

# CRANBERRY STATION NEWSLETTER

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UMass  
Cranberry  
Station

Research  
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## IN THIS ISSUE:

Notes from the 2023 Crop Summit

2024 UMass Cranberry Management Meeting

Station News

Newsletter Signup

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## 2023 Crop Summit Notes

By Katie Ghantous, Peter Jeranyama,  
Hilary Sandler and Marty Sylvia

### NOTES FROM THE 2023 CROP SUMMIT

The Massachusetts Cranberry Crop Summit was held on November 29, 2023, in the Makepeace Meeting Room at the UMass Cranberry Station, and was attended by 56 people including growers, handler representatives, and staff from both the Cranberry Station and USDA. The group reflected on the success and challenges of the 2023 growing season.

### WEATHER SUMMARY 2023 SEASON

**Peter Jeranyama:** The winter months (December-February) received a total of 6 inches of snowfall which is 21 inches less than the long-term average. The snowfall total was much less than the 43 inches received in the winter of 2022. Minimum temperature was -9°F and was obtained on February 4 and 5. The highest day temperature was 66°F recorded on February 11. Total precipitation during the winter months was 15.8 inches (the long-term average for winter is 12.2 inches).

The spring period received 3 inches of rainfall which is way below the long-term average. The period of March-May received no snowfalls against a long-term average of 6 inches of snowfall. More than 25 frost nights were called and some of them were very dangerous. Sprinkler frost irrigation was almost every other day of the spring season.

The summer months (June-August) received 14 inches of rainfall; 0.33 inches greater than the long-term average and 5.8 inches more rainfall than in 2022. The maximum day temperature was 92°F on July 29. However, there was no official heat wave in the summer of 2023. (Heat wave is defined as 3 consecutive days with air temperature above 85°F.) Total rainfall received for each month from 2016 to 2023 and 30-yr average precipitation for each month is presented in Figure 1.



*Figure 1. Total rainfall for each month from 2016 to 2023 compared with the long term 30-yr average precipitation for each month (red bars).*

There was some discussion of how the increased rain impacted the timing of sprays and fertilizer, and this also extended to helicopter applications.

## HARVEST INFORMATION PRESENTED BY HANDLERS

**Adama Korejwa from Ocean Spray:** The median yield from Massachusetts was down around 8% over last year, with Stevens and Ben Lear down by a larger margin (about 15%). Rot was higher for all varieties except Crimson Queen. Crimson Queen in Massachusetts has higher rot than a lot of other varieties in general, but compared to itself, it had a lower rot this year. Overall, the color was average with fruit a little softer and a little larger compared to the region's average. Yields delivered to the receiving station were lower for the second half of harvest. More rot was not noted in the fruit delivered, but some growers were reporting that this was due to an increase in rot resulting in less fruit making it into the trucks.

Other regions: Eastern Canada had the lowest yield on record (20% lower than the 5-yr average and 40% down from last year). New Jersey had a 15% higher yield than their 5-yr average, with Stevens and Haines doing particularly well. It was noted that many newer beds recently came into full production in NJ, so this may skew the numbers. Wisconsin had a good year, coming in at 20% higher than their 5-yr average with good quality fruit. Washington also had a good year coming in around 18% higher than their 5-yr average with good quality, but slightly smaller fruit. Oregon was around 7% higher than their 5-yr average.

**James Ross from Decas/Fruit D'Or:** They opened the receiving station a week earlier than last year and noted that it seemed to result in getting better quality fruit. Using TAcY as opposed to Digi-eye used by Ocean Spray, Decas noted a significant delay in color for most varieties. Stevens were lagging about

5-10 from farm to farm for reaching similar TAcY compared to last year. Unusable fruit was slightly down from the average of 5%, but overall volume was down by 10% with some farms being down by as much as 15%. The estimates for other regions were similar to the numbers provided by Ocean Spray (above).

Rainfall measured at the Decas office in Carver showed almost 26 inches of rain received between April 17 and October 30. While May had shy of 2 inches, June was a very wet month with 5.73 inches. July had 3 inches; August 3.4 inches; September 5.5 inches; October 3.1 inches.

**Kathy Patterson from Lassonde/Pappas:** Similar to what the other handlers experienced; it was a slow start to the season. People were waiting for color to develop and repeatedly checking fruit. After color began to develop, they expected to see things ramp up, but it never did. Amounts being delivered were very up and down. Fruit was smaller and not uniform in color or size, with some very green fruit in the pool along with fruit that had good color into November. It was a hard year for growers to decide when to harvest. Some Stevens seemed to be mishappen and not easily identifiable. Rot was increased, with high rot early in the season but it did level off. Noted more leaves in the deliveries, and unsure if it was from plant health or a change in grower harvest practices. TAcY numbers never reached the same highs as they did in previous years. Some growers would bring in samples indicating a decent TAcY (e.g. 30) but then the harvested fruit would come in much lower than the sample (e.g. 23), so the way test samples were collected may not represent the true state of the color on the bog. We requested the grower to deliver over 25 TAcY but we were flexible on a case-by-case basis based on the overall quality of the bed.

**Brendan Moquin from Blue Water:** Attributed the bad growing year in Eastern Canada to a very hard frost season and increasing pest pressure, including a leaf hopper species. He noted that packaged fruit looked great going into bags but saw a rapid decline (poor keeping quality).

**James and Matt Rhodes from Cape Cod Select:** Agreed with ideas expressed by the other handlers. Overall was down 4-5% due to poor fruit. Spring frost set a staggered bloom. Ben Lear did very well this year. Noted that Stevens were odd shaped and sized.

## OTHER HARVEST DISCUSSION

Some growers noted that their Howes had a good year for yield and color, and that while the Stevens and Howes were delayed, they caught up quickly once night temperatures started getting low.

One grower noted he has been focused on biological aspects and increasing microbial diversity. While overall yield was down, he had a good year as far as quality and color development.

## WINTER

One grower did dry sanding with the slinger and some barge sanded. Lots of pruning happened. Some in December, some in spring, and some in the fall. Some growers are concerned about when to prune in the fall. Peter and Hilary agreed that after the vines are hardened it is OK to prune. One grower noted that there is almost no real winter, and it is like fall into spring and allows the work to happen all year long.

## SPRING

Do shifting temps in the spring impact preemergence herbicides and crop safety? Growth stages are moving up, so maybe the herbicide window is changing.

Cody Jones from Hortau noted that in past years the frost epicenter was Rochester/Freetown, but this year France Street (Middleboro near the Carver line) was it. One grower noted he ran for frost 20 out of 32 days in Berkely, but at another bog only 5 miles away they did not. Other growers noted it was a cold spring that never really warmed up.

One grower expressed that he was happy to have automation to start pumps but was wary of using it for cycling. Other growers said they did not cycle at all this year.

The night of the bad frost, one grower noted it was the first time they saw frost damage on a bed where they were running AND had wind. In this case, the wind was affecting the sprinkler patterns and causing areas to get missed (on both pop-ups and impact heads).

The spring was wet, and running for many frost nights added more water. Some people didn't irrigate all summer long.

One grower noted that the bud development was very uneven, and it lasted all year. There were vines at white bud and some fully extended at the same time, and it lasted all season as he saw bloom and fruit set at the same time. He attributed this to the stressful growing season causing non-uniformity.

## INSECTS

Scouting/Sweeping – very few worms, just lots of weevil. Even green spanworm was down from last year. Very few reports of casebearer. Marty noted that the insect problems keep shifting. Scale, black bug, things appearing and things shifting. One grower asked with the climate shifting, can we look to NJ for information? Marty noted their insect issues are so different from what we have in MA. NJ is a different world and hard to make projections for MA based on NJ even as our climate becomes more similar.

Anne noted when people back off on broad spectrum insecticides, they see populations of black bug and blunt nosed leafhopper develop. One grower had a bed that averages 300 bbl have an issue with black bug only yield 50 bbl this year. Marty said black bug sprays best in May, but timing is tricky because growers like to hold off on their broad spectrums for scale until June.

Diazinon 50W was available, but there was some shortage of the liquid this summer. ADAMA is making more liquid for the next season, but it is not available yet.

**Bees:** One grower is a beekeeper. He said that the pollination was ok this year, but that varroa mite was very bad for local bee colonies and many bee hives were lost to mites.

Bees in blueberry in Maine were hurt by a frost so some migratory beekeepers moved them into MA earlier than we needed them. It was a challenge to spray with the extended bloom keeping the bees around longer. One grower asked if we should be moving the bees around on farms to follow bloom from bed to bed based on variety.

A grower said he has noticed that there are hardly any native pollinators on his farm, and asked what the recommendation is for bringing in bees. For honeybees, Marty and Anne still recommend 1-2 hives per acre. They have never been able to show a pollen deficit, so this amount of bees appears adequate.



Purchasing bumble bee hives is not recommended because it is not cost effective unless early hybrids warrant. However, strong honeybee hives are essential.

Another grower said his beekeeper does not like mancozeb exposure for his bees, due to an adjuvant that injures bees. Anne said she doesn't think the adjuvant is harmful to bees in the real world, but if all the areas around them are treated with a fungicide at the same time they have no food source that is not treated, so no dilution. We are at the end of migratory route, so bees may already be in rough shape when they reach us. Bloom held on for longer and bees had to work longer.

## FRUIT ROT AND OTHER DISEASE ISSUES

One grower commented that the last two years, rot seemed to show up in spots where most of the berry was firm, but Ocean Spray would not count it as usable. This year rot was more "normal" and the whole berry fell apart. That kind of rot falls off the vine or gets crushed during harvest, so it doesn't show up in delivery of later varieties.

There was some discussion of ADM's "rot pool". Glen Reid said it works well. Even if the crop is under the max at 20% rot, they will take it back and clean it and send it back at a lower price than the handler would charge to clean it. Some outside growers brought their fruit to ADM to be cleaned that came in at 30% rot and went into the receiving station below 12%. They did more cleaning in the earlier part of the season but noted that rot happening later didn't make it into the trucks.

A grower noted more rot in early varieties, and that he had issues timing sprays because of the rain. In addition, wind has also been a problem.

One grower noted they used more fungicides this year than they ever had. They used a late Kocide on larger fruit in August and felt they had very good results. Another grower used Kocide on beds that got flooded and also felt it worked well. There was some discussion on whether it is worth it to take beds out of export to "hammer" it with Bravo and then go back to export. Marty noted there are plenty of growers using Bravo and still having rot problems, so she doesn't see it as a magic bullet. The conversation then turned to being proactive on managing disease on new plantings – even ones that are not yet being harvested.

Katie Ghantous noted that there are multiple different a.i.'s in different copper fungicides (copper sulfate, copper hydroxide, copper oxychloride, copper octanoate, and others). It is unclear if the different types of coppers have different properties. Leela said that she has never done a direct comparison of copper products, but that pathologists recommend using products that have over 20% metallic copper in the formulation.

A grower said they heard that the mancozeb and copper have a synergy that makes them work better. Another grower mentioned that there are stickers/adjuvants that supposedly have fungicidal properties too. Some discussion of Rampart and Phostrol.

Leela Uppala asked how many people consider the keeping quality forecast when planning their fungicides. About 20% of people in the room raised their hands.

Leela asked if any export growers are planning to switch to domestic to be able to use more chlorothalonil. ADM responded that they will sometimes take a small number of problem beds out of export. One grower said he has all of his acreage as domestic because he feels it is worth it to use other tools export growers cannot use.

An organic grower reported his Howes did well and have been performing well for the last few years compared to Stevens that fell apart (even the conventional beds). The organic Early Blacks are not doing well, and he is considering renovating.

A few other growers echoed that their Howes have been doing surprising well, especially compared to Stevens. One grower feels the Stevens are getting harvested later because of the newer earlier varieties.

One grower said upright dieback was a huge issue this season. He saw it on varieties he has never see it on before.

## WEEDS AND HERBICIDES

One grower noted that Zeus works really well for moss but can cause a reduction in crop.

Another grower saw a big increase in fireweed (aka American burnweed, *Erechtites hieraciifolius*), and asked if others also had a problem with that weed. Several other growers responded that had issues with it on their farm. One grower asked if there are good control options other than Casoron. Hilary mentioned Stinger could work for postemergence control. Katie noted that while the majority of problematic weeds are perennials, fireweed is an annual that germinates every year from seed. It is harder to control the plants once they establish, and a better strategy is to use a preemergence herbicide to stop the seeds from germinating in the spring. Some evidence that Devrinol and/or Callisto used PRE should help control seeds, but Callisto POST did not work. There was discussion about how unusual it was for an annual weed that is only usually found in areas with poor cranberry canopy is now appearing on heathy beds with closed canopies.

One grower asked if changes in winter management is changing weeds and other pests, noting that winters are warmer (sometime 60° F days in January) and very little to no flooding is needed or used some years. Also wondered if winter flood practices contributed to Scale outbreaks. Anne did not think there is a relationship and noted that scale was a problem decades ago when winter floods were common.

**Dodder:** A grower expressed that he was happy with how Kerb works on dodder. The bed still had some dodder, but there was a dramatic reduction from the previous year. The dodder seemed to come in later this year than usual.

**Poverty grass:** One grower tried 4 apps of Intensity One for PG and was not happy with control. Another grower said he used it for a few years in a row and had decent control over time. Applying by drone or helicopter is more effective than chemigation (which is what we expect). Some felt that drone use for clethodim could be a game changer for grass control. And mapping with the drone will let you spot-treat with drone and use less product.

Should late-water timing change with climate change?

## FERTILIZER

On State Bog the wet spring impacted the nitrogen availability to the vines and caused vines to get leggy.

Some growers stated that there is too much emphasis on nitrogen and questioned is the excess nitrogen related to rot issues. Anne Averill pointed out the nitrogen supports insect pests like leafhopper.

There was discussion regarding how drone fertilizer takes longer than drone spraying. Drone fertilizer applications are slower and not comparable to the speed of a helicopter, consequently not practical for a large farm.

## 2024 UMASS CRANBERRY MANAGEMENT UPDATE MEETING

The UMass Cranberry Management Update meeting has been scheduled for **Tuesday, January 30, 2024, from 7:30 AM - 3:00 PM**. This will be a hybrid meeting; you can choose to join via Zoom or in-person in the AD Makepeace Meeting Room, at the UMass Cranberry Station. In-person seating is filling up fast due to room capacity allowance. Registration fee is **\$50 per person**, 4 pesticide credits available (2 for morning session and 2 for afternoon session). **To attend, contact Robyn Hardy 508-970-7635 or [rmhardy@umass.edu](mailto:rmhardy@umass.edu) by 1/26/23 for your preferred attendance choice and see page 9 for meeting payment form.**

### TENTATIVE AGENDA

#### **Tuesday, January 30, 2024, 7:30 AM – 3:00 PM**

##### **7:30 Check in starts, in-person coffee chat**

7:45 Station Update and News of the day – Hilary Sandler

8:00 Pesticide and MDAR Updates – Marty Sylvia

8:25 Leafhopper and Black Bug – Anne Averill

8:50 Addressing Cranberry Fruit Rot - Leela Uppala and Salisu Sulley

9:20 Herbicide and Weed Research – Katie Ghantous

9:45 JBI Nutrient Work Orders and BOGS Program Link – Sean Newcomb and Emma Wick

##### **10:00 ----10-minute stretch, coffee break----**

10:10 Irrigation and Nitrogen Fertilizer – Peter Jeranyama

10:30 Historic Frost Comparison – Sandeep Bhatti

10:45 New Cultivar Update – Giverson Mupambi

11:00 USDA/ARS Research Priorities – Casey Kennedy UMass/USDA

11:10 Helicopter vs Hand Cranked Fertilizer Apps – David Millar, UMass/USDA

11:30 Cranberry Bog “watersheds”; How They Vary and Why They Matter – Adrian Wiegman, UMass/USDA

11:45 Nitrogen Dynamics in Cranberry Farm Soils – Molly Welsh, UMass/USDA

##### **12-1 Lunch Break on your own: Zoom takes a break, In-person may want to bring your lunch!**

1:00 Weevil Update - Marty Sylvia

1:20 Pesticides, EPA, and the Future – Katie Ghantous

1:40 Phytophthora Root Rot Study Updates – Leela Uppala and Salisu Sulley

2:00 Vaccinium Scale, A Moving Target – Anne Averill

2:20 False Blossom, Guest Speaker Leslie Holland, WI Plant Pathology

## Station News

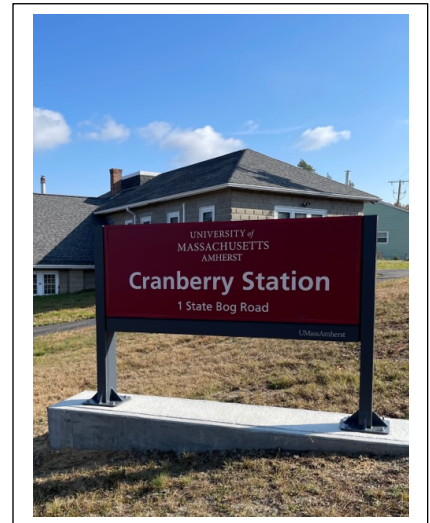
By Hilary Sandler, Director

### 2024-2026 CHART BOOK UPDATE

We are currently working on the 2024-2026 Chart Book. You will be able to preorder your copy. Stay tuned for more information and order forms in the February 2024 newsletter.

### SAVE THE DATE!

The Pesticide Safety meeting has been scheduled for Wednesday, April 24, 2024, 8:00 -12:00 PM with 4 pesticide credits available. This will be a hybrid meeting (Zoom/in-person). More information to come in the February 2024 newsletter.



## Newsletter Signup Form

Please return the form below.....

### TO STAY ON THE MAILING LIST, YOU MUST RENEW EVERY YEAR!

NAME: \_\_\_\_\_

COMPANY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

TOWN: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

PHONE: \_\_\_\_\_

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#### CHECK ONE:

<input type="checkbox"/>	Owner
<input type="checkbox"/>	Employee
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<input type="checkbox"/>	Consultant
<input type="checkbox"/>	Industry
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#### CHOOSE ONE:

EMAIL \_\_\_\_\_

- **Sent via email:** Annual subscription is **FREE** for everyone.

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- **For Massachusetts growers, cranberry researchers and IPM consultants:** Annual subscription is **FREE** for postal delivery.
- **For out-of-state growers, industry personnel and private sector:** Annual subscription is **\$15** for postal delivery. Please include a check payable to **UMass** and return to: **UMass Cranberry Station, 1 State Bog Road, East Wareham, MA 02538.**

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## Meeting Payment Form

### TO ATTEND THE 2024 UMASS CRANBERRY MANAGEMENT UPDATE MEETING:

Please complete the information below and return as soon as possible. In-person seating will go fast due to room capacity allowance. Once your form and payment are received, a confirmation email will be sent to each person confirming your selection of attendance, via Zoom or in-person. The Zoom confirmation email will have a link to register online. **All meeting attendees MUST pay to attend whether receiving credits or not. Please contact Robyn Hardy at 508-970-7635 or [rmhardy@umass.edu](mailto:rmhardy@umass.edu) by 1/26/23 for your preferred attendance choice.**

NAME: \_\_\_\_\_

COMPANY: \_\_\_\_\_

PHONE: \_\_\_\_\_ EMAIL(required): \_\_\_\_\_

#### ADDITIONAL ATTENDEES:

NAME: \_\_\_\_\_

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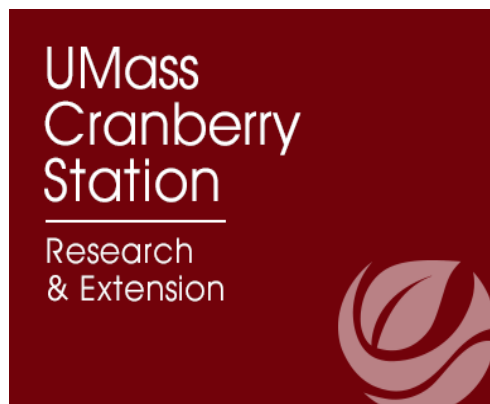
PHONE: \_\_\_\_\_ EMAIL(required): \_\_\_\_\_

#### PLEASE CHECK:

**Attend via Zoom** (\$50 per person) \_\_\_\_\_ number attending

**Attend in-person** (\$50 per person) \_\_\_\_\_ number attending

Please make checks payable to **UMass** and return payment by 1/26/24 to UMass Cranberry Station, 1 State Bog Road, East Wareham, MA 02538.



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