



**UMass
Extension**

Cranberry Station Newsletter

APRIL 2010

UMASS CRANBERRY STATION

1 STATE BOG ROAD

P.O. BOX 569

EAST WAREHAM, MA 02538

<http://www.umass.edu/cranberry>

Section 18 granted for QuinStar 4L and Dry Flowable

*Some handlers are prohibiting its use—**Read carefully!***

EPA granted our emergency exemption request in mid-March for the use of QuinStar for dodder control. Growers can use up to 12.5 fl. oz/A per application of the 4L (8 fl. oz/A or 0.25 lb a.i., seems to be an effective rate), not to exceed 16 fl. oz/A per season with a maximum of two applications. In a similar fashion, growers can apply up to 8 oz/A (5.33 oz/A or 0.25 lb a.i., seems to be an effective rate) per application of the Dry Flowable formulation, not to exceed 10.67 oz/A per season with a maximum of two applications. Irrespective of which formulation you use, up to 2 applications can be made, not to exceed a total of **0.50 lb active ingredient**/acre per season.

Ocean Spray growers are prohibited from applying QuinStar in 2010. Due to residue concerns for product bound to foreign markets, OS is prohibiting the use of QuinStar in 2010. Scientists, industry, and marketing groups are working together towards the development of use patterns that ensure delivery of product that meets export thresholds. We will keep you posted as any changes emerge.

I urge using QuinStar with caution!! We have VERY limited data for its efficacy in MA. Be very selective about which bogs you treat; do not treat large areas of bog. If you can apply QuinStar (that is, your handler will take treated fruit), applications made earlier in the season (pre to early postemergence of dodder seedlings) seem to be most effective. This is based on limited data from NJ with QuinStar and more extensive trials with BASF's DF product in WI. In an average year, this would mean planning to make your first application in late May (but it may be sooner for 2010 if the weather stays warm). Scout for early emerging seedlings on your bogs and time your application based on the appearance of seedlings. Applications made once dodder has attached to its host are much less effective, and if fruit are present, they are more likely to present a residue risk. A 30-day interval must elapse between applications and QuinStar has a 60-day PHI.

All growers should verify that their handlers will accept fruit treated with quinclorac PRIOR to treatment.

If you have any questions about using QuinStar, please call me at ext. 21 and/or contact your handler.

HILARY SANDLER

Winter Moth in Cranberry April 2010

Winter moth has only recently appeared as a pest in southeastern Massachusetts and on cranberry. This insect has long been a pest in Europe and likely made its way into the US via Canada. Unfortunately, the larvae hatch early in the spring and could do much damage before sweeping begins on cranberry in mid-May. There have been reported losses in cranberry from winter moth in the last 2 years and high counts (50-100) larvae were found in sweeps in the first 2 weeks of May 2009. Winter moth larvae feed on a number of deciduous trees including oak, maple, and ash. They prefer fruit trees such as apple, crabapple, cherry and blueberry. When given a choice, they would abandon cranberry, but when not given a choice, the larvae will eat cranberry. Because the female moths do not fly, if the female develops on cranberry, many eggs will be laid there for the following year. If you have seen a flight of brown moths over or near your bog in November and December last year, it likely means there was a female there.

Eggs generally begin hatching in mid-April. Researchers at UMass are predicting very high numbers of this pest this year in Massachusetts based on moth flight. Once hatched, the tiny caterpillars seek swelling host plant buds and wriggle in to feed. Many larvae per bud or a slowness of the buds to open can lead to loss of both leaves and flowers. The tiny larvae will burrow into developing buds, preferring the flowering buds. Once they have eaten out one bud, they will move onto another bud. The tiny larvae are hard to distinguish from black-headed fireworm as they too have a black head.

Once slightly larger, the larvae look like our typical green spanworms (they are in the same family as the green spanworms we already scout for). Winter moth caterpillars are pale green caterpillars that, when larger, have a white longitudinal stripe running down both sides of the body. They are “loopers” or “inchworms” and have just 2 pairs of prolegs. At maturity, the caterpillars will be approximately one inch long. They drop to the soil for pupation generally around late May. Winter moth caterpillars are often found in association with both the fall and spring cankerworms, which look like

and have similar feeding patterns to the winter moth caterpillar. Once winter moth caterpillars become free-feeders (after the buds have opened), they are easier to control. Orthene, Avaunt, Intrepid and Delegate are all good choices. Sevin and Diazinon are not good choices as spanworm are often resistant to these compounds.

MARTHA SYLVIA

Frost Season Is Here!

I have been looking at cranberry flower buds the last few days and based on what I am seeing, it is time to think about frost protection. I have seen buds from inland locations that are at white bud stage (20F tolerance for Early Black and Howes; 22F for Ben Lear and Stevens). Others are still red (18F for Early Black and Howes; 20F for Ben Lear and Stevens). It is time to begin protecting buds when on-bog temperatures drop below these tolerances.

We are up to two weeks ahead of average years in the development of the plants. This is not surprising, since the chilling requirement was satisfied back in January. After that, it is only cool temperatures that keep the plants dormant. As heat units begin to accumulate, dormancy ends. Normally this leads to greening by mid-April with bud movement following. However, this past March was the warmest we have ever recorded at the Station. Alternating rain and warm weather has advanced our heat units beyond the norm for early April and the plants are responding.

The Cape Cod Cranberry Growers Association will begin the 2010 spring Frost Warning Service on Friday the 9th. All questions about the service should be directed to them at 508-866-7878. I provide the information regarding frost tolerance for the Warning Service. Since State Bog is so recently renovated, I have been using the Makepeace Rosebrook location to scout for tolerance stages. These bogs are in Wareham. The tolerance information is for that location and is only provided as a reference point. You should scout tolerances on your own bogs and plan your protection accordingly. A free factsheet showing bud stages is available at the Station.

Peter Jeranyama has a new graduate student who will be studying the effectiveness of cycling sprinklers for frost protection. If you would like to be included in her studies (scouting for damage and looking at flowering and crop production for various cycling protocols) please call Peter at x29 or me at x25.

CAROLYN DEMORANVILLE

WATER AND MORE WATER

I have been hearing many reports about bogs being flooded for extended periods this spring due to the crazy weather (this was the second wettest March in our records). So what does this mean for your 2010 crop? Here are some thoughts.

Cranberries are very tolerant of flooding if the water temperature is cool (below 65F). Most bogs entered the winter in good condition (lots of sun last year and no super big crops) and so carbohydrate reserves should be good. So any bog that was out of flood by April 5th or so should be no different than any other nonflooded bog, although the soil may be a bit slower to warm up. However, some bogs are still under water now. This presents some challenges.

At this point, the vines are breaking dormancy. What should you do if you are still flooded?

- If you can get the water off by about April 12th — do so and manage normally afterwards.
- If you do not think you can get the water off by the 12th — make sure the vines are fully submerged — commit to being in a late water situation.

If you are in the late water situation, how should you manage?

- Keep the vines fully submerged — no tips out, about 1 foot deep — you want cool water.
- If you drain the bog after April 15th — protect from frost for any temperature below 27F no matter what the buds look like.
- If you drain the bog after April 21st — protect from frost for any temperature below 30F.

When should you drain late water?

- Best case (if you can't drain by the 12th and you have cool, clear water) — hold until May 15th. If you are seeing algae in the water, release sooner if you can. In either case, you must then protect from frost at 30F.

Post-late water management. If you hold late water for up to 3 weeks from now, you should not need to change your nutrition management. If longer, cut nitrogen back by ~30% (skip the spring application). If you hold *at least* 3 weeks, cranberry fruitworm should be suppressed (consider no or one spray followed by scouting — see the Chart Book). Fungicides may also be reduced — consult Frank Caruso for recommendations. Additional recommendations for managing late water can be found in the Chart Book.

A final note — if your bog is not under water already — it is too late to start late water now. Plants are breaking dormancy (see the article about frost in this newsletter).

CAROLYN DEMORANVILLE

WORKER PROTECTION TRAININGS

Cranberry Station Library 2-4 PM

Worker Protection Trainings for cranberry workers in the handler category will be offered in 2010: April 28, May 26, and June 30. There is a \$5 fee to cover the cost of the WPS training manual. If you have a pesticide license, you do not need this training.

Contact Martha Sylvia: 508-295-2212, x 20 to sign up or for additional information.

IPM Phone Message is Activated for the 2010 Season

The IPM Message is now activated. Call 508-295-2212, ext. 60 or go to the home page of the Cranberry Station web site for the latest news on scouting and pest management.

Suggestions or comments? Call Hilary at x 21.

Dr. Hilary Sandler
Cranberry IPM Specialist

PRELIMINARY KEEPING QUALITY FORECAST

As of April 1, there are 5 points out of a possible 10 that favor keeping quality for the 2010 Massachusetts cranberry crop. The 5 points were awarded for favorable sunshine hours from the previous year (4 points) and 1 point was awarded for favorable sunshine hours in February. The forecast is for **GOOD** keeping quality. The final keeping quality forecast (issued after June 1) could be upgraded if we have a cool and dry April and May. Based on the present forecast, fungicide applications and the rate of fungicides applied could be reduced.

As for the holding of late water, because we are currently two weeks ahead of normal plant phenological development, it is too late to start flooding for late water unless the bed was already flooded in the heavy rains of March 29-30. If the bed still has a significant depth of water, the vines should be totally submerged (see page 3). As for flood duration, call Carolyn DeMoranville (x 25) for advice. Check the section on late water in the Chart Book for advice regarding general information on this cultural practice. If you have any questions regarding the forecast, please contact me at x18.

Frank Caruso, Plant Pathology

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