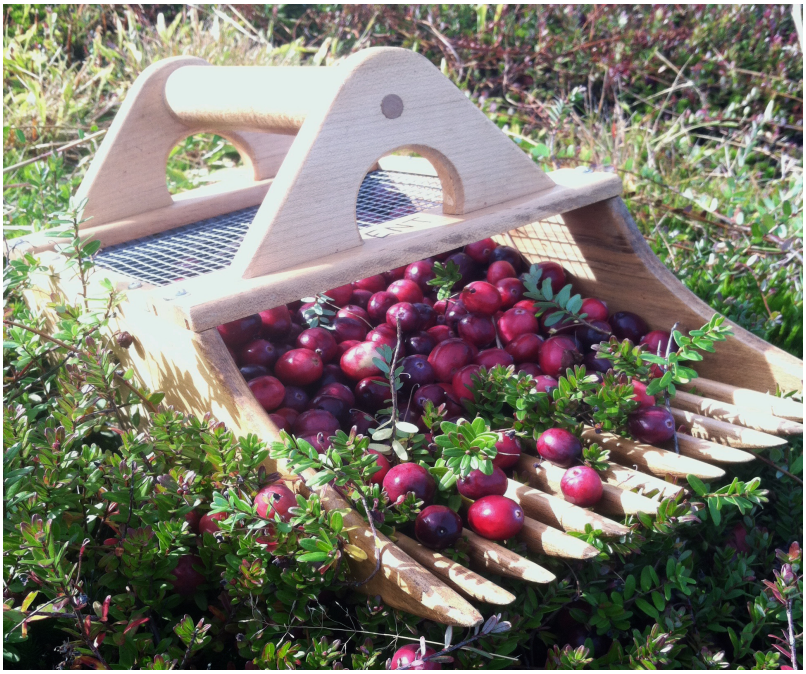
CRANBERRY STATION NEWSLETTER

June 16, 2021 Vol. 22:5



UMass Cranberry Station
Research & Extension

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IN THIS ISSUE:

Green Spanworm Moths are flying on the bog now, females below and males above in this picture.

News from the Entomology Lab

By Anne Averill and Marty Sylvia

INSECTS: SPRING RUNDOWN

What to watch for now, but there is a balancing act between treatments, bloom, and bee placement. It is too late for many treatment options.

Now is the **Putnam scale** treatment window**.** It is in stunning numbers on some bogs and is the cause of some, but surely not all of the dead spots that we are seeing on bogs. Females are immobile bright yellow blobs under a bark-colored cover.

Check on the older wood of the vine for roundish white spots where the scale has fallen off, or for bumps on the vine that exude yellow goo when squished. Females produce eggs under the cover, which hatch into tiny bright-yellow and mobile immatures, called crawlers. Crawlers emerge from under the female's cover, find a spot to permanently settle, and create a bright white cover. Parasitism of females by a black wasp is very high at some sites. Late water appears to have been effective again this year.

Drop off suspected vine samples at the Cranberry Station, cutting living whole uprights near the soil just outside the dead area. Consult us for treatment.

Golden casebearer is a tiny beetle that we have found on bogs when browned areas are reported. It is about 1/2 the size of a cranberry weevil. Look for fast-moving, tiny roundish beetles that are dark to golden. They do not hop. Some have reflective covers that shine in sunlight; this may help you get a search image in the net. Injury appears in patches across the bog where all flowers are eaten. It may be too late to treat if you have entered bloom/bee arrival.

Sparganothis fruitworm moths have started to fly. Larvae were remarkably variable in size on many bogs. For example, moth flight (look for bright yellow moths with a brown X on wings) has started while there are still medium-sized larvae picked up in sweeps. Populations appear higher than in some other years.

If you think you missed the spring population, put up a pheromone trap and see if you catch moths. Intrepid could be applied during bloom, using two applications, one at end of June and another 2 weeks later. Delegate could be used against larger larvae at end of bloom.

Cranberry weevil numbers are still high on some bogs and sweeping will pick them up now. The females are laying eggs in blossom buds at this point and the new population will appear in July. Spring Actara sprays were effective for management. Given that bees are arriving, and that bloom has started, it is too late to apply Actara now.

Look for **Green Spanworm moths flying on bogs** (pictured above) to signal population levels**.** injury is mostly done for the season: larvae have completed development on many bogs, and you may see the first flight of moths, which are small yellow (females) or white (males) with scattered brown markings. The moth is small and triangular-bodied. Eggs will hatch next year, so if you see a lot of moths now, think about green spanworm management early next spring. We are watching to see if this earlier-than-expected activity allows a second generation this summer (never seen before).

What we have not seen in our scouting trips:

The tiny **Blunt-nosed leafhopper,** the vector of false blossom has not appeared in large numbers on any conventional bogs that we have scouted.

Winter moth larvae, which look like a green spanworm in the larval stage**,** was not found on bogs.

News from the IPM/Weed Lab

By Hilary Sandler and Katie Ghantous

SPOT TREATMENTS FOR WEED CONTROL

Poison Ivy on the bog.

Spot treatments are always a good IPM practice for good weed control; you only use the amount you need and apply the herbicide to the target area. Callisto (mesotrione), grass herbicides and Roundup can be used as spot treatments. Callisto can be applied either at the regular per acre rate (as you would use for chemigation, 8 oz/A) or as a concentrated solution. The concentrated solution has been shown to be effective on tough weeds like poison

ivy. You should plan on making two applications per year for at least 2 consecutive years, especially for bad infestations. Wait at least 14 days between applications. It is good to give the plant a chance to resprout some leaves before treating for the second time. Whether you apply by chemigation or as a spot treatment, you can only make a maximum of two applications per season.

Most grass herbicides permit multiple applications; you just need to make sure you do not exceed the total amount permitted per season. Remember, none of the grass herbicides, except Intensity One, can be chemigated! These herbicides are only effective against true grasses. If you are not sure if your target plant is a grass, please contact Hilary or Katie for an ID. For Select and Intensity, the max allowed per season is 32 oz and for Select Max and Intensity One, the max is 64 oz. Since the recommended rate for these grass herbicides is 8 and 16 oz/A, respectively, you could do a total of 4 applications per year. Most bogs are infested with many different types of grasses, which tend to come up at different times. Multiple applications give the opportunity to control these various weeds when they are in the susceptible stage (4-6 inches tall, before flowering). Poast permits a total of 5 pt/A with a recommended max of 2.5 pt/A per application (but no limit to the number of applications).

Roundup (glyphosate) is usually applied as a wiper application, but dry ditches can be sprayed during the season and post-harvest sprays are also permitted to small areas. Be sure to make up your solutions fresh each day, whenever possible. Efficacy is lost for solutions that have been sitting around for more than one day. Use a dye to track your applications, especially with wipers. Glyphosate is a systemic herbicide. It is absorbed by the plant leaves and moves throughout the entire plant, especially to areas of active growth. Many weed species are more susceptible to glyphosate later in the season as the plants are storing resources in the roots (with glyphosate moving into those areas of active growth), however some species are better controlled with earlier applications. It is thought that some plants like poison ivy may develop thicker leaves and absorb less herbicide later in the season. Weeds like Phragmites that grow rapidly and can create large root systems in a single year are best controlled as early as possible BEFORE they can establish themselves.

Below is a chart, reproduced from the Chart Book's "At-A-Glance" for solution mixtures of these POSTemergence herbicides. Any questions, please call Hilary (x21) or Katie (x43).

RECIPES FOR HERBICIDE SPOT TREATMENTS

Callisto per gallon of water

	Unit you are using to measure the herbicide		
	Measuring spoons	**fl oz**	**ml**
Regular spot-treatments Using this rate, max. 30 gal/A per application	1 to 2 tsp	0.15 to 0.3	4 to 8
Concentrated spot-treatments Using this rate, max. 5.3 gal/A per application	3 Tbsp	1.5 fl oz	44 ml
+ Crop Oil (1%)	2.6 Tbsp	1.3 fl oz	38 ml
or + NIS (0.25%)	2 tsp	0.33 fl oz	10 ml

Grass herbicides per gallon of water
Adjuvants needed for good efficacy!

	Unit you are using to measure the herbicide		
	Measuring spoons	**fl oz**	**ml**
Poast (sethoxydim)	2.6 to 3.8 Tbsp	1.3 to 1.9 fl oz	38 to 56 ml
+ Crop Oil (1%)	2.6 Tbsp	1.3 fl oz	38 ml
Select Max or Intensity One	2.6 to 5 tsp	0.44 to 0.85 fl oz	13 to 25 ml
+ NIS (0.25%)	2 tsp	0.33 fl oz	10 ml
Select or Intensity	2 to 4 tsp	0.33 to 0.65 fl oz	10 to 20 ml
+ Crop Oil (1%)	2.6 Tbsp	1.3 fl oz	38 ml

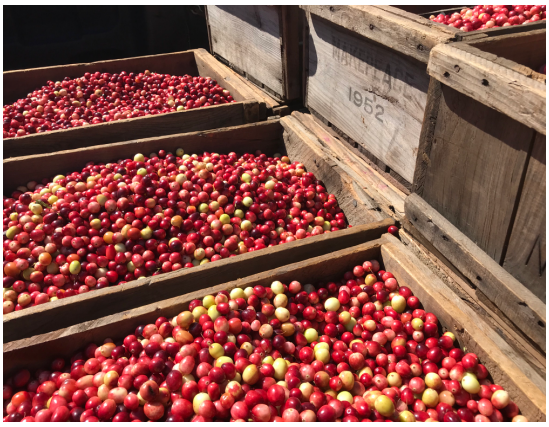
Roundup or Glyphosate Products

Type of application	**Rate** (for a 48% a.i. product)
Wiper	10-20% (1 part glyphosate product to 4-9 parts water)
Dry ditch spray	1-1.5 % (2.5-3.8 Tbsp or 38-57 ml per gallon water)
Clipper	50-100% (use full strength or dilute by half)
Post-harvest spray	0.4 – 0.7% (3-5.5 tsp or 15-27 ml per gallon water)

Roundup Wiping – Suggested amounts per gallon of wiper solution

Based on a 48% a.i. solution. Refer to label for rates if product has a different % a.i.

	Unit you are using to measure the herbicide		
	Measuring cups	**fl oz**	**ml**
Roundup or other glyphosates + enough water to make 1 gallon of solution	1 5/8 to 3 1/8 cups	13 to 25 fl oz	385 to 739 ml



Final Keeping Quality Forecast

By Peter Jeranyama and Leela Uppala

The final forecast is **POOR** keeping quality.

We obtained 4 points out of a possible 16 to arrive at this keeping quality forecast for the 2021 Massachusetts cranberry crop. This score makes the final keeping quality poor.

The final keeping quality score of 4 was based on (i) the favorable sunshine hours for February (110 hr) which were less than the 50-year average for that month (143 hr), (ii) the sunshine hours in March of 252 hr which are greater than the long-term average of 179 hr, and (iii) the total precipitation for April 2021 which was less than the average of East Wareham and Middleboro precipitation of

6.70 inches. However, the average temperature for April and May for Middleboro were both above the required values to gain additional points.

Implications
• This suggests that the fruit rot incidence could be high unless timely and effective disease management strategies are employed. • Fruit quality will be sacrificed if you reduce your fungicide use drastically. • Be conservative… If the beds are cultivated for fresh fruit. If the beds were not managed or sprayed with fungicides last year. If the beds had significantly higher fruit rot in the previous year.
Additional Notes
• Follow ALL label instructions, including application interval, recommended rates, water holding time and pre-harvest interval. • Alternate fungicides with different modes of action. Use FRAC (Fungicide Resistance Action Committee) codes on the labels to determine the mode of action. Fungicides from the same FRAC codes have similar modes of action. • Above normal sunshine hours during June, July, and August (especially July) have been associated with good or better quality than predicted.

Station News

By Hilary Sandler, Director

Do you still need a Chart Book? The 2021-2023 Chart Books are available. Since public access to our buildings is still restricted due to University guidelines**, we cannot accommodate unscheduled walk-ins.** Please contact Robyn Hardy at rmhardy@umass.edu or 508-295-2212 x10 to arrange to have one mailed to you (**$6 mailing fee per book**) or we can arrange a contactless pickup for you. Current plans are for the University to re-open all campus buildings on August 2. We will keep you posted.

You can catch up on what's happening on the bogs by calling the **IPM Message** at 508-295-2212 x60 or go to the Cranberry Station's home page, www.umass.edu/cranberry and click on IPM Message (right-hand side 'Quick Links'). The message is updated each week by end-of-day on Friday.

The growing season is well underway and there is lots of activity here at the Station. We welcome 5 UMass Amherst summer students who will be working with me, Casey Kennedy, Dave Millar, Giverson Mupambi and Leela Uppala on new and continued research. As part of our Federal Hatch project, we are establishing a variety trial on Section 1 on State Bog. This will allow us to document the performance of 13 hybrid varieties under Massachusetts conditions. Specials thanks go out to Van Johnson (coordination, bulldozing and levelling), AD Makepeace (sand), Hannula Cranberries (trucking), Sure-Cran (tractor) and Steve Ward (irrigation). We hope to have a "show and tell" soon!

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