University of Massachusetts • Cooperative Extension

Cranberry Station Newsletter

IPM EDITION -- APRIL 21, 1995

Volume 5, Issue 3

Cranberry Experiment Station
Glen Charlie Road
East Wareham, MA 02538

MANAGEMENT UPDATE

ABNORMAL UPRIGHTS. Growers have been bringing in yellowing vines to the station. Some vines are yellow at the top of the upright and some are yellow all the way down. Some of the yellowing vines are showing up in small circular patches; others are showing up as streaks or tails on the bog. The yellowing is probably a stress-related phenomenon, associated with the unusual winter conditions.

It is possible that the vine damage found in the small, circular patches is from desiccation. One grower observed that during a warm spell in winter, these patches may have been areas where the ice opened up and water drained through. The vines could have been exposed at this point and were injured. In the other situation, yellowing vines in the pattern of a streak or a tail may be the result of an oil spill from harvest.

Typically, when the whole upright is yellow, it means some sort of stress from cold or desiccation. If the top inch is yellowed, the stress is usually from a chemical or oil burn. A nutritional deficiency typically shows up as a yellowing on the lower portion of the upright or as a very general pale yellow on the upright. The yellows that we have been seeing are very striking.

If you want, you can tag the affected uprights with a small piece of tape. Check to see if the new growth also has these symptoms. You can place flags around the affected area to see if it spreads. Taking a tissue test at this time of year is not recommended because results are very difficult to interpret. We recommended the application of Sul-Po-Mag only if the whole bog is crunchy as well.

LATE WATER. Growers have been putting out their late water floods this past week. Floods should be held for at least 30 days. Remember to keep the vines completely covered throughout the duration of the flood.

Keep a watch for algal growth. Growth is usually seen first along the bog edges or at the flumes. At the first sign of growth, apply a copper sulfate or algaecide. A fact sheet on controlling algal growth is available in the IPM notebook.

No preemergence herbicides should be put on after the flood is withdrawn. Wait at least 2 weeks after withdrawal of the flood before adding any fertilizer. Usually, no fertilizer is needed on LW pieces until bloom. Monitor the bog closely before adding any additional fertilizer.

DISEASE MANAGEMENT. You can start thinking about applications of Bravo 720 for upright dieback and Ridomil for Phytophthora root rot. The general application period is April 25-May 15. Bravo should be applied after the terminal bud has broken dormancy and has begun to swell. Terranil and Supanil cannot be applied for URD.

Ridomil 2E cannot be applied by air, but the granular 5G can. The 5G is well-suited for spot treatments. Do not rely solely on chemical treatment to remedy your Phytophthora problem. Improve the drainage of the affected and surrounding areas. You can also sand the low areas, fertilize plants surrounding the dead areas to stimulate growth, and/or use Vapam when renovating.

USING DICHLOBENIL FOR DODDER CONTROL

Dichlobenil (Casoron® or Norosac®) must be watered in immediately after application. Dichlobenil volatilizes (evaporates) readily at warm temperatures. Even on cool days, the soil surface can be warm enough to cause rapid herbicide loss. Dichlobenil must be applied before dodder emerges to be effective. Dodder seedlings will not be controlled by dichlobenil after they have found a host and become attached.

M.J. ELSE, WEED IPM SPECIALIST, UMASS.

CRANBERRY WORKSHOPS THURSDAY APRIL 27 9-10 AM

TOPICS INCLUDE:

Frost

Weeds (incl. algae on LW bogs)

Fertilizer

Upright dieback & Phytophthora root rot

Meet in the Cranberry Experiment Station Library at 9 AM.

Cranberry Experiment Station
I.E. Demoranville, Director
U-Mass, Glen Charlie Road, P.O. Box 569
East Wareham, MA 02538
(508) 295-2213 FAX (508) 295-6387

April 21, 1995 Vol. 5, Issue 3

Hilary A. Sandler, Editor

Cooperative Extension Mailing Signoff

Hilary A. Sandler, Cranberry IPM Specialist

MANAGEMENT UPDATE

(continued from Page 1)

FERTILIZER. Applications of soil amendments are more effective when the soil temperatures have warmed up. Soil amendments are typically applied mid-April to mid-May.

WEED MANAGEMENT. *Dodder Emergence.* Dodder seeds were reported to have germinated on at least two bogs (Rochester and South Middleboro) on April 16-17. The dodder seeds were scattered in greenhouse pots which were buried level with the surface of the bog. We specifically chose bare, sandy areas because these areas are warmer than well-vined areas. Dodder will show up in these warmer spots sooner, allowing more time for you to apply dichlobenil products during the window of oppurtunity.

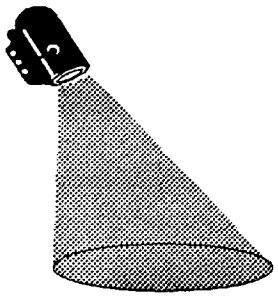
Herbicides & Sanding. A few questions have come in concerning sanding and application of preemergence herbicides. Do not sand on top of a Casoron/Norosac application! This practice will cause severe injury to the vines. In a similar fashion, it is not recommended to sand on top of an Evital application. Though the damage may not be as severe as with dichlobenil, it is still a risky practice.

You can, however, sand on top of a Devrinol application. On established bogs, you can apply 60-90 lbs/A either on top of or underneath a layer of sand or in some combination. On new beds, do not exceed 40 lbs/A, either on top of or underneath a layer of sand.

VINE STATUS. Vines on State Bog have been set at an 18°F frost tolerance as of April 19 in the afternoon. Dee and Carolyn have been looking at quite a few buds since last week. As of this writing, they have not reported seeing any injury.

ALWAYS CHECK THE LABEL OF THE PESTICIDE YOU ARE USING TO VERIFY THE REI FOR THAT MATERIAL.

TECHNIQUE SPOTLIGHT



FROST PROTECTION

Prevention of frost injury is the most important cultural practice in growing cranberries. A grower who is as little as one hour late in starting the sprinklers may lose 10-15% of the crop. Often, the loss is much greater. Injury is not always visible to the naked eye; sometimes not even with a magnifying lens.

Frost protection is achieved with the application of water through the irrigation system. Here, we are taking advantage of a simple law of physics. When water changes from a liquid to ice, it releases heat. This warms the air around the vines.

Why not just run the sprinklers all the time during frost season? 1) it's very expensive to constantly run the pumps; 2) constant use of water would seriously impact available water supplies; 3) the roots of the vines would die from lack of oxygen; and 4) frequent overuse of irrigation for protection may cause vines to lose frost tolerance.

Below are some practical tips on protecting your bog from frost damage.

1. **Know your bog**. Keep records of temperatures (T). Document your experiences and results. Build a frost history if one does not already exist.

2. **Learn to recognize vine tolerance on your bog**. Only use State Bog tolerances as a guide.

3. **Never take anything for granted.** Forecasting is not 100% accurate. Listen to our forecasts, then check your own weather, bog temperature, etc.

4. **Temperatures vary from spot to spot**. Know where the cold spots are and protect accordingly.

5. **Locate thermometers at the vine tips** and only use these for startup decisions. T are coldest at vine tips. This is the part of the plant that needs frost protection.

6. **Bog Ts are lower than upland Ts.**

7. **Water in sprinkler lines can freeze at 25˚F.** Keep your lines open by starting up and running at idle.

8. **Do not turn off the sprinklers too soon in the AM.** Often, T will remain below the danger point after sunrise. Always monitor the T outside the influence of the sprinklers. The T must rise above the tolerance before you turn off the sprinkler system.

9. **Clouds that persist until after midnight are favorable** because T are slow to decline even when it clears.

10. **Never completely trust wind.** Wind stirs the air such that T do not fall rapidly. However, when the wind becomes calm, the T can fall abruptly.

11. **Bog T will fall below the forecast if drought conditions exist.**

12. **In the spring, the lowest bog T will occur just before dawn on nights of good radiation 90% of the time.** In the fall, the coldest T usually occurs in the early part of the night.

13. **High pressure that moves from the north and is located slightly west and south of the cranberry district is the most dangerous.**

14. **Low dew points in the evening can be the forerunner of a damaging frost.**

15. **New growth is never hurt by an air T of 30˚F or above.** Berries in the white stage will endure T as low as 28˚F.

16. **Always be alert.**

Quoting Dr. Franklin, "The formulas may be regarded as guides to experience when being used in frost forecasting."

Excerpted from I. Demoranville, Director, Cranberry Experiment Station, *Frost Protection*, CCCGA Newsletter, 1993.

SCOUTING CHECKLIST

Below is a checklist of the standard items you should have on hand prior to the start of the scouting season:

- 12-inch diameter sweep net and handle.
- Optional Velcro-closure sweep net.
- Hand lens (10X or greater).
- ID manuals and/or IPM Notebook.
- Pheromone traps and lures.
- Maps of your bogs for identifying special needs or problems.
- Record sheets or notebook.

Many of these products can be purchased at your local Ag dealer/supplier.

NOTICE

REIs & Pesticide Labels

Pesticide labels, REIs and other WPS requirements are reviewed and revised on a regular basis. A label for a product that you are using on the bog may have a different REI than what was published in the last IPM newsletter (Vol. 5, Issue 2, page 3). This list can be used for general guidance and information.

To be in legal compliance with the regulations, observe the REI (and follow all other appropriate instructions) listed on the specific product you are using. Look for the boxed area on the label that reads 'Agricultural Use Requirements' under the Directions for Use sub-heading.

COOPERATIVE EXTENSION
U.S. DEPARTMENT OF AGRICULTURE
UNIVERSITY OF MASSACHUSETTS
AMHERST, MA 01003-0009

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300

FIRST CLASS MAIL
POSTAGE AND FEES PAID
USDA
PERMIT No. G268