# WISCONSIN CRAN TIPS

July, 1987

DEAR WISCONSIN CRANBERRY GROWER,

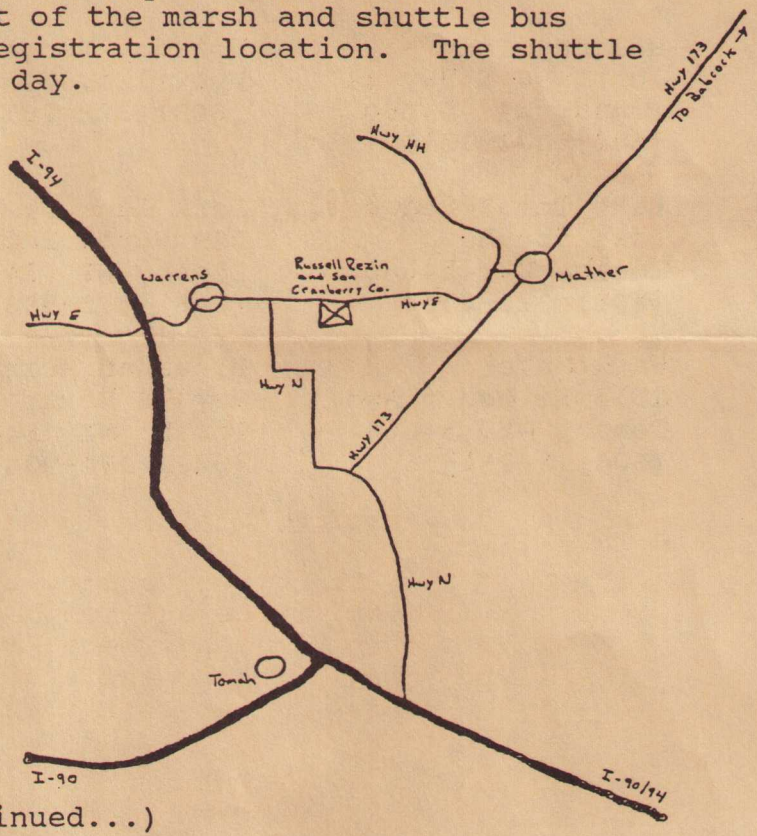
## SUMMER FIELD DAY TO BE HELD IN WARRENS AUGUST 4.

The 1987 Cranberry Field Day will be held on Tuesday August 4 at the Russell Rezin and Son Cranberry Company near Warrens. Our hosts for the day will be John and Judy Rezin and their family and crew. Thanks go to John and his family for hosting the event this year, as well as to the Wisconsin Cranberry Grower's Association program committee and Dave Olson, Monroe County Extension. This will be another excellent day of exhibits, education, and social activity. We hope to see you there.

The Russell Rezin and Son Cranberry Company is located on County Hwy E 4 miles east of Warrens (see map). From I-94 (north or south) take the Hwy E (Warrens) exit. Continue through town and east 4 miles. The marsh is on the right and is marked by a large sign. From the Wisconsin Rapids area, take Hwy 173 south to Mather. Follow the signs to Co. Hwy E toward Warrens. Parking will be in a field west of the marsh and shuttle bus service will take you to the registration location. The shuttle buses will continue to run all day.

Registration begins at 8:30 and marsh tours begin at 9:00. Luncheon tickets must be purchased at registration. After lunch there will be a brief WCGA business meeting, then plenty of time to visit the exhibitors. Helicopter rides will be available again this year (for a fee).

Exhibitors Note: Major equipment must be set up the night before. Any questions about exhibits should be directed to WCGA President Nodji Van Wychen at (608) 378-4813.

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Camping and Lodging: For your convenience, a listing of some of the local motels and campgrounds is given below.

## CAMPGROUNDS

Kamp Dakota
Box 128
Oakdale, WI 54649
(608) 372-4966

Yogi Bear Jellystone Camp
Box 67
Warrens, WI 54666
(608) 378-4303

Tunnel Trail Campground
Route 1, Box 185
Wilton, WI 54670
(608) 435-6829

Granger's Campground
Route 3
Tomah, WI 54660
(608) 372-4511

Tomah Campground
Route 1
Tomah, WI 54660
(608) 372-2480

Meadowlark Campground
Route 3, Box 98
Sparta, WI 54656
(608) 269-5528

## MOTELS

Day Break Motel
Hwy 12 & 16 East
Tomah, WI 54660
(608) 372-5946

Holiday Inn
Jct I-94 & Hwy 21
Tomah, WI 54660
(608) 372-3211

Lake Tomah Lodge
Lake Tomah
Tomah, WI 54660
(608) 372-2358

Park Motel
1515 Kilbourn Ave.
Tomah, WI 54660
(608) 372-4655

Hillside Motel
Hwy 16 West
Tomah, WI 54660
(608) 372-5569

Holiday Lodge
Wyeville, WI 54671
(608) 372-2671

Lark Inn
229 North Superior Ave.
Tomah, WI 54660
(608) 372-5981

Pleasant Acres
Hwy 12 North
Tomah, WI 54660
(608) 372-9343

Red Gables
Route 2, Box 29
Hwy 12
Tomah, WI 54660
(608) 372-6868

Super 8 Motel
Hwy 21 & I-94
Tomah, WI 54660
(608) 372-3901

Rest Well Motel
Hwy 12 & 16 East
Tomah, WI 54660
(608) 372-2471

Tomah Courts
1509 Superior Ave.
Tomah, WI 54660
(608) 372-4174

## NEW RE-ENTRY INTERVALS

Please note that the following pesticides now have a 24 hour re-entry period: chlorpyrifos (Lorsban); chlorothalonil (Bravo); and captafol (Difolatan). Re-entry into fields treated with these materials must not occur until 24 hours after application. Other re-entry periods include azinphosmethyl (Guthion): 24 hours, and parathion: 48 hours. There is a zero hour re-entry on other cranberry pesticides, but sprays must be dry before re-entry.

## USING DEGREE DAYS TO TIME CRANBERRY GIRDLER INSECTICIDE APPLICATIONS

Daniel L. Mahr, Extension Entomologist

One of the most important aspects of chemical pest control is the correct timing of the pesticide application. Although pests usually occur at about the same time each year, vagaries of weather can influence pest activity by as much as 2-3 weeks. Modern research on insect management frequently aims at developing better and easier methods for monitoring insect activity and properly timing insecticidal controls. Within the past 5-10 years, major advances have been made to more properly time controls for cranberry girdler.

Damage and Biology To briefly review, the larval (worm or caterpillar) stage of cranberry girdler feeds on the underground runners, usually within the top 1-2 inches of soil or trash layer. This feeding, in progress from August through September, is in the form of small chewed areas of the bark, and results in the girdling of the vines and the death of the stems. In Wisconsin, damaged areas are usually confined to rather small spots, usually less than 100-200 sq. ft. in area.

When done feeding in the fall, the larva forms a trash cocoon in the duff, and pupates the following spring. Normally, emergence of the adult moths takes place starting in late June and flight and egg laying continues through mid August. Eggs require 7-14 days to hatch (depending on temperature). After hatching, the young larvae immediately begin feeding on roots and stems. There is only one generation per year.

Monitoring the Adult Flight Period. The best method of monitoring adult flight is with commercially available pheromone traps. These should be placed in the beds the first or second week in June. A minimum of 3 traps should be used per marsh. Preferably, use 3 traps per 20 acres of bed. Traps should be monitored once weekly until catches start to significantly increase, and then twice weekly until catches start to decline. Record the numbers caught and calculate an average number of moths per trap per day. Note the date when trap catches start to decline.

Monitoring Degree Days for Egg Hatch. Our research at the University of Wisconsin has shown that the base temperature required for cranberry girdler egg development is 9°C (48°F). We have also found that at temperatures above this base, it requires 180-200

degree days (DD) (in °F) for egg hatch. Considering that peak egg hatch should be 180-200 DD (°F) past peak flight, this would be the optimum time to apply diazinon 14G for larval control.

Several instruments are on the market that automatically calculate degree days when programmed with the proper base temperature. It is suggested that these instruments be activated at the removal of the winter flood, and readings recorded once or twice weekly. Be certain to record the reading at the time of peak flight as monitored by pheromone trap catches, and be prepared to make your diazinon application, if needed, 180-200 DD later.

If you do not have degree day instruments, you can manually calculate an estimate of degree days as long as you have a minimum-maximum thermometer, and you are conscientious about recording daily readings. The number of degree days which accumulate per day can be estimated by the formula

$$DD = [(max + min) \div 2] - 48,$$

where "max" is the high temperature for the day,
"min" is the low temperature for the day, and
48 is the base temperature for girdler egg development.

Example for one day:

$$DD = [(86 + 54) \div 2] - 48 = 22 \text{ DD}.$$

Applying DD Methods to Girdler Control. Larval insects are usually more easily controlled with a specific rate of an insecticide when they are young and small. This is the reason why it is important to control cranberry girdler larvae as close as possible to peak egg hatch. However, there is some flexibility in the control program based upon DD. The value given above for peak egg hatch is the ideal timing for a diazinon 14G application. However, the young larvae will continue to be highly susceptible for many days after application. For optimum control, the application should be made within 7-10 days after peak egg hatch as determined by DD summation. Delays beyond this may result in reduced control.

Please note that recommendations for cranberry girdler control are for those marshes which have had a problem with this pest. If you have not experienced this problem, do not apply preventive applications.

Publications Available. University of Wisconsin Extension publication A3188 on cranberry girdler is available from your county Extension office. A research publication on the methods used to determine the base temperature and Degree Days for cranberry girdler is available in limited numbers. A single copy will be sent to the first 25 written requests. Send a self-addressed unstamped legal-size envelope with a request for "cranberry girdler research reprint" to Dr. Daniel L. Mahr, Dept. of Entomology, 237 Russell Labs, 1630 Linden Drive, University of Wisconsin, Madison, WI 53706. Please note that this is a technical research publication and does not directly discuss control measures.

# PHYTOPHTHORA ROOT ROT OF CRANBERRY IN MASSACHUSETTS

Steven N. Jeffers, Department of Plant Pathology

I have just returned from a trip to the east coast where I observed a "newly" recognized disease of cranberry - Phytophthora root rot. It has been identified in both Massachusetts and New Jersey. The purpose of this note is to provide a status report on the disease and to address some questions that may have arisen due to articles printed in our local newspapers.

It is likely that the disease is "new" only in that it has not been formally identified previously; some growers have observed symptoms in their marshes for years. Symptoms and characteristics of the disease include: large areas of dead or dying plants, areas void of plants, replanting in these sites has not been successful (and is not due to pesticide overdose or spill!), affected areas tend to be associated with low lying portions of the bed or where water dissipation is hindered.

The disease was first recognized in Massachusetts last fall and has been found since in New Jersey. To date, approximately 10% of the bogs in Massachusetts have confirmed occurrences of the problem. Affected areas are irregular in shape and range from 1-2 feet in diameter to over 10 feet across. Contrary to some reports in the press, the fungus is NOT wiping out entire beds or marshes. The problem tends to be localized in those beds that are affected. Apparently, the disease has been accentuated due to excessive rainfall the past two years.

Phytophthora is a genus or group of fungi that is fairly ubiquitous in the soil and is notorious for causing rot and stem rots on many woody and herbaceous plants, including numerous fruit crops. Different species attack different host plants. The only species identified thus far on vines in Massachusetts and New Jersey is P. cinnamomi, which is known to attack some 900+ plant species. P. cinnamomi is considered to be a "subtropical" fungus in that it is native to warm climates and does not survive well under conditions of extreme cold. I do not expect to find this species here in Wisconsin.

Last spring, prior to the report in Massachusetts, we recovered different species of Phytophthora from two locations here in Wisconsin; one location had symptoms similar to those observed back East and the other was without symptoms. It is possible there are other locations in the state where symptoms occur and these fungi are present. I would like to hear from people who think they may have symptoms similar to those I have described. PLEASE NOTE: This is NOT something to be overly alarmed about. So far, we have no evidence that the problem occurring in Massachusetts is present here in Wisconsin.

## PROFESSOR ELDEN STANG ON RESEARCH LEAVE

Dr. Elden Stang, University of Wisconsin - Extension fruit crops specialist, is on a 6 month research leave. Elden and his wife Judy are in Finland, where Elden is conducting research on native Vaccinium species, and other types of small fruits.

Early word from their trip indicates that the European winter was as harsh as ours was mild. It was also late in departing which resulted in delayed plant development. The late cool spring in Finland was also a little hard on Elden and Judy because the luggage containing their winter-weight clothing did not arrive for several days after they did.

We look forward to Elden's return in October. We are certain he will be brimming with new ideas for growing our Wisconsin fruit crops!

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