

University of Massachusetts • Cooperative Extension

Cranberry Station Newsletter

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Volume 5, Issue 1

Cranberry Experiment Station

Glen Charlie Road

East Wareham, MA 02538



MANAGEMENT UPDATE

The 1995 season is underway. Due to the mild winter, some bogs have been out of the winter flood for over a month. Many growers pulled their winter water during the last week. Below are some things to be thinking about as we head into April.

IRRIGATION SYSTEMS. Irrigation systems should be cleaned and inspected every year. This includes packing, seals and foot valve. Inspect all welds and connections for pinholes, pitting and leakage. Inspect the nozzles for wear and replace worn ones. If possible, use high uniformity nozzles. The weakest head should be able to operate at 40 psi. Be sure to set out half-heads or screens to protect sensitive areas and edges.

Improving your system's uniformity coefficient (UC). Work done by Tom Bicki of Ocean Spray and Steve Spears of SCS has shown that coverage (measured by a uniformity coefficient) can be improved by doing some very simple things. Make sure your risers are at least 6" high. Measure from the ground to the top of the riser without the head. If the bog has settled or you have sanded heavily the past few times, the sprinkler heads may be less than 6" above the ground. Consider adding a 6" extension to the existing riser. Make sure your risers are plumb. Stake them to stabilize the unit. Depending on the spacing of your system and the types of nozzles used, these simple steps could improve your UC by about 5-10%.

PREEMERGENCE HERBICIDES. Preemergence herbicides are most effective when they are applied

as close as possible to the time of seed germination. Wash the herbicide in as soon as possible after application if no rainfall occurs. Avoid overlapping of the herbicide. Do not apply herbicides under sand. Herbicides may be applied before a late water flood.

Do not apply dichlobenil (Norosac®, Casoron®) to young plantings. Dichlobenil products inhibit root formation and will stunt the growth of the vines. Repeated use of dichlobenil, especially in high-end doses, may restrict root growth of both young and established cranberry vines. Plants with weakened root systems are more prone to stresses such as drought.

Split spring applications of dichlobenil? There have been several questions raised about using split applications of dichlobenil in the spring time. Some growers want to do this to control broadleaf weeds with 50-60 lb in the early spring and then apply a second dose of 25-35 lb in mid to late April for dodder control. Even though the label gives specific guidelines for splitting applications for cranberry production in the Pacific Northwest, it does not give instructions for splitting spring applications for any other region. Thus, at this time, split spring applications are not recommended by the personnel at the Cranberry station.

In addition, please note that the label does read that a spring application cannot be made if treatment was made the previous fall. Applications may not be split in this fashion either. Check page 20 of the 1995 Chart Book for more information.

SOIL TESTS. It is recommended to take soil samples every 2-3 years. Information from these

tests can provide a long-term record of soil characteristics. If you want to take a soil test on your bogs, you can take a sample in the spring as soon as the bog has drained adequately (not waterlogged). Make sure your sample does not contain stems, leaves or trash. Use a soil probe (1-2" diameter) and collect samples 4-6" deep. Collect 4 cores up to 1 acre; 1 core for each additional 2 acres, up to a total of 10 cores per bog.

Obtain a sample bag from the commercial lab which will be processing your soil. Dry the soil for a day or two at room temperature before mailing. The method of analysis can vary from lab to lab. Therefore, pick a lab and stick with them. Organic matter determination can provide useful information and is recommended. Refer to page 21 of the Chart Book for more details.

CHART BOOK. There are several changes in the 1995 Chart Book. The Weed Management section has been significantly revised. It is arranged by individual weed and the management practices associated with that weed. All herbicide information is at the back of the section on page 20. There is a section containing information relating specifically to New Plantings (pages 30-32).

Sections of Fertilizer Management have been rearranged and revised. Information on soil and tissue tests are presented first and have minor revisions. The tissue standards are slightly different from last year. They now represent a consensus of opinion from all the cranberry scientists of North America working in this discipline.

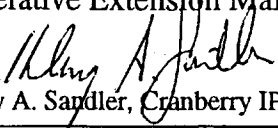
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Hilary A. Sandler, Editor

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Cooperative Extension Mailing Signoff


Hilary A. Sandler, Cranberry IPM Specialist

In the Insect Management section, there are now several Bt products available for control of cutworms and spanworms. Carefully read the label for the product you are using. Be sure it is labeled for cranberries. The 2 post-bloom application labeling of Omite® has been suspended and is under review. Check page 8.

In the Disease Management section, several chlorothalonil products are now available: Bravo®, Terranil®, and Supanil®. Note that Bravo 720 is the only one registered for control of upright dieback. Keep your chart book handy during the season. Let me know if you have any suggestions or changes that would improve the chart book.

MILD WINTER. We don't really know how the mild winter will affect the frost tolerance of the buds in the springs. We encourage all growers to get their sprinkler systems in working order as soon as possible to be ready for the frost season. Call the Code-A-Phone to obtain new information as any general trends develop.

LATE WATER FLOODS. Late water (LW) floods are spring reflows usually held from April 10-15 though mid-late May, depending on geographic location and weather. If you are considering holding later water, keep the following in mind.

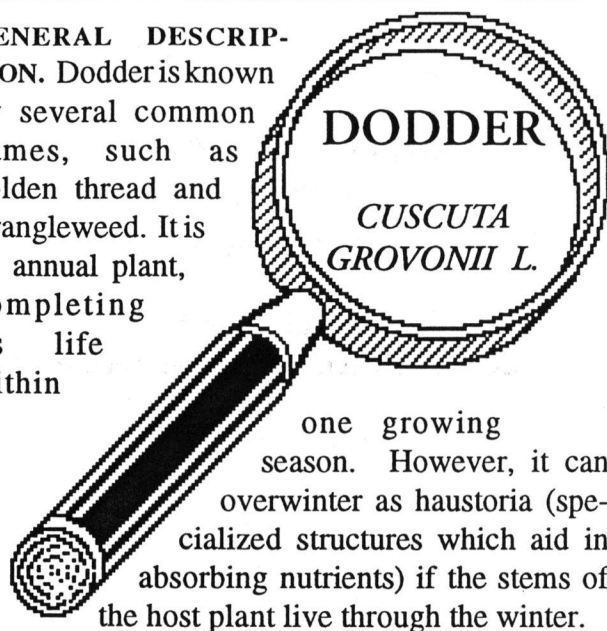
Do not use LW if you sanded in the fall or winter. Preemergence herbicides may be used prior to LW, but not after the flood is withdrawn. The flood should go on no later than April 18. If temperatures in very late March and the first 10 days of April are at least 5°F above normal, the flood may be put on up to a week early. Maintain the flood deep enough to keep the vine tips completely covered for the duration of the flood.

Late water floods are a good management strategy for newly planted bogs. Fruit rot inoculum is lowered and vegetative growth is encouraged after a LW flood. This can be especially beneficial during a bog's first two seasons.

When the flood is removed, you must treat the buds as though they have a 30°F frost tolerance. Frost has the potential of being very damaging because all of the buds will be at the same approximate stage of growth.

PEST PROFILE

GENERAL DESCRIPTION. Dodder is known by several common names, such as golden thread and strangeweed. It is an annual plant, completing its life within



one growing season. However, it can overwinter as haustoria (specialized structures which aid in absorbing nutrients) if the stems of the host plant live through the winter.

LIFE CYCLE AND DISPERSAL. Dodder is a parasite and cannot survive alone; it must attach itself to a host plant in order to live beyond the seedling stage. Dodder can attach itself to a host that is within 1 inch of their point of emergence. Dodder will penetrate the host and send haustoria into it. It then loses its contact with the soil and lives totally off of the host plant. If an acceptable host is not near, the seedling will die.

Hauptoria have a high level of growth activity. Even if all external portions of the dodder plant are completely removed from the host plant, the embedded haustoria can remain alive. They can then generate new dodder plants.

Dodder reproduces by seed, but these are not easily dispersed by wind or animals. The major means of dispersal is human activities. For example, water harvesting has significantly increased the dispersal and occurrence of dodder in MA. Seed can also be spread through the irrigation system if the water is contaminated with dodder.

SEEDS & SEEDLINGS. Seeds are very tiny, gray to brown in color, and irregularly round. The seed coat is very hard. Only a small percentage of the seed population in the soil may germinate in a single season. However, once a field is infested, it

can stay infested for many years.

Most seedlings emerge from a depth of one-half inch of soil. Seedlings are rootless and leafless, consisting of a thin, yellow, thread-like stem. They emerge as an arch, straighten out, and then begin to twist counterclockwise. It is at this point that they can contact a host and twine around it. Sometimes seedlings are rather difficult to find on the bog floor. It is easiest to look for them in thinly-vined or bare areas of the bed.

SHOOTS. After attaching to the host, new shoots will develop from the portion of the dodder seedling which is twined around the host. These stems grow rapidly and attach to other host plants. Growth of as much as 3 inches in a day has been recorded. The stems of dodder have nodes and internodes, just like some green plants. Dodder may attach itself many times to the same host.

FLOWERS. After growing vegetatively for some time, dodder grows clusters of flowers which may be white, pink, or yellowish. The numerous flowers produce abundant fruit or capsules which contain the seeds. These may fall to the ground or be spread during harvest operations.

DAMAGE. Dodder can reduce yield and fruit quality. It can interfere with harvesting procedures. After many years of infestation, dodder may kill cranberry vines.

CONTROL. *Preventative measures* are the best control for dodder. *Hand removal* may be practical if the infestation is light. Many seedlings will die before attaching to the host, so wait until the dodder has attached to the host before removing the dodder and the host. *Manage other weeds* that serve as early season hosts, such as narrow-leaved goldenrod and loosestrife.




Raking dodder before it sets seed will help to reduce the number of seeds produced. Raking should increase the amount of light reaching the vines. It should also reduce the number of attachments by haustoria. Repeat raking may be necessary. *Low doses of dichlobenil* (30-40 lb/A) immediately prior to germination provide good results. No postemergence control is available yet.

CALL THE IPM CODE-A-
PHONE

WEEKLY UPDATES

24 hours a day



-  IPM TECHNIQUES
-  FERTILIZER NEWS
-  INSECT DESCRIPTIONS

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BEGINNER'S CRANBERRY SCHOOL

WEDNESDAY APRIL 12, 1995

8:30 - NOON

Cranberry Station Library

Presentations will cover the basics about scouting, insect, disease and weed ID, and fertilizer management. This course is designed for people new to cranberry production or those doing their own scouting.

Seating is limited, so call the station to register.

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