CRANBERRY CROP MANAGER SOFTWARE (CCM) NOW AVAILABLE

Wisdom Cranberry Crop Manager (CCM) software developed by the University of Wisconsin is now available. A fully functional date-limited demonstration copy will soon be sent to all Wisconsin growers. Two training programs covering the features and use of CCM have been scheduled for June 17.

FEATURES OF CCM.

CCM was originally conceived to run pest phenology models developed by University of Wisconsin researchers in the Departments of Entomology, Plant Pathology, and Horticulture. Predictive models in the current version of CCM include hatch of overwintering and summer generations of blackheaded fireworm, flight of first generation cranberry tipworm, percent flight of cranberry girdler and sparganothis fruitworm, optimal spray dates for cottonball and fruit rot, and germination of dodder. The models provide specific recommendations based upon the events that are happening on an individual farm, such as weather and pest-scouting information. In addition to these phenological models, the Plant Pest Profiles component of CCM includes dozens of color photographs and written text about all major cranberry insects, diseases, and weeds. CCM also provides methods for keeping records on weather, pest scouting, pesticide use, and pesticide applicators.

CCM HARDWARE REQUIREMENTS.

University of Wisconsin-Extension IPM software is developed for IBM and similar hardware. In order to install and run CCM, your computer must have the following (or better):

- 486 SX processor;
- at least 6 MB of RAM (8 MB recommended);
- about 10 - 12 MB of free hard disk space;
- Microsoft Windows 3.1 or later, Microsoft Windows for Workgroups 3.11 or later, or Microsoft Windows 95;
- a 256-color graphics card (800 x 600 resolution recommended);
- a mouse or similar pointing device.

A CD-ROM player is required to view the Plant Pest Profiles images, but is not required for CCM operation. The initial mailing will consist only of a CD-ROM disc, but a version of CCM without the Plant Pest Profiles will be available on standard high-density diskettes.

DISTRIBUTION AND SUPPORT.

CCM is being marketed by Gempler's, a national direct-marketer of farm products, based in Mt. Horeb, Wisconsin. The University of Wisconsin-Extension IPM Program has entered a marketing agreement with Gempler's for distribution of all Wisdom products, including CCM. Gempler's will also provide software support; full information will be provided with the mailing. In a cooperative arrangement with the Wisconsin State Cranberry Grower's Association, Gempler's will be sending a fully functional CD-ROM version of CCM to all Wisconsin growers. The disc will be encoded to allow recipients to use the software free for 30 days *from the time of*

installation on their machines. After 30 days, the software will automatically be disenabled; users will need to contact Gempler's to get a password to continue usage. The list price for CCM will be $500. However, Wisconsin growers will be given a 15% discount, resulting in a cost of $425.

TRAINING SESSIONS.

Two informational training sessions are scheduled for June 17. One will be in Tomah and the other in Wisconsin Rapids. WSCGA is coordinating these sessions and will soon be mailing further information. When you receive the CD in the mail you may wish to wait to install it until after the training session to allow maximum trial of the software package. Information will be provided on installation and use of CCM and specific insect and disease models and recommendations. A representative from Gempler's will be available to discuss distribution and product support. If you wish to purchase CCM, call Gempler's at 800-382-8473.

Dan Mahr, UW-Madison Extension Entomologist

UPRIGHT DIEBACK VS. UPRIGHTS DYING BACK

What is the difference between **upright dieback** and **uprights dying back**? Your initial reaction might be, "Who cares what the difference is when the result (dead vines) is the same." However, if you want to solve the problem, or prevent it from becoming worse, you need to know the difference.

First, what is upright dieback? In the field, upright dieback appears as orange-bronze colored uprights that are scattered amongst healthy-looking uprights. Affected uprights can show up adjacent to healthy uprights on the same vine. This scattered distribution gives the affected portion of the bed a "salt and pepper" appearance. In plantings less than about 3 years old, upright dieback can occur in patches rather than in a scattered pattern. Upright dieback has been put in the disease category because several fungi, most notably *Phomopsis vaccinii*, can be found in vines with symptoms. Even so, all the criteria (which I won't go into here) that qualify a fungus to be a pathogen have not been met with *Phomopsis* on cranberry. Still, for our purposes, it seems to be the major fungus involved in upright dieback in Wisconsin (a different fungus is a major player in Massachusetts). I looked at a lot of dead spots in cranberry beds and isolated fungi from a lot of dead and dying uprights and vines last year, and only rarely did I find *bona fide* cases of upright dieback that were clearly associated with *Phomopsis*.

Phomopsis is also the fungus that causes viscid rot of berries. In general, rots occurring in the field are hard to distinguish. But berries with viscid rot are filled with a gooey, slippery (some might say snot-like) substance that gets stringy in consistency when you draw it between your thumb and fingers. Other rots are just mushy, not slippery and stringy like viscid rot. Abundant viscid rot at harvest indicates that *Phomopsis* is present at a relatively high level, and may have been responsible for some of the orange-bronze uprights that may have been noticed in July and August.

So what causes **uprights to die back** if it's not *bona fide* **upright dieback**? I'll throw out a few possibilities, but you can probably come up with more. Drought stress, heat stress, and windburn cause uprights to turn reddish or brown, slightly different from the more orange-bronze look of Phomopsis upright dieback. Herbicide or other pesticide injury causes a variety of symptoms, some of which may cause uprights to die back. Interveinal chlorosis and leaf yellowing is a phenomenon without a known cause. Nutrient deficiencies cause discoloration and decline. Wet feet can result in dead spots in a bed, as can cranberry girdler. The important point is that fungi are probably not the primary reason for most cases of uprights dying back, and therefore, *fungicides are not the answer for most cases of uprights dying back*.

If you have ruled out cultural and environmental factors and strongly suspect true

upright dieback based on the scattered distribution of orange-bronze uprights, you might want to submit declining (not dead) vines to the Plant Pathogen Detection Clinic (1630 Linden Dr., Madison, WI 53706, phone 608-262-2863) for a diagnosis. If you do, be sure to send entire vines, roots and all, if possible. Mail early in the week so that the sample doesn't get stuck in a hot post office over the weekend. There is a $10.00 fee.

If *Phomopsis* is confirmed by lab diagnosis, and at harvest you can find several viscid rot berries, an application of chlorothalonil (Bravo 720) *the following spring during shoot elongation* might be justified. Data on Bravo efficacy on upright dieback in Wisconsin is limited, but it appears to be most effective when shoots have elongated about ½ inch. The label permits two sprays during bloom, but as far as upright dieback is concerned, the limited data show little or no benefit from the bloom sprays. *Phomopsis* apparently infects vines during early shoot elongation. Once inside the plant, the pathogen is out of reach of protectant fungicides like chlorothalonil and copper compounds. *Fungicides will not reduce upright dieback once symptoms are evident.*

A final important point: several pathogenic fungi, including *Phomopsis* can be isolated from healthy cranberry tissue but don't act up unless the plant becomes stressed. By keeping plants free from environmental hardships, you can prevent the pathogens from having their day. If uprights are dying back, I urge you to seriously consider the numerous possibilities before assuming fungal pathogens are the primary cause. If you can distinguish between **upright dieback** and **uprights dying back**, you have a much greater chance to prevent the problem in the future.

Patty McManus, UW-Madison Extension Plant Pathologist

I find television very educational. Every time someone switches it on I go into another room and read a good book.
Groucho Marx

INSECTICIDE LABEL CHANGES

It is more important now than ever to read product labels before making an application. There have been several changes to product labels recently that affect cranberry growers.

Guthion

Only the Guthion 50WP formulation has cranberry listed on the label. The 2L and 3F products do not list cranberry on new products. As always, if you have existing stock that does list cranberry on the label you can legally make the application. However, just because you have some old 3F, for example, that has cranberry on the label it does not mean that you can purchase new material and apply it under the old label.

Sevin

Rhone-Poulanc has made several changes to the Sevin label that are important to cranberry growers.

- Reduced the maximum rate from 3 to 2 qts/A.
- PHI changed to 7 days.
- Don't apply more than 10 qts/A per season.

They further add that Sevin may kill shrimp and crabs and should not be used where these are present (Probably not a Wisconsin problem).

DIAZINON G-14 FOR CRANBERRY GIRDLER

On May 19, 1997 the Wisconsin Dept. of Agriculture, Trade, and Consumer Protection issued a **one-year** (expires December 31, 1997) special local need registration [24(c)] to allow the continued use of Clean Crop Diazinon G-14 on cranberries for the control of cranberry girdler. As in the past, the same restrictions apply: do not apply to bare ground, do not apply within 10 feet of perimeter or center ditches, do not allow the discharge of water from production areas of the marsh to other surface waters for 7 days following application, no aerial applications, apply only once per growing season and do not apply this product within 7 days of harvest.

Also, growers who use this product MUST NOTIFY the Wisconsin Dept. of Agriculture, Trade and Consumer protection at least 24 hours prior to application by calling (608) 224-4542. You must have the Special Local Need label before making an application (available from the product supplier). You must also allow Dept. of Agriculture personnel access to properties where the product was used for the purpose of inspection and sampling of any ditch areas. NOTE: All formulations of Diazinon including G-14 are RESTRICTED USE PESTICIDES which means you must have a certified pesticide applicators license in your possession! Extreme caution must be used as this product is highly toxic to birds and moderately toxic to humans and other aquatic organisms.

The timing and rates used for girdler control also remain the same. Apply a maximum of 21 pounds per acre when the first signs of girdler larvae appear, normally between July 21 and August 10 or about 2-3 weeks after peak adult moth flight. Nematodes from Biosys (Biosafe-N or Biovector) have also been used to suppress girdler populations. However, their availability is somewhat tenuous this year since the company has gone bankrupt and was recently purchased. Please check with your local agrichemical dealer as nematode availability and rates commonly used.

Growers using pheromone traps to monitor activity find that moth flight usually begins the first to second week in June and continues through mid-August. Depending on the growing season, peak flight normally occurs around the first week in July. Adult moths are about 3/8 inch in length with a long protruding snout-like nose. Wings are silvery white with straw-colored lines and a silver band with two to three black dos on the outer margin of each forewing. One generation of girdler occurs each year.

Tim Dittl, Ocean Spray Cranberries

It is not the function of our Government to keep the citizen from falling into error; it is the function of the citizen to keep the Government from falling into error.

Robert H. Jackson

OBSERVATIONS FROM THE FIELD

In the early spring things looked fairly good, but as the frosty weather continued we noticed excessive leaf drop in the Ben Lear and surprisingly in the ever hardy Stevens vines as well. Some growers feel that it is because of the snowfall this winter, they plowed the snow off instead of blowing it off and the edges ended up with layers and layers of snow. Some feel that the edges were just plain saturated. Others feel that because they had a good crop in those beds that the nitrogen levels may have been too high. Add to that the stress of carrying a good crop and the harvest just took its toll. At the present time we are seeing the vines on the mend, but only with red nodes of leaf development with the bud at a standstill. Will those areas have smaller fruit? Would it be wide for us to give them extra TLC in our fertilizer program?

It appears to be the year of the spanworm. Even though we are not seeing much growth in May, we are seeing pest problems. Some areas are beyond threshold numbers and the critters are feeding on something because they are getting bigger and bigger. The ½ wing looper is out in full force. It too is causing some problems in areas that we have not been plagued in the past.

I am pleased to share that we now have cranberry fruitworm lures available. Should you wish to use this lure in your program contact Great Lakes IPM, Jim Hansel, 10220 Church Road NE, Vestaburg, MI 48891 (517-268-5693).

Gypsy moth trapping is underway. Watch for the orange traps in your area. Our growing areas are now being trapped heavier because this pest is infiltrating our counties. Become interested in learning as much as you can, for I believe the indicators are present for Gypsy Moth to be a potential problem on the vines. I am told they are fairly easy to control, but we must be attentive to their presence first.

We have swept blackheaded fireworm as early as May 18th and 19th, but we did not find threshold levels. Presently we are finding BHFW webbings at uncomfortable levels. With the warm forecast things are happening fast.

Isn't it amazing that when you look out over your beds many of the vines still have a dormant cast but all the weeds are green and growing! Frustrating isn't it?

Jayne Sojka, Lady Bug IPM

NEW GROWER SEMINARS

A series of seminars for new growers is planned for this summer. With the exception of the July 9 seminar all will run from 3:30 to 5:00 pm. If you need directions to the location call the Wood Co. Extension office (715) 421-8440. If you are new to cranberry production we hope you will come.

June 18	Erosion Control
Leader:	Tod Planer
Site:	Jacob Searles Cranberry Co.
June 25	Diseases
Leader:	Patty McManus
Site:	J & J Cranberries
July 2	Insect Management
Leader:	Jayne Sojka
Site:	Bassuener Cranberry Co.
July 9	Chemigation
Leader:	WDATCP staff
Site:	Northland Biron Division
July 16	Mineral Nutrition
Leader:	Teryl Roper
Site:	Valley Corporation

CRANBERRIES ON THE INTERNET

The Cranberry-list for e-mail is still functioning. This newsletter is sent out via e-mail before (well, usually before) it is sent to the printer for hard copy distribution. Occasionally some other message, information, or question is sent out to the list. Any grower who has e-mail can be added to the list. Given some administrative changes in how the list operates it is probably best to just send me (trroper@facstaff.wisc.edu) an e-mail message indicating that you wish to be added to the cranberry-list and I will add you to the list. When I add you, you will receive instructions for posting messages. If you wish to post a message send the message to: cranberry-list@lists.ces.uwex.edu and your message will be sent to everyone on the list.

Subscribers to the list include university types, growers, journalists, etc. Today there isn't too much traffic, perhaps a couple of messages a month. Don't let a fear of too many messages keep you from subscribing.

Cranberries Magazine has an Internet site. The URL is:

http://web.hoflin.com/cranberries/

Not all of the information in the magazine is on the web page but some information is available there including pictures of the cranberry bud development stages.

Northland Cranberries, Inc. has a web site with information about the company and current press releases and stock prices. There is also a condensed version of "Cranberry production in Wisconsin. The URL is:

http://www.northlandcran.com/

Bill Bland has some new weather forecast information on his home page. This information will augment the forecasts you are receiving via the telephone from American Weather Concepts.

http://www.soils.wisc/wimnext/

CRANBERRY AGRICULTURE IN MAINE GUIDEBOOK REVISED

The Grower's Guide Cranberry Agriculture in Maine has been revised and reprinted. This is an outstanding resource for people who are new to the industry or who are considering establishing a cranberry marsh. Although the guide is written for Maine, much of the information is applicable to all growing areas. The economic analysis is unparalleled in other publications. This version is a joint effort of University of Maine Cooperative Extension, The Maine Dept. of Agriculture and the University of Massachusetts Cooperative Extension.

The guide is available to the public, the cost is $20+$5 shipping=$25, the check should be made out to the University of Maine Cooperative Extension (UMCE).

Requests should be sent to:

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