our subscribers and advertisers have never paid us off in cranberry products)

### THE GOOD FEELING OF SPRING AND THE CRANBERRY INDUSTRY

Spring has officially come and after a winter, which always seems long and kind of dispiriting, everybody feels better about everything. The water is off or is going off the bogs and marshes, and growers are eager to get going into the active season of cranberry growing.

In the 30 years we have been publishing, we have never seen growers as a whole more cheerful about the future of the cranberry industry and more eager to improve their properties.

This is very natural, as the 1965 crop was the all-time record and returns this past year were the best in a dozen years or so.

The optimism is concretely proven by the fact that Ocean Spray plans to spend about 19 million in a new plant in Massachusetts. This may be a puny sum as the Government and Big Business spends, but it is a lot for the cranberry industry, and if the future did not justify it the hard-headed leaders in Ocean Spray would scarcely authorize such an expenditure.

New bog is being put in to some extent in all areas. The growers, especially in Massachusetts, are putting in more sprinkler systems, and, we suspect, making other investments in their properties which reflect the good feeling throughout the industry.

About the only flaw we can see is that it is now forecast that the great Eastern drought, especially in Massachusetts, may continue another year into its fifth consecutive year, but the new sprinkler systems will do much to offset this.

An agricultural industry cannot help being healthy when it can produce its record crop and sell this at satisfactory returns to the producers, and when there was really a scarcity of fruit available instead of the surplus which has been dogging the industry for a number of years. Yes, we believe "the goose hangs high" for the cranberry grower at the present moment.

CLARENCE J. HALL  
Editor and Publisher

EDITH S. HALL — Associate Editor  
Wareham, Massachusetts

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East Wareham, Massachusetts

##### New Jersey

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

The industry learned to its sorrow this month of the passing of two prominent and respected members. The first was that of Enoch F. Bills of Bordentown, New Jersey, and the second Peter A. LeSage of South Yarmouth, Massachusetts. Mr. Bills was a tower of strength to the industry in New Jersey and active in the cooperative field. Mr. LeSage was an independent cranberry grower and distributor.

Continued from page 24

beds or recently sanded beds coupled with the rain. Exposed vines were reflowed prior to the following severe cold and sanded beds were recapped. Sanding operations were coming to an end by the middle of the month although dyke and road work continued. Most marshes in the south were wasting excess water the last 3 weeks of the month.

## WASHINGTON

### March Comes in Like Lion

March entered the Pacific Northwest like a lion, in contrast to the East. Winds have blown and rain descended in torrents.

### February Tough Month

February proved to a "teaser" of spring, but the winter returned with a total precipitation of 7.89 inches and low temperatures for the time of year. But there was not as much rain as a year ago February when the month totalled 13.04. The most rain come on the fifth with 1.30 inches.

### Sprinklers Used

Spring pruning is about completed on the bogs. Some of the growers were still applying dormant fungicides during March. There were bog lows on the first, second and fifth of March and growers were forced to sprinkle for frost protection. Since development of vines had started the danger could have been harmful.

### February Temperatures

The actual high for February was 62 degrees on the 21st with a low of 25 on the 14th with a bog low of 22. The mean actual high for the month was 62 degrees. The mean high was 50.2 and mean low was 36.9.

### Hail Storm

March came in with a flurry of snow with up to two inches in some areas. But this soon melted. There was also a hard hail storm for about 15 minutes on March 7.

### Soil Tests Show Fertilizer Needs

The soil test project is continuing with several growers getting surprising results and they are becoming convinced that they need to supply fertilizers in various amounts to replenish their

bog soil.

The program is to apply one half of the recommended amount needed, in April at the "popcorn" stage, and the other half in July.

Dr. Carl Johanson of the Washington State University is to speak to meetings of Grayland and Long Beach areas on March 15th and 16th. His topic will be "Bee Population in regard to Cranberries."

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(CRANBERRIES Photo)

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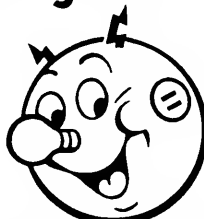
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## Indian Trail Co. in New Quarters

Headquarters of Indian Trail Cranberry Co. has been moved from the Mead-Witter Building to the Badger Shopping Center, 1353 8th St. S., Wisconsin Rapids.

Joseph Hoelting, general manager, said the change was made to obtain larger quarters and more convenient parking facilities, especially for truck drivers who must report to the office for orders during the shipping season.

Indian Trail, which has seven full time employees, had been in the downtown location since 1948 when the company was formed. It now is a division of Green Bay Foods, a subsidiary of Dean Foods Co. of Chicago.

Half of the Badger Shopping Center space formerly occupied by the Whitting Discount Store has been leased by Indian Trail and remodeled into office quarters.

### READ

### YOUR MAGAZINE

## DON'T BUY A SPRINKLER PUMP

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### BILGRAM

### MAIN STREET GARAGE

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## Request No More DDT on Wisconsin Cranberry Bogs

The following notice went out this month to Wisconsin cranberry growers from the president, Craig Scott and other officers of the Wisconsin Cranberry Growers Association:

Everyone is aware of the continuous investigations by various state and federal agencies to determine the harmful effects of DDT on our wild life, fish, and natural resources. From current findings it is a known fact that DDT has done considerable damage and the residue continues to build up in the wild animal and fish tissue.

To prevent any problems, we feel it becomes imperative that the State Cranberry Growers' Association take a stand and recommend that absolutely no DDT be used by any cranberry grower on his marsh or premises in 1966 or in the future.

With products such as Sevin, Parathion, and Guthion equally as effective, and probably more so, these products should be used and DDT eliminated from all further use.

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## IMPORTANT NOTICE

Effective Immediately

### CRANBERRIES MAGAZINE

has a new mailing address to be used for all correspondence and remittances as follows:

**Cranberries Magazine**  
**Box 70**  
**Kingston, Mass.**  
**02360**

Deadline for copy will be the 10th  
Publication date will be the 15th  
of each month.

### LULU ISLAND, B. C. MAY HAVE 18,000 BARRELS THIS YEAR

Norman V. Holmes of New Westminster, British Columbia, formerly of Carver, Mass., was a visitor here in the East this month. He is now completing about 120 acres of new bog on Lulu Island, New Westminster, having formed a new company, known as the Columbia Cranberry Company, Ltd.

Last fall the total barrelage of Lulu Island was approximately 15,000, its largest production to date and this fall Mr. Holmes estimates it will be two or three thousand more. He also estimates, as he has all along, that by 1970 Lulu will be growing about 50,000 barrels on an annual basis.

### Copter Application Casoron Granules In Washington

Frank Glenn, owner of Cranguyma Farms at Long Beach, Washington has covered 40 acres of his bog with Casoron granules applied by helicopter. The entire job was done in about an hour, as against an estimated four-day walking application on the surface.

There was a reported high uniformity of application by the copter, with a maximum 120 foot swath, and no lapover or skipping of the chemical.

Work was done by the Evergreen Copter, Inc. which is reputed to have spent more than a million dollars in experiments of copter application of granular chemicals.

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**Our Middleboro yard has been closed as a retail yard.**

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End of Cambridge Street (Off Route 44) Middleboro, Mass.

### Only Four of Ten In Mass. Keeping Quality Forecast

Weather records to date show four of a possible ten factors in favor of keeping quality of the 1966 cranberry crop in Massachusetts. If April or May are cooler or drier than normal, the quality prospects this year should be good. Bogs that often produce weak fruit should be treated with fungicides (see the *Insect and Disease Control Chart*). "Late water" may be used to conserve dwindling water supplies and usually results in superior quality fruit.

**READ CRANBERRIES**

# Mass. Cranberry Station and Field Notes

by IRVING E. DEMORANVILLE

Extension Cranberry Specialist

## Club Meetings

The March series of cranberry club meetings were held at Kingston on March 15, Rochester, March 16 and Barnstable, March 17. Dr. Robert Devlin discussed "Possible Solutions to Some Cranberry Problems." "Bob" gave some of his thoughts about research that he plans on weed control and increasing cranberry production. Prof. William Tomlinson's topic was "Cranberry Insects" in which he discussed changes in the Insect Control Chart and discussed girdler. Dr. "Wes" Miller presented some of his data on "Pesticide Persistence and Translocation," pesticides discussed were casoron, dieldrin and parathion. Much of this work is still in the preliminary stages

showing up. Prof. "Stan" Norton presented information on "Bulk Storage of Cranberries." "Stan" discussed the results of his work storing cranberries in various types of bulk containers under differing storage conditions and also his ideas for a truck-mounted loader for bulk containers or pallet loads of field boxes. The writer spoke on a variety of topics including weed control.

The club elected officers for the new season. The South Shore Club in Kingston elected "Larry" Cole, president, Alden Alber-

ghini, vice-president and "Bob" Alberghini, secretary - treasurer. The Southeastern Massachusetts Club in Rochester re-elected "Bob" St. Jacques, president, "Dave" Mann, vice-president and Russell Hiller, secretary-treasurer. The Cape Cod Club re-elected Carleton Collins, president, Raymond Thatcher, vice president, Mrs. Hollidge, secretary and Victor Adams, treasurer.

## 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.

Station	Place	A.M.	F.M.	Afternoon	Evening
WEEI	Boston	590 k.	103.3 mg.	2:00	9:00
WBZ	Boston	1030 k.	92.9 mg.	2:30	9:00
WPLM	Plymouth	1390 k.	99.1 mg.	2:30	9:30
WOCB	W. Yarmouth	1240 k.	94.3 mg.	3:00	9:30
WBSM	New Bedford	1420 k.	97.3 mg.	3:30	9:00

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**Preliminary Keeping Quality Forecast**

Weather records to date show four of a possible ten factors in favor of keeping quality of the 1966 cranberry crop in Massa-

chusetts. If April or May are cooler or drier than normal, the quality prospects this year should be good. Bogs that often produce weak fruit should be treated with fungicides (see the *Insect and Disease Control Chart*). "Late water" may be used to conserve dwindling water supplies and usually results in superior quality fruit.

**Weather**

March went into the record books at about 2 degrees a day above normal. The month had only three brief cold periods and the rest of the month was quite good. It was an excellent month for getting work done around the bogs. Precipitation totalled 2.31 inches which was only about 50 percent of the average. One-half of the precipitation for the month occurred in the first five days. Snowfall was 4.1 inches, all in one storm on the 12th and 13th, and only stayed on the ground for about 3 days.

**Odds & Ends**

The "average farm operator" in 1966 will manage a farm unit

of 350 acres, which is 20 percent larger than 7 years ago.

World food production rose 1½ percent in 1965 over 1964, but world population increased faster.

Fresh cranberries in window boxes are more in demand in markets in the East and South, but the film bags are more popular in the Midwest. No preference shown in the West.

A quotation from Confucius overheard the other day that seems very appropriate at this time of year. "There is no fertilizer more beneficial than the footsteps of the owner."

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# Cranberries

THE NATIONAL CRANBERRY MAGAZINE

Issue of May 1966 — Vol. 30, No. 12

## FRESH FROM THE FIELDS

Compiled by C. J. H.

### MASSACHUSETTS

#### Snow March 12

Most of the first part of March was "Marchlike" with some high winds and temperatures a number of times high in the fifties. Then on the 12th winter took another swipe at the cranberry area, the temperature declining sharply and heavy snow was dumped over the area, with depths varying from 3 to 6 inches.

Total of snow at the Cranberry Station was measured at 4.1 inches, equal to less than a half inch of rain, but still helpful.

The middle of March brought in the usual March varieties of weather, but mostly rainless, unfortunately. There was a low of 5 above on a Carver bog on March 5th and for the next two days temperature highs were in the 50's and 60's. It was a bit breezy but a preview of beautiful spring to come.

#### First Day of Spring

The official first day of spring March 20 was preceded by a light rain and was less like spring than the preceeding weather had been. The day was mild, but cloudy and foggy. However, the ice had all gone from ponds and reservoirs and the frost from the ground.

The first days of official spring were warm and very spring-like. There was gentle spring rain on the 22nd.

#### March Warmer

March was turning out to be a warmer than normal month,

the excess degrees on the 23rd being 90. Early spring flowers were in bloom and the green was just beginning to show up. However, bogs, which were exposed in greater acreage earlier than usual, were still dormant.

The 24th and the 25th again brought light spring showers, helpful but not enough to raise the low water tables.

March, which came in like a lamb went out with some growls, with raw, cloudy weather and a cold rain on the last day.

#### Month Slightly Warmer

However, as a month the 31 days were about two degrees warmer than normal, putting the month on the warm side.

But, as for rainfall, this fell into the deficient side, the total,

as measured at the State Bog, being only 2.36 inches, average is 4.39. Thus March did little to sweeten up the water supplies, although the first two months had showed a slight plus.

### OREGON

#### Frosts in March

Spring frost control began in March. More and more growers are installing automatic and thermostatic starters on their systems.

#### More Bog Work

Much work has been going on in the bogs than usual, the incentive being the good returns growers have been receiving for their crops. The work has included pruning, sanding and ditch cleaning.

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March was a wet month, with rain nearly every day. When the sky cleared temperature dropped to below freezing and sprinklers were started up.

Conditions have been favorable, according to Ray Bates of Bandon and a good crop should be produced this fall.

## NEW JERSEY

After two successive months of greater than normal rainfall, the weather resumed the recent pattern of drought. Only 1.37 inches, or about 2 inches less than normal rainfall, occurred in March. The total for 1966 through March is 9.43 inches. This differs very little from the totals during the first three months of the two last bad drought years; in 1964 it was 9.13 inches and in 1965 it was 9.37 inches. Normal for this period is 9.76 inches.

Flood water on cranberry bogs stayed unfrozen for almost the entire month as temperatures remained relatively mild. The thermometer was in the 50s on 15 days, in the 60s on 5 days, and in the 70s on 2 days. The lowest maximum daily reading was 40 degrees. The lowest minimum reading was 17 degrees.

## WISCONSIN

**March Wettest Yet**

March came in like a lamb and left like a lion, along with being one of the wettest on record and also considerably warmer than average. Precipitation for the month, mostly in the form of rain, was about 4½ inches compared to the average 1½ inches. Temperatures averaged from five to seven degrees above the normals. Rain or snow was recorded on 19 days throughout the month. Total rainfall to date is now almost seven inches compared to the average to this date of about 3½ inches. Warmest day of the month was 74 on St. Patrick's day and the low was 2 above on the 25th. It was above freezing on all but two days of the month. It also was the first

*Continued on Page 32*

# The Robert Gottschalks Have Cranberry Antecedents in Both Families

**Gottschalk Operates Large Marshes at Cranmoor —  
Was One of the First to Use Bulk Harvesting Method**

By CLARENCE J. HALL

Both Mr. and Mrs. Robert A. Gottschalk of Cranmoor, Wisconsin have a family cranberry background. "Bob" Gottschalk operates the 75 acre marsh of Gottschalk Cranberry, Inc. He also owns the "North Marsh" of 17 acres, also in Cranmoor, a mostly run-out marsh which he hopes to rebuild.

His father is August F. Gottschalk, a former Wisconsin Rapids merchant and grocer, who also operated a general store at nearby Port Edwards. August bought and sold cranberries for his customers in the Rapids and at Port Edwards. In his early days deliveries were made to the cranberry marshes and that was probably where "Bob" got his first interest in cranberries.

His grandfather was Rufus McFarland, who was part Scotch, a river pilot and early Wisconsin cranberry grower.

Mrs. Gottschalk's grandfather was Richard Rezin, pioneer of the prominent Rezin cranberry growing family in Wisconsin, and her father was Lloyd Rezin, also a cranberry grower.

## Live on Marsh

The Gottschalks live in a pleasant home on their marsh, with a large picture window giving a view of their main marsh.

This marsh is known as the old Foley marsh, called the East marsh containing 25 acres. This marsh is entirely set to Searles. The West marsh is of 50 acres and Bob is engaged in rebuilding this. This marsh has some Natives, some Searles and Bob has planted Ben Lears for early harvesting. These vines originally came from one of the earliest marshes in Wisconsin, the so-called Berlin Marsh near Berlin, Wisconsin and were planted in a small plot on the Lester Cranberry Company marsh. These vines were carefully selected from the Lester Cranberry Company marsh and transplanted to the Biron marsh (Nash). Then the late Dr. Neil Stevens, Dr. F. B. Chandler and others decided at that time, that they would not be suitable for fresh fruit, and as little processing was done then in Wisconsin; only the pies and seconds were being sold for processing.

Because of their dark color at harvest, the Ben Lears can immediately be shipped to the Ocean Spray plant at North

Chicago to be made into juice. It was Tony Jonjak who had taken these vines from a ten-foot square plot at Biron and transplanted them to his own marsh at Hayward in northern Wisconsin to propagate and to be sold commercially. After about ten years he had enough to sell so that in 1959 Gottschalk and Roy Potter bought vines and each planted four acres of the Ben Lears at Cranmoor

## Marsh Sprinkled

The marsh is flowed from the Wisconsin River. In 1964 Gottschalk put in 19 acres of sprinklers, these having Rain Bird heads. Last year the balance of the marsh was put under sprinkler.

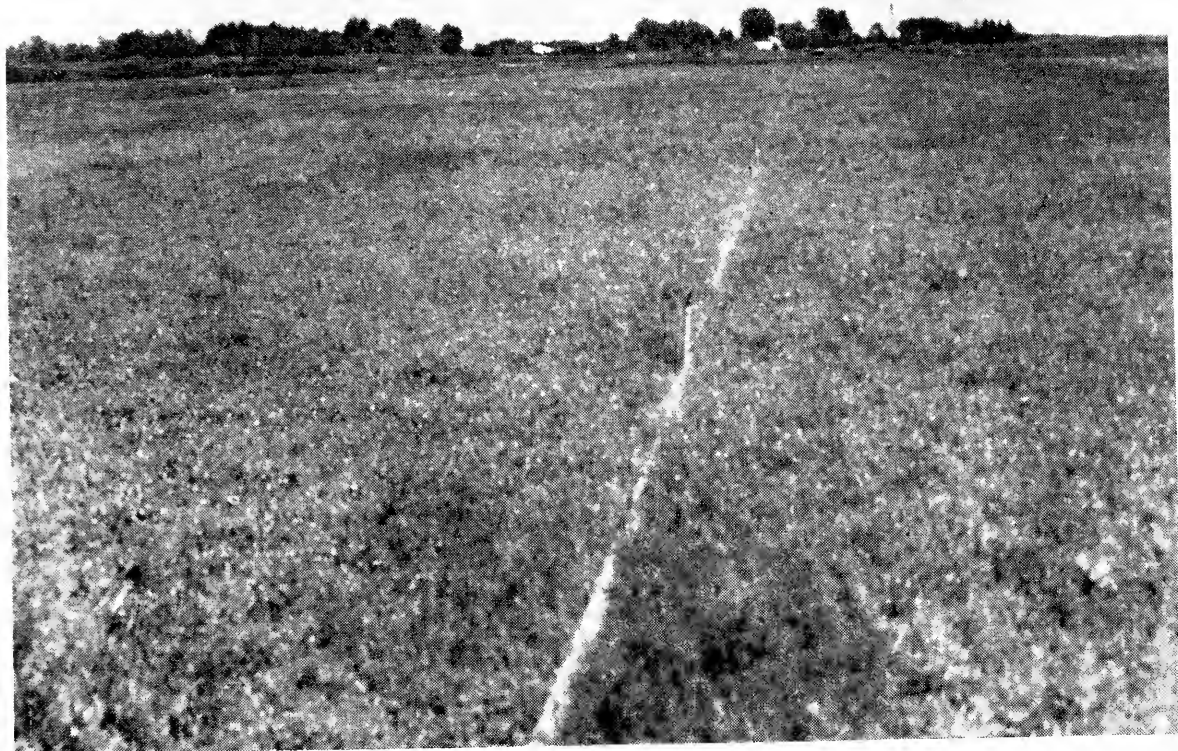
Gottschalk contributes plots on his marsh for experimental use by the University of Wisconsin and both Dr. Malcolm N. Dana and Dr. Donald Boone have made satisfying use of these plots, Dr. Dana on weed control and Dr. Boone on fungicides.

Gottschalk's dusting is done by airplane. He is using the James Miles Air Service of Hartford.



Mr. and Mrs. Gottschalk in their Yard.

(CRANBERRIES Photo)



**View of the Gottschalk Marsh, showing Sprinkler Head.**

**(CRANBERRIES Photo)**



**Another view of the Gottschalk Marsh.**

**(CRANBERRIES Photo)**

Wisconsin. A Stearman bi-plane has been remodelled so that it can carry a maximum amount of fertilizer or insecticides. Gottschalk fertilizes twice a year putting on about 200 pounds to the acre per application, the mixture used being 7-28-14S. This is done in April and just as the berries are setting.

For production his East marsh averages about 4000 barrels a year. He harvests with three Dana-Getsinger pickers. He harvests in a little different manner than do most Wisconsin growers by going around and around a bed rather than always in the same direction.

#### Used Bulk Boxes

Bob was the first to use bulk wooden boxes, 4 feet by 4 feet by 4 feet, handled with fork lifts in shipping his crop to Ocean Spray. He has a warehouse of considerable size but plans to build a new one. His North marsh across the highway from his other properties is an old "wild native marsh" started in 1888 before the present Milwaukee Railroad was put through.

#### Mrs. Gottschalk a Teacher

Gottschalk was born in Wisconsin Rapids in 1913. His early schooling was there, grade and high school. Then he attended Ripon College at Ripon, Wisconsin and finished at Northwestern University at Evanston, Illinois, taking a business course and receiving a Bachelor's degree. For the past 14 years he has been and is assessor of the Town of Cranmoor. He is a member of the Wisconsin State Cranberry Growers' Association, and a past president of this association, and was a director of the former Mid-West Cranberry Cooperative. He is an alternate member on the Advisory Board of Wisconsin Cranberry Marketing Order. Mrs. Helen E. Gottschalk attended school at Cranmoor and Nekoosa. She attended Wisconsin State University at Stevens Point, taking a teachers' course and com-

pleted her requirements for a Bachelor's degree at the University of Wisconsin. Afterwards she taught American History and related subjects.

The Gottschalks have two sons, Jon 20 years, who is attending Wisconsin State University and Guy 16 years, who is a junior at Wayland Academy at Beaver Dam, Wisconsin.

#### Hobby is Curling

The hobby of the Gottschalks is a rather unusual one, at least for most of the country. It is curling, that ancient game played

on ice with a heavy stone and broom. There is a curling club at Port Edwards to which the Gottschalks belong, along with the Wayne Duckarts, Irving Bennetts, Newell Jaspersons and Dan Rezins, all cranberry growers in the town of Cranmoor. This is a sport that can be played in the long cold Wisconsin winters, when there is not much to be done on the marshes. Bob is a former secretary and treasurer of this club.

A poem by Mr. Rufus E. MacFarland, maternal grandfather of Mr. Gottschalk follows:

---

#### CRANBERRY PICKING TIME

*Don't you think that city folks would think it very cute,  
To go upon the cranberry marsh to see them pick the fruit.  
If the men would take along their daughters and their wives,  
They would bid good-bye to all resorts the balance of their lives.*

*When you go upon the meadow before the work is begun  
Where every dewdrop sparkles like diamonds in the sun;  
The grass appears as beautiful as waves on inland seas,  
Golden rod and buttercups are nodding in the breeze.*

*It surely is a sight to see on the bogs we pass,  
Each berry tries to hide itself beneath the moss and grass.  
They act like timid people as if they were afraid,  
When you bring them to the light they blush like a bashful maid.*

Continued on Page 32

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Big Hale pump for sprinkler system.

(CRANBERRIES Photo)



I. Stanley Cobb, new publisher of CRANBERRIES (left), and Clarence J. Hall, former editor and publisher, pass papers of agreement, while Donald Chartier, new editor, looks on. (CRANBERRIES Photo)

## 'Cranberries' Magazine Under New Management

### Clarence J. Hall, Founder, Retires

CRANBERRIES, with this issue is sold to a new publisher. It was established May, 1936 and since that time has been published and edited by Clarence J. Hall, ably assisted as associate editor by his wife, Mrs. Edith S. Hall at Wareham, Massachusetts.

*The new owner and publisher is:*

Comor Publishers, I. Stanley Cobb, president, 236 Main Street, Kingston, Massachusetts 02360. Telephone area code 617 585-2310.

Mr. Cobb will be handling advertising and subscriptions and other matters relating to CRANBERRIES. New mailing address for all correspondence and remittances will be as follows:

Cranberries Magazine  
P.O. Box 70  
Kingston, Massachusetts 02360

Associated with Mr. Cobb is Donald Chartier, who will be acting the capacity of editor. Mr. Chartier's address is 30 Sewell Street, Brockton, Mass. Telephone 617-588-4595.

For the past two years Cobb has been the printer of the magazine since the sale of the Wareham, Mass. Courier printing plant. This has given Mr. Cobb considerable insight into the publishing of CRANBERRIES, and into the cranberry industry.

Mr. Cobb has been in the printing business all his life. He was born in Boston in 1928 and after graduation from high school he went into printing. For several years he worked on newspapers in West Brookfield and Rockland, Mass. He then worked in commercial printing plants acquiring a well rounded knowledge of the business.

In 1955, Mr. Cobb established a commercial printing business in his home in Kingston. He later acquired an associate, Mr. Walter Morlock, moved into a new building and in 1962 the business was incorporated as Cobb Printing, Inc.

Mrs. Harriet Cobb is a native of Kingston and the daughter of Dr. Harry G. Briggs. She was at one time employed for a period of 11 years by Ocean Spray Cranberries, being secretary to Mr. John F. Harriott, who at that time was assistant treasurer of the cooperative. This gives her a valuable familiarity with names of growers and a general knowledge of the industry.

Mr. and Mrs. Cobb have two children, Deborah and Donald. The couple attend the Mayflower Congregational Church of Kingston of which Mr. Cobb is a deacon. They devote much of their spare time to work of the church in various activities.

In 1965 Mr. Cobb, deciding to get away from the job printing business, retired from the firm and organized Comor Publishers for the purpose of publishing and

**Here's to a juicy year  
for cranberries.  
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you make it two in a row.**



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**chloro ipc**

printing magazines and books. This year the company handled three large annual town reports. Cranberries is the first major periodical.

Mr. Chartier was born in Marlboro, Mass. in 1923. Attending parochial school he was taught French as well as English. His school athletics were basketball and track. He worked for some years as make-up editor and printer on the Marlboro daily. He attended Boston University, taking courses in public relations and communications.

Mrs. Chartier is the former Josephine Paulino of Hudson, Mass. The Chartiers are the parents of six children.

Mr. Chartier is currently employed at the Veterans Administration Hospital, Brockton, where he is a recreation therapist. Among his duties there include editor of the patient newspaper. Don also does art work for the publication.

During the Second World War he was in service in the 101st Airborne Division, training at

Fort Benning, Georgia, and then serving in active duty in Europe.

Don is interested in photography and has done developing of negatives and prints. He is interested in art as a hobby.

His wife has been a teacher in the public schools and conducts her own kindergarten.

So, both men, like your former editor and publisher have long been familiar with the smell of printers' ink.

While the transition of ownership is in progress, Mr. Hall will continue with CRANBERRIES in the capacity of consultant and may be reached by mail at Box 32, Wareham, Mass. 02571 or telephone 617-295-9533. He will also contribute some articles as certain material has already been gathered.

There is to be no drastic change in policy or editorial content. But the future will be approached with possibly an improved magazine with fresher eyes and younger blood in charge.

## GELSTHORPE ELECTED TRUSTEE OF ALMA MATER

Edward Gelsthorpe, executive vice president and chief executive officer of Ocean Spray Cranberries, Inc., has been named a trustee of Hamilton College, Clinton, N. Y. He is a 1942 graduate of the institution.

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**PLYMPTON, MASSACHUSETTS**

## Frank D. Costello

Frank D. Costello, a long time cranberry grower of South Carver, Mass. died at St. Luke's Hospital, Middleboro March 26. He was 77.

Mr. Costello was treasurer and general manager of the big Crane Brook Cranberry Company with headquarters in South Carver. He was born in Boston, the son of James J. Costello and Catherine M. O'Brien. He is survived by his wife, Elizabeth Atwood Costello, a son James Costello of Monterrey, California and a brother, Charles L. Costello of Cincinnati, Ohio, six grandchildren and three great grandchildren.

He was a member of the Middleboro Lodge of Elks, a charter member of the South Carver Grange, a director of the Middleboro Cooperative Bank since 1936 and was president of the Carver Old Home Day Association.

He was one of the founders of the Atwood-Costello Chevrolet of Middleboro. He was a long time winter resident of Vero Beach, Florida, where he was a member of the Vero Beach Country Club.

A requiem of High Mass was held March 30 at Our Lady of Lourdes Church of Carver and interment was at Central Cemetery, Carver.

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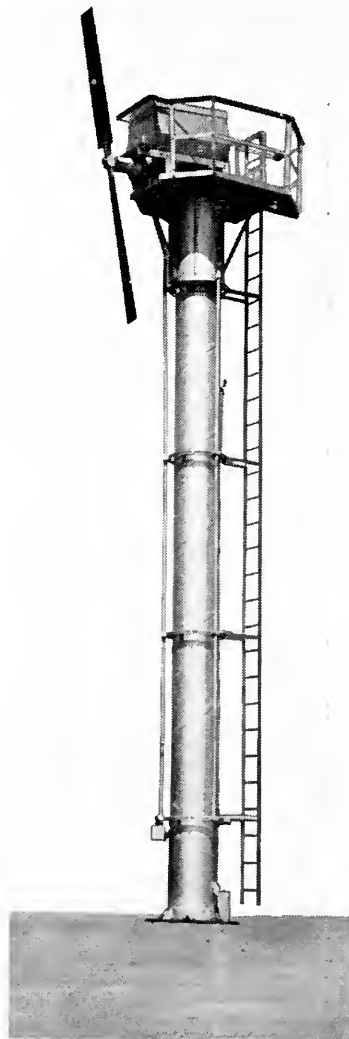
### 3. THEY ELIMINATE FLOODING

Water shortages, water damage to fruit, drainage difficulty all dictate against flooding. The FMC wind machine protects by drawing warm air from above and mixing it with cold ground air. Not one drop of water is involved.

### 4. THEY PROMOTE BETTER FRUIT YIELD AND QUALITY

Flood water may damage fruit, wash away pollen, inhibit vigorous growth. Also, flood water can carry in weed seeds. FMC wind machines eliminate these time and profit consuming drawbacks.

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**FMC CORPORATION, FLORIDA DIVISION**  
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## BABCOCK TO BE SITE OF NEW \$300,000 CRANBERRY STATION

Ocean Spray Cranberries, Inc., has announced plans for construction of a receiving and screening station in the village of Babcock, Wisc., estimated to cost around \$200,000 and scheduled for completion in time for the 1966 harvest season.

Lloyd Wolfe, Wisconsin field manager for Ocean Spray, said the new facility is expected to provide seasonal employment for approximately 75 people this fall.

He said specifications for the building are to be completed soon and the construction contract award will follow shortly. The site is adjacent to the Babcock railroad station.

The plans provide for a 150 by 200 foot, one-story building.

Barring last-minute changes in specifications, it will be of metal construction, according to Wolfe.

The plant will contain equipment for sorting and shipping cranberries grown by Wisconsin members of Ocean Spray, and will also have office quarters.

Wolfe, who will oversee operation of the new facility, said the corporation's Wisconsin office, now located at 321 12th Ave. S. in Wisconsin Rapids, will be moved to Babcock at the conclusion of the 1966 harvest season.

In making the first public announcement of the project at Ocean Spray's headquarters in Hanson, Mass., Edward Gels-thorpe, executive vice president and chief executive officer, said:

"Erection of the new Wisconsin receiving and screening plant is part of the cooperative's program of expanded services to grower members through a plant modernization and building program. This program is in keeping with Ocean Spray's growth over the past three years in both sales dollars and increase in cash per barrel return to its grower members."

Berries will be shipped directly from the Babcock station to Ocean Spray processing plants in North Chicago, Ill., and on the Pacific coast.

Wisconsin members of the corporation's board of directors are Lester M. Gordon, Tomah, vice president; Alfred E. Bark and Donald S. Duckart, Wisconsin Rapids; Harold D. Gross, Manitowish Waters, and Tony Jonjak, Hayward.

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# MASSACHUSETTS CRANBERRY CLUBS HEAR SUGGESTIONS ON HOW TO GROW LARGER CROPS

## Also Elects 1966 Officers — Bulk Handling Discussed

Suggestions as to how to produce larger crops and more efficiently were made to growers attending the Massachusetts Cranberry Club meeting in March, and also suggestions as to harvesting and storage were made by members of the Massachusetts Cranberry Experiment Station. The meetings were those of the South Shore at Kingston, March 15th, Southeastern, Rochester on the 16th and the Cape Cod, Barnstable on the 17th.

The discussions were under the leadership of Irving E. Demoranville, Extension Cranberry Specialist.

An interesting feature in the production of larger crops was in the production of larger as well as more cranberries, as this would swell the total crop.

First speaker was Dr. Robert Devlin, pathologist at the Station, a relative newcomer, who was making his first appearance before the growers on a speaking program. His subject was "Possible Solutions to Some Cranberry Problems." He first discussed "Gibberallin," a chemical which is a growth regulator. He said cost production was the problem of every grower and that Gibberallin acid is a natural growth regulator. It is not toxic, but at the moment it is not inexpensive as it is not commonly used on many agricultural products.

He said that normally flowers need pollination, usually bees to set fruit. "If we spray flowers with Gibberallin Acid we may be able to achieve 90 to 95 percent fruit set, if the cranberry plant will respond to this acid."

He noted there is a very large loss in the potential of the crop if flowers do not all set, as is

now the case. He said this alone could help increase total production.

The acid will also enlarge the berry, another advantage in total production.

On more advantage possible is that a seedless fruit may be produced (he cites the Thompson grape) and this is something Ocean Spray is very anxious to have in sauce making.

Gibberallin acid, he said may also be useful as a supplement to herbicides. Some plants grow to six times their normal size under this treatment and the plant will take up more herbicides.

The material is not yet registered for use on cranberries and his research is so far only in the experimental stage. (Editor's note: Gibberallin is also under experiment for cranberry use in New Jersey by Charles N. Mainland, Dept. of Horticulture, Rutgers University.)

### New Compounds

Dr. Devlin said he had about 30 new compounds to test at the station, several seemingly promising. Two might increase yield, one gave an excellent short time control of weeds which might be used successfully on poison ivy, and there was one for cleaning ditches of weeds, provided the ditch is dry when applied. The weeds would not come back for six months.

"Pesticide Persistence and Translocation," was the topic of Dr. G. W. Miller, biochemist. He explained tests which had been made at the State Bog. Casoron is persistent, he said, mostly on the upper part of the soil. He said that two applications in a

single year remained longer than if only one application is used.

He said he had found samples of Casoron and Dieldrin in a drainage ditch back to the reservoir, but that these moved at a very slow rate. He said Parathion had been found in mussels in the pond reservoir. He discussed how long Parathion stayed on the vines when big sprinklers were used and also wondered if the material was washed off with sprinkler use.

He mentioned briefly the relation of the use of Casoron to bog sanding.

Demoranville, who was listed as speaking on "Weeds," said his talk could better be put down as "Cranberry Hash," as he was speaking on a number of subjects.

He said that harvest should be delayed, if possible until the berries were fully mature, and of the right color. He said it was amazing the difference in the size of the fruit picked too early and that picked at full maturity. This perfect timing in harvest can make a good deal of difference in the amount of production a grower will obtain. He said harvest before the coming of mechanical pickers was usually earlier as it took longer to get the crop off. He said it was September 16th before the Blacks were really fully matured and October first for the Howes, if

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the individual growers were able to wait that long.

"I am a believer in fertilizing," he said, "as a means of increasing production." He said he preferred a "balanced" fertilizer, and this was much better than just nitrogen alone.

He went into the matter of water harvesting slightly.

In discussing the matter of not picking until the berries were fully ripe, he said he was following the advice of Dr. Cross as given at a previous meeting.

There are no new chemicals at all in the weed chart for 1966, he said. Reverting to fertilizers again he asserted that all bogs are different and each grower must experiment and find out what program is best for his own property.

Prof. William (Bill) Tomlinson, entomologist, took up the recommendations for this year, noting the changes of recommendation in a number of items. He said that there might be more trouble with gypsy moth this year, following last year's outbreak of this pest on the Cape. It had not been a problem for about 15 years and might be a new problem for some of the younger growers. He suggested a number of sweeps be limited to 25 rather than 50 before a check is made.

He cautioned growers that they were responsible for any pesticides on their property. He suggested that containers be buried and said it was bad practice to remove part of the contents of a container and put it in another. Material should be kept in the original container, he said, and the container has antidote directions on it to use in the event of accidental poisoning. He said it was often best to destroy some chemicals if they had been left over from the year of their use as they might have deteriorated and have lost strength and when applied would not do the job desired.

Final speaker was Prof. J. "Stan" Norton, engineering research.

He talked to some extent on wet raking, and told how ex-

periments are being made with 12 inch plastic pipe filled with water as a barrier to flood a bog area for wet picking. This gives an area about 150 feet in diameter, he said, which barrier would be portable for use at different places on the bog as the fruit ripened.

He also spoke of "Bulk Storage" of cranberries. He told how fruit had been stored in cooperation with Ocean Spray and records kept of the rate of rot in various containers and in various conditions of temperature storage. He summarized by saying that he couldn't see but that the fruit kept as well in bulk bins containing seven barrels as well as that stored in the usual field box.

#### Officers Elected

All three groups elected officers for the coming year. The *Southeastern Club* reelected Robert St. Jacques president; vice president David Mann, Buzzards Bay; secretary-treasurer, Lewis Hiller and advisory committee, Kenneth Beaton, Robert C. Hammond and Oscar Norton.

*South Shore Club* at Kingston: Lawrence Cole of North Carver, succeeding Stanwood Briggs of Duxbury, who term had expired; Alden Alberghini, Plymouth, vice president; and Robert Alberghini of Wareham, secretary and treasurer.

The *Cape Club* reelected the same slate as last year: president, Carlton Collins, Waquoit; vice president; Raymond L. Thacher, Harwich, secretary; Mrs. Crawford H. Hollidge, Marston Mills; and treasurer, Victor F. Adams of Barnstable.

### 3-Phase Electric Extension Will Aid Wisc. Growers

Staking crews were at work shortly after December 1, on two main three-phase feeding lines north from the Mather substation that will serve the townships of Bear Bluff, Knapp, Kingston, Remington and City Point and bring three-phase service to a number of Wisconsin cranberry

growers throughout that area.

It is estimated that construction in this area will be nearly completed by May 1, 1966. The vastness of this construction program can be measured in nearly one-half million pounds of aluminum conductor, nine to ten car loads of poles, some 150 large size transformers and an estimated labor cost for construction of over \$125,000.

Staking crews are coordinating their work with irrigation pump manufacturers who are assisting all growers and our crews in locating the point where cranberry sprinkling pumps will be installed. These pumps will range from 50 to 150 horsepower.

Consideration will be given to the location of all overhead lines to render the least amount of interference to aerial spraying, dusting, etc. It is planned that most of our secondary lines will be located underground from the transformer pole to the pump location.

Plans are to serve all cranberry growers who have signed up for three-phase service, however, it is only natural that service will be available first to those who are located nearest to our substation load centers. Those located further away must, of course, expect service at a date possibly later than May 1, 1966.

It is expected that many new uses for electricity will be found by growers in the area now that three-phase service will be made available. There is no question but what a greater amount of electric power will be consumed in the processing of cranberries in drying, warehouse heating, refrigeration storage, and other applications that will come about as a result of research now underway.

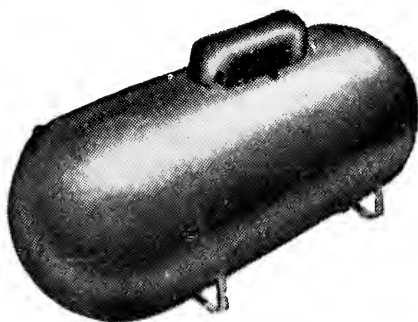
Construction will be done out of Oakdale Electric headquarters, using the cooperative regular construction crews, however, in order to meet service deadlines it may be necessary to employ additional people. Every effort will be made to employ those from local areas served by the cooperative.



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# Farm Bureau

## In Action

By VERNON A. BLACKSTONE

Farm Bureau Staff Assistant

(EDITOR'S NOTE: *Farm Bureau is fortunate in having James E. Shaw, Esq. of Dunstable as General Counsel for the Massachusetts Farm Bureau Federation. Following is a resume of a decision handed down by the Land Court relative to Cranberry growers. This case was taken into Court by the Massachusetts Farm Bureau to determine the validity of an amendment to the zoning by-laws. Mr. Shaw is the Author.*)

### Merry v. Duxbury Article

Cranberry growers generally can take comfort from a decision handed down by the Land Court involving the validity of an amendment to the zoning by-laws of the Town of Duxbury.

The by-law provided that "no obstruction of streams or tidal waters and no excavation or filling of any marsh, wetland, or bog shall be done without proper authorization by a special permit issued by the Board of Appeals." (See *Merry v. Duxbury*, Land Court, Misc. Case # 32878).

In attacking the by-law, Stanley M. Merry of Duxbury in his petition alleged it was invalid as an "attempted exercise of police power that has no reasonable relationship to the public health, safety, or welfare of the inhabitants of the Town; that the Board of Health by Chapter 111, Section 125 (of the General Laws), has jurisdiction over land which is wet, rotten, spongy, or covered with stagnant water and offensive or injurious to health; that the by-law fails to provide adequate standards for the Board of Appeals in the issuance of 'special permits,' that failing to define essential terms the by-law has patent ambiguities; that it contravenes the Constitution, voids the Massachusetts law as to the reasonable use of riparian rights, subjects the rights of cranberry growers statutory and

otherwise, to the whim of a board, and substantially interferes with cranberry business of growing and expanding."

The Land Court, unequivocally, decided in favor of Mr. Merry and specifically found that the amendment to the by-law in question had "no force or effect" as to his "cultivation of cranberries" and that it was "an invalid exercise of authority by the Town under the Zoning Enabling Act."

In his opinion, Judge Joseph R. Cotton relied heavily upon the points raised in the brief prepared and filed by James E. Shaw, General Counsel for Massachusetts Farm Bureau, who represented Mr. Merry in the action. Among others, the following observations were made by Judge Cotton:

(1) "Natural water courses from time immemorial, and as set forth in many decisions on riparian rights, give the owner of the land over which it runs the right to use it without substantial injury to the upper or lower riparian owners. The by-law states an owner cannot obstruct it without prior permission of the Board of Appeals, regardless of degree or reason for doing so."

(2) "Permission or 'proper authorization' as to marsh, wetland, and bog must be first obtained before the owner may 'excavate or fill' any of them. It does not say that it applies to a substantial excavation or fill nor does it exempt a minor act."

(3) "The amendment places upon a landowner the interpretation of whether he is on swampland, wetland, or bog and without permission acts at his peril, regardless of necessity or the general improvement which would result."

(4) "It is well established that all town by-laws must be sufficiently definite so that a citizen of average intelligence in reading may reasonably know whether any act of his is in violation."

(5) *Hinkley v. Nickerson*, 117 Mass. 213, 215, recited that as early as 1866, an 'owner had a legal right to maintain a dam for the purpose of flowing and irrigating his land for the cultivation of cranberries.'

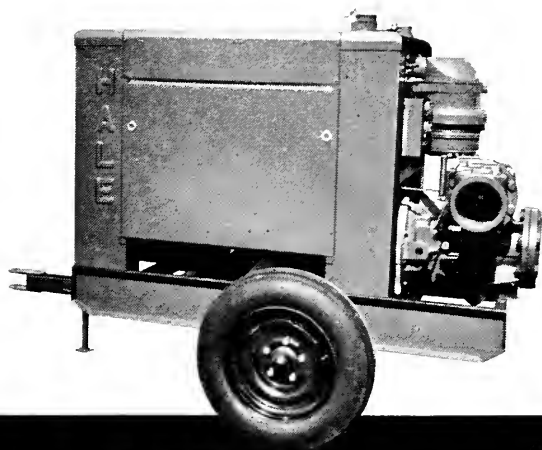
(6) "*Howe v. Grush*, 131 Mass. 207, 211, states, 'The Legislature has seen fit to give to the owners of cranberry meadows the same rights to erect dams and flow their meadows that had long been enjoyed by owners of mill sites.' It must be done with 'reasonable care, skill and prudence,' which is the rule that requires everyone so to use his own as not to injure another."

(7) "I am unable to perceive any rational tendency in the amendment to promote safety, health, morals, or general welfare of the public. Its chief purpose seems to be founded on aesthetic considerations. Its phraseology is unreasonable and arbitrary."

Judge Cotton then went on to discuss the rights of Mr. Merry relative to the "non-conforming" use of his land in light of the amendment to Section 5 of Chapter 340, Acts of 1962. The Massachusetts Farm Bureau Federation was instrumental in having this particular amendment adopted as part of the State Zoning Enabling Act. The opinion reads:

"It is uncontroverted that petitioners have been operating and improving three cranberry bogs and performing all acts needful for producing cranberry crops. It is uncontroverted that in this respect they possess a non-conforming use which is ordinarily exempt from zoning by-laws adopted subsequent to such use becoming established.

"The Zoning Enabling Act by Section 5, as amended by Chapter 340, acts of 1962, gives protection to nonconforming use of land. In substance it states a zoning by-law shall not apply to the 'existing use' of land to the extent to which it is used at the time of the adoption of the or-

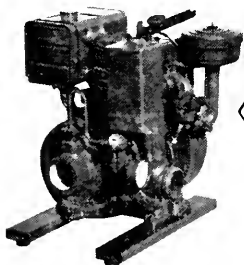


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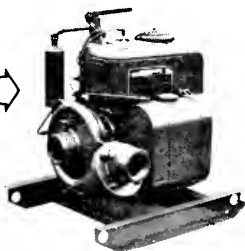


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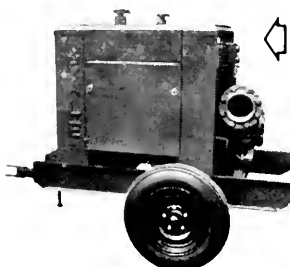
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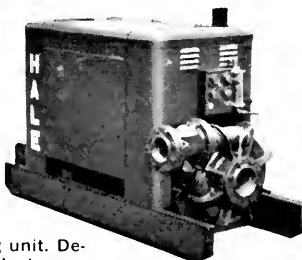
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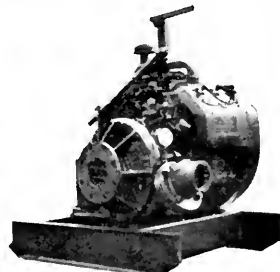
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apply to any change of use thereof, or for its use for the same purpose to a *substantially greater extent*; and provided, further, that no such ordinance or by-law *shall prohibit* the alteration, rebuilding or expansion within applicable set back requirements of non-conforming buildings, except greenhouses located in residential areas, or the *expansion of land*, used primarily for *agriculture, horticulture or floriculture*.

"The rights of petitioners in the exercise of their nonconforming use appear clear."

## Cold Injury to Cranberries in 1965 in Washington

by CHARLES C. DOUGHTY  
and AZMI Y. SHAWA

(Assistant Horticulturist, Western Washington Research and Extension Center, Puyallup, Washington and Junior Horticulturist, Coastal Washington Research and Extension Unit, Long Beach, Washington, respectively.)

Cranberry producing areas in Washington have a rather mild climate compared to the other regions where this crop is grown. The cranberries grown are principally the McFarlin variety with a small amount of older varieties included.

Minimum temperatures during the fall months are such that the cranberry plants remain green or in a semi-dormant condition well into November or early December in some years. Winter temperatures are frequently relatively warm and no winter injury occurs until physiological activity resumes in late February or early March. Occasionally minimum temperatures of 0 degrees F to 10 degrees F occur. When this happens, low temperature injury is produced. For this reason an investigation was started in 1964 to determine the degree of injury that could occur at various temperatures and stages of bud development.

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**Field Observations.** A study of dormant plants growing under commercial conditions was started just prior to a low temperature of 9 degrees F which occurred in mid-December, 1964. Periodic checks were made on bogs in both the Grayland and Long Beach areas to measure injury throughout the dormant period. Injury was determined by dissecting and visually examining three to five samples of 50 up-

rights (fruiting shoots) each that were collected from several locations in the cranberry areas. Each upright collected had one dormant terminal bud which contained an inflorescence of one to seven developing blossom buds and a vegetative growing point. The data shown below in Table 1, represents the mean percentage of injury to dormant buds and the abscission layers.

TABLE 1. Mean percent of low temperature injury in dormant McFarlin cranberry buds, in commercial bogs, in the 1964-65 period.

Sample date	Min. Temp's. below 32°F at vine level	Accumulative total degrees below 32°F	Accumulative per cent dormant bud injury
Dec. 16	27 30 26 15 9 *	51 **	8
Jan. 31	23 28 30 28 25 27	98	9
Feb. 11	27 26 31 24 22 28 29 29	138	19
Feb. 26	27 25 26 23 25 19 24	193	44
Mar. 12	29 30	198	10
Mar. 24	28 31 28 24	215	4
May 4	26 24 26 23 24 25 26	270	30

\* Minimum temperatures are listed from one date to the next.

\*\* Accumulative totals of degrees below 32°F were calculated from December 1, 1964.

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The amount of injury varied greatly on all sampling dates. Cold injury does not occur to all dormant buds. The differences in the stage of development, nutrition, and vigor of the plant cause the degree of hardiness to vary. Resistance to cold injury among the developing blossom buds of the inflorescence also varied considerably. Those blossom buds that developed first, or lowest on the inflorescence were generally more susceptible to injury than those which developed later.

The data shown in Table 1 indicates that the buds are relatively resistant to cold injury in earlier parts of the dormant period. However, after physiological activity resumes in the cells, they are increasingly susceptible to injury as the dormant period progresses toward its termination. For example, the February 11th group of temperatures show two on this date. These are 24 and 22 degrees. These temperatures at the earlier dates did not seem to cause increased injury. The February 26th temperatures have six minimums (25, 26, 23, 25, 19, and 24 degrees) which probably caused the increased injury shown.

Most, but not all, injury in the mid-dormant period, was to the abscission layer. This is a layer only a few cells thick between the dormant bud and the stem and is surrounded by the bases of the outer bud scales. Injury varied from complete kill to only slight. Those stems which were only slightly injured seemed to recover when growth resumed. However, those stems where the abscission layer was killed, even though the bud itself remained undamaged showed no further development. This accounts in part for an increase in injury from 8% on December 15 to 44% on February 26.

Those buds where the abscission layer was killed dropped off and only healthier buds remained on

March 12th and 24th. Part of those buds where the abscission layer was less severely injured started growth the following spring but died in a short time.

Three points of injury were found in the dormant buds. These were the abscission layer, the flower buds and the vegetative growing point. Any one or all three may be injured. If the abscission layer is killed, then a new shoot starts from a lateral bud but no fruit buds develop till the following year.

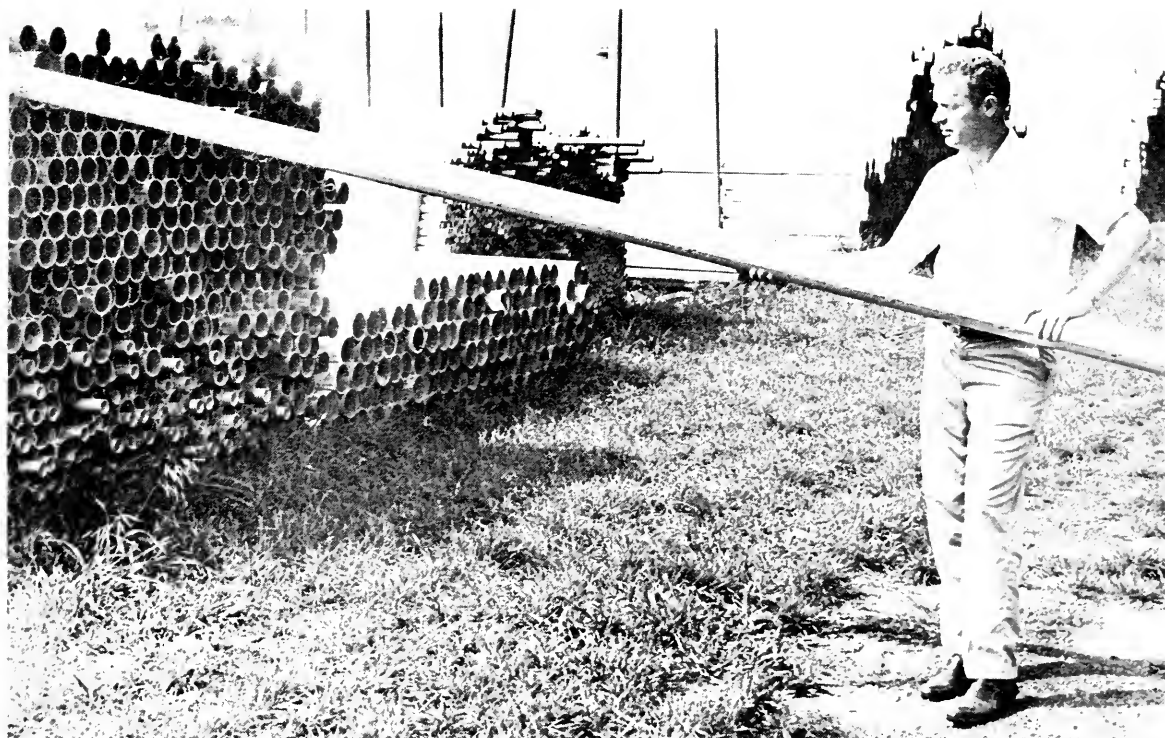
*Artificial Freezing Tests.* Tests were conducted in controlled freezers to determine the temperatures at which injury occurred. Uprights were collected on February 26, March 12, March 30 and May 4 and divided into bunches of twenty. One bunch was used per treatment per replication. Each test was replicated five times. The freezer was set to

decrease the temperature one to four degrees per hour and hold for two hours at each selected temperature. At the end of each two hour period samples were removed and the buds dissected and visually examined for injury.

Results of these tests also showed that there was an increase in temperature at which serious injury occurred as the dormant season progressed and physiological activity of the buds increased. Table 2 shows the percent of injury to the blossom buds caused by different temperatures at four sampling dates during the latter part of the dormant period and at the white bud to popcorn (cluster bud) stage of growth (May 4th). These percentages include all buds which showed injury in any degree. Injury during these periods was principally to the blossom buds.

TABLE 2. Mean percentage of cold injury to McFarlin cranberry buds subjected to artificial freezing tests, each temperature constant for two hours.

Freezer Temperatures °F.	DORMANT PERIOD			White bud to popcorn stage
	February 26	March 12	March 30	May 4
31	—	10%	17%	24%
30	—	14	24	27
28	—	18	33	33
26	10%	22	38	39
24	14	27	44	44
22	18	31		
20	22	35		
18	25	40		
16	29	44		
14	33	48		
12	37	53		
10	41	57		
8	45			
6	48			
4	52			
2	56			



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*Discussion.* During the first part of the dormant period the abscission layer was the part that received the greatest injury. After physiological activity resumed

in the latter part of the dormant period, this was no longer true. Subsequent to this time injury to the blossom buds was the limiting factor. As shown in Table

2, even 31° temperatures will produce serious injury after growth has started.

From the latter part of the dormant season through the hook (pink) stage the parts of flower buds most easily injured were the anthers, style and nectaries. The anther tubes, through which the pollen is discharged, and the base of the style surrounded by the nectaries received the most damage. Anther tubes injured by freezing temperatures during development twist and curl so that pollen dehiscence is extremely difficult.

Damage to the ovaries and ovules also occurred in these tests but not as readily as to styles and anthers. However, if damage to the latter was very extensive, the ovaries were also injured enough to cause serious crop reduction. Injury to the style base can cause serious crop loss as this prevents the pollen tubes from reaching the ovules. Injury to the anthers, especially the anther tubes, can prevent pollen dehiscence. When this occurs the chance of pollination occurring is reduced. Another factor observed was that when the anther tubes were injured the style was generally damaged also.

After bud break has occurred any temperature 31°F or lower will cause serious crop reduction (see table 2). Even temperatures of 32°F appear to cause some injury if they persist long enough. Irrigation system should therefore, be started any time the temperature drops to 33 or 34°.

Starting at this temperature will counter-act the danger of spot injury during frosty periods. During periods of radiation frosts, a decrease of only four to six inches in the height of the vine surface may result in injury in low spots. Experiences during the past few years show that damaging frosts can occur any time during the growing season in localized areas if conditions are right. When this happens the upright tips will turn brown and die.

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## **New Buckner 1966 Catalog Published Features New Lines**

Buckner Sprinklers 1966 Agricultural Catalog has just been published by Buckner Industries, Fresno, California.

Listing the complete line of Buckner Sprinklers and accessories, it includes a special section on working charts and performance characteristics for sprinkler installation.

The 16-page catalog lists the 26 different Buckner sprinkler series covering the widest possible range of specialized uses.

Low angle orchard rainers, low pressure, short spacers, overhead sprinklers, systems with wide spacing and low precipitation rates and special frost control sprinklers are enumerated in the brochure together with supporting performances.

New are the 800G, 810G and 850G Rainer series.

The 800G Rainer is designed to operate dependably with very small nozzles. According to Buckner agricultural engineers, the sprinkler is ideal for low precipitation on solid-sets. It is also described as outstanding for heavy soils where runoff is a problem. Finally, the engineers say its performance excels in orchards where light applications and special spacings are needed for frost protection.

Complete information is available from Buckner sprinkler dealers or from Buckner Industries, P.O. Box 232, Fresno, California 93708.

## **Wisconsin Gift House Being Enlarged**

Vernon "Goldy" Goldsworthy, president of Cranberry Products, Inc., Eagle River, Wisconsin, announces that his firm is now in the process of adding a substantial addition to their gift house, which features numerous specialty items made from cranberries.



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## Crop Summary of 1965 Massachusetts Cranberries

A crop summary of the marketing of Massachusetts, 1965 crop has been issued by the Boston office of the Consumer and Marketing Service of the USDA. It is written by John E. O'Neil and William E. Struck.

The report says in part:—

Acreage harvested in 1965 was down one hundred acres from 1964 to 11,600 acres. This with a total Mass. crop of 745,000 barrels, the third largest Mass. crop brings the average yield per acre to 64.2 barrels, up to 7.8 barrels from 1964.

Early Blacks continued to be the predominating variety grown in the Cape Cod and Plymouth areas, followed by Howes and a few miscellaneous varieties. The approximate percentages were Early Blacks 60 percent, Howes 36 percent and others 4 percent.

Practically all shipments continued to be packaged in cardboard cartons containing 24 one-pound film bags and window boxes. In southern and eastern markets the window boxes are more in demand, in mid-Western markets the film bags are more popular. In western markets there doesn't appear to be any marked tendency toward either package. A few 25 pound bulk cartons were used this season, mostly to institutional outlets in Canada and the northwest U. S.

Rail movement again this season was a minor factor. A total of 19 rail shipments were reported which represents the lightest rail shipments since this report originated in 1954.

Truck movement as usual continued as the major source of transportation. A total of 765 carlot equivalents were shipped in 1965 compared to 777 in 1964. Combined rail and truck shipments in 1965 were approximately the same as in 1964, ten percent less than in 1963 and 26 percent less than in 1962.

The national distribution of Massachusetts cranberries in 1965 represented possibly the finest year in history. As in 1964, Wisconsin berries ceased to be a major competitive factor by the end of November. With few exceptions, markets throughout the country reported heavier unloads of Massachusetts cranberries than in any previous season. Terminals showing an increase in unloads included Atlanta, Cincinnati, Cleveland, Dallas, Denver, Detroit, Los Angeles, Minneapolis, New York, Philadelphia, Portland and San Francisco.

As in past years the F. O. B. prices in 1965 were again extremely uniform. This uniformity applied equally to Blacks and Howes. Both varieties averaged 25 cents a quarter higher than in 1964. F. O. B. prices in 1965 were the highest listed since the inception of the report in 1954.

### USDA PESTICIDE INFO CENTER

Secretary of Agriculture Orville L. Freeman has announced establishment of a pesticide information center in the Department's National Agriculture Library as a facility in the USDA's stepped-up program of research and education in the fields of pest control.

The center is a pioneering development which marks a significant advance in making widely available masses of scientific and technical information on pests and their control. (*Cooperative Digest*)

ONE WAY TO FIGHT RE-APPOINTMENT?—There's talk in New Jersey and California about splitting into two states each. The New Jersey Farm Bureau asks: "If five tiny counties of northeastern New Jersey can control the entire state, why not two separate states—East New Jersey and West New Jersey? A legal basis already exists for such a change. ("Today," in the *Farm Journal*)

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## F. F. Mengel, Wisc. Grower, Dies in Florida

Forest F. Mengel, 77, 921 2nd Ave. S., founder and president of one of Wisconsin's largest highway construction companies, died at 8 p.m. Feb. 19th at Fort Lauderdale, Fla.

Mr. Mengel, who had been suffering from a lingering illness, was confined at Holy Cross Hospital there for the past two weeks.

### Funeral February 23

Funeral services were held at 10:30 a.m. Feb. 23 at Our Lady Queen of Heaven Catholic Church, the Rev. Stanley Andrzejewski officiating. Burial was at Calvary Cemetery.

The son of the late Mr. and Mrs. Ernest Mengel was born Nov. 26, 1888, at Oconomowoc and came to Wisconsin Rapids in 1915 as district engineer for Division 4 of the Wisconsin Highway Commission.

### Held Public Office

He held the state post until 1927 when he resigned to form the F. F. Mengel Co., a firm which pioneered in paving techniques and has been responsible for construction of considerable Interstate system mileage in Wisconsin. Mr. Mengel, a registered professional engineer remained active in the firm, although management responsibilities had been largely taken over by his son, William.

In 1937 Mr. Mengel formed the Mengel Cranberry Co. which operates a marsh on County Trunk Z south of Wisconsin Rapids.

He was a member of the Wisconsin Rapids Board of Education, serving from 1933 to 1936, and an alderman from 1923 to 1927.

Mr. Mengel held membership in the Knights of Columbus, Elks and Kiwanis Clubs, and the Holy Name Society at Our Lady Queen of Heaven Catholic Church.

On Nov. 25, 1913, he married Kathryn Finnerty at Oconomowoc. She died July 17, 1958. His marriage to Margaret Pomainville-Lathrope took place April 30, 1963, at Richmond, Va.

Surviving are his wife; the son, William, and two daughters, Mrs. Gary Getzin and Mrs. Don Neitzel, all of Wisconsin Rapids; 11 grandchildren and three great-grandchildren.

## U. S. BEE COLONIES DECREASED IN 1965

Bee colonies generally declined in 1965 in the United States, according to a release from the USDA. But the decline was only slight; in colonies the total number lowered from 5,601,000 in 1964 to 5,502,000 in 1965. In New Jersey, the decline was from 36,000 to 35,000. In Massachusetts, 11,000 to 10,000. In Wisconsin from 200,000 to 184,000.

Honey production, as might be expected, also decreased.

## Cranberries in English In-Store Promotion

A recent issue of the USDA publication *Foreign Agriculture* told of a series of in-store promotions launched in the United Kingdom to promote the sale of American foods to British housewives. The stores included in the promotion were Selfridges, Britain's largest department store, the large Fine Fare chain in three locations, Tolworth store, the largest supermarket in England and Lewis' department store at Birmingham.

## CRANBERRY SALES DOUBLE IN UK

Ocean Spray Cranberries with headquarters at Hanson, Massachusetts is moving into the export market with both fresh and processed fruit. Wisely, Ocean Spray is proceeding cautiously, because American cranberries are relatively unknown in Europe. Although sales are still small, they have doubled in the United Kingdom in the past year.

(*Foreign Agriculture, publication of the USDA*)

## Rutgers University Observing 200th Anniversary

Rutgers, New Jersey State University at New Brunswick, of which the cranberry-blueberry station at Pemberton is a unit, this year is observing its Bicentennial. It was in 1766 that in the name of the British Crown, New Jersey Governor William Franklin granted the eighth colonial charter in the New World, the endeavor then being known as Queen's College.

The tiny college, as Washington's army and the Redcoats fought up and down New Jersey moved frequently to stay clear of the armies. With U. S. independence it obtained land in New Brunswick on land which is now called "Queen's Campus."

## START ANNUAL BANDON BERRY FESTIVAL

First steps in the annual 1966 Bandon Cranberry Harvest Festival have been taken. Dave Lawson of the Western Banks system has been named to head the Festival Association. Dates of the big festival are Sept. 23-25 inclusive.

## ONE OF FIRST WOODS FIRES IN NEW JERSEY

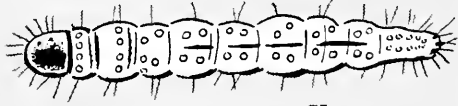
One of the first woods fires in cranberry areas of the 1966 season took place in New Jersey March 19. A fire raged for more than 8 hours on Willard Mill Road in back of Whitesbog. About 58 acres were destroyed.

The blaze was fought by firemen from the State Forest Fire Control, Browns Mills Volunteer Fire Company and Pemberton Good Will Fire Department.

Cause of the fire was not determined.



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## THE END OF OUR ERA IN CRANBERRIES

It is with mingled emotions that we announce the sale of CRANBERRIES. Regret, because we have for so long been so closely associated with the cranberry industry for so long—and a feeling of relief at no longer having the responsibility of publishing a magazine every month.

Thirty years is but a flick of the eye in eternity, but it is a large chunk of a person's life. It can only be with sorrow that we give up this enterprise which we began in May, 1936.

During that time it has been our good fortune to have visited every cranberry-growing area; from Nova Scotia, all Cranberry counties in Massachusetts, Nantucket, Martha's Vineyard off the Massachusetts coast and Long Island in New York; in New Jersey from Pemberton to the coast at Toms River and south to Cape May; in Wisconsin from Berlin, where cranberry growing began in that state to the main area around Wisconsin Rapids and far north to the Eagle River-Manitowish Waters area; on the Pacific from the new developments at LuLu Island, New Westminster, British Columbia, through Washington at Grayland and Long Beach, across the Columbia into Clatsop county and south to Bandon in the Coos and Curry County section in southwest Oregon.

Everywhere we found growers friendly and hospitable. You have taken us into your homes, you have dined us, taken us around your cranberry properties and even sight-seeing to points of interest in your area. We feel we have many real friends in the cranberry industry, whom we will miss.

But this does not mean we will entirely be through with cranberry matters. We have agreed to stay on with the new publisher and editor through the transition period in an advisory, consulting and now-and-then contributing capacity. So we will be around if you care to communicate with us for anything.

During the past 30 years the cranberry industry has made tremendous advances, we no longer harvest by hand; the industry is much more mechanized. We have better agricultural chemicals, applied mostly from the air. We feel we have contributed something to that advance; by articles concerning the various practices in different areas, by

Established 1936 by Clarence J. Hall at Wareham, Mass.

### *Publisher*

COMOR PUBLISHERS  
Box 70, Kingston, Mass. 02360

### *Editor*

DONALD CHARTIER  
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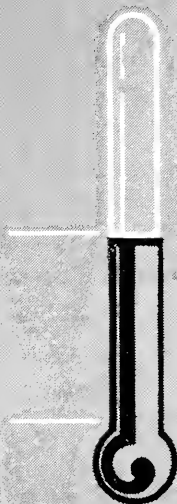
familiarizing growers one with another because of write-ups of individuals and individual properties. CRANBERRIES has been a means of getting scientific articles by the researchers to your attention.

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*All day long the pickers go,  
Until the sun is getting low.  
For when the sun sinks in the west  
Then nature hails the time of rest.*

*The wild wood songster clears its throat,  
And gives one long lingering note,  
That echoes sweet o'er dale and hill  
Then settles down and all is still.*

*Their daily labors being done,  
The boys and girls must have their fun,  
To the bower house they then will go  
And trip the light fantastic toe.*

*Till the foreman comes at ten each night,  
In a stern voice, "Put out the light,"  
Each tired picker seeks their cot,  
And soon their troubles are all forgot.*

## FRESH FROM THE FIELDS

Continued from Page 6

time since 1961 that no sub-zero temperatures were recorded. Incidentally 1961 was the last year that Wisconsin went through the entire growing season without a killing frost in the cranberry bogs. Mixed rain and snow accompanied by snappy winds closed the month out. The outlook for April calls for temperatures to be below normal and

precipitation to be near normal.

### Expect Vines Wintered Well

Needless to say the March weather wattern was a complete reversal of last year when heavy snow cover and very cold temperatures prevailed throughout the month. This year the ice cover disappeared very early along with the snow except for the very far north. Some marshes removed the winter floods in the third week of the month with

several inches of frost out of the beds. Most marshes were still holding winter water at month's end and planned to remove it the first week of April. It is felt that with a late winter and early breakup the vines should have come through the winter in good shape.

### Growers Optimistic

Growers were anxious to start marsh work although roads and dykes were in very poor driving condition. Although there was not deep frost the saturated soil last fall was causing slow drying of the roads. Growers were feeling a note of optimism and looking forward to the coming year with great expectations.

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