RUTGERS COOPERATIVE RESEARCH & EXTENSION AT THE NEW JERSEY AGRICULTURAL EXPERIMENT STATION

PLANT & PEST ADVISORY

CRANBERRY EDITION $1.50 APRIL 28, 2005

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Insect Update

Dan Schiffhauer, Agricultural Specialist, Ocean Spray Cranberries

The winter flood is off many New Jersey cranberry beds by now, or will be in the very near future. The vines are beginning to green and bud break on the earliest drawn beds will occur soon. Insect pests that overwinter on cranberry beds tend to be linked to the plant phenology and therefore do not emerge before the vines start to grow. There are some insects that should be priorities for scouting early in the season.

1. Gypsy Moth: Cranberry beds have two potential sources of gypsy moth infestation. Eggs laid on trees near cranberry beds the preceding summer will hatch the following April/May and early instar larvae will "balloon" onto cranberry beds. The small larvae can move on the wind for some distance and if there is a gypsy moth infestation on surrounding uplands it is not at all uncommon to find them on cranberry beds. Gypsy moth eggs laid on cranberry beds will survive the winter flood and hatch the following spring. I think that what happens many times is that a few gypsy moth larvae blow into a cranberry bed, hatch and develop on the vines, and the females that are produced lay their eggs on the bed. (Remember, female gypsy moths are flightless.) The following year when all the eggs hatch the grower has a major outbreak on his hands. Gypsy moth larvae tend to be one of the earliest pests found on cranberry beds. Often they are found before bud break has occurred. Gypsy moth larvae are very easy to pick up in a sweep net when they are small. As they grow larger they have a tendency to become nocturnal (night active).

2. Spotted Fireworm: Spotted fireworm numbers have been falling over the last few years and it is not been nearly as prevalent as it was 6-7 years ago. Potential reasons for the decline are numerous, but one intriguing possibility is that the use of biorational compounds such as Confirm and Intrepid have allowed the natural enemies populations to build and impact spotted fireworm levels. This insect overwinters on the bed as a small larva and emerges early in the spring; usually soon after bud break. The newly emerged larvae move to the top of the upright and feed on new foliage. They web together uprights and as they grow these webbed uprights will expand to include numerous uprights. Spotted fireworm larvae can be picked up in sweep nets early in the season while they are still small. This insect is very omnivorous and usually can be found on dams as well as the bed, but dam populations tend to emerge earlier than those on the bed.

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GA Farm Owner and Manager Sentenced for Causing Bird Kill

Source: EPA News Briefs, April 8, 2005, Washington, DC.

Roger F. Kahn, owner of Kahn Cattle Co. of Bartow County, Georgia; and Glen M. Bramlett, Farm Manager of the company, were all sentenced on March 24 in U.S. District Court for the Northern District of Georgia in Rome, GA. Kahn Cattle Company was ordered to pay $95,664 in restitution and also pay a $170,000 criminal fine for illegally disposing of hazardous waste in violation of the Resource Conservation and Recovery Act (RCRA). One hundred eight thousand dollars of the fine paid by Kahn Cattle Company will be used to acquire and preserve wetlands. Roger Kahn and Glen Bramlett will each spend 60 days in home confinement, perform 160 hours of community service and serve one year of supervised release.

Each man will also pay a $15,000 fine for unlawfully killing approximately 3,300 migratory birds in violation of the Migratory Bird Treaty Act. All three defendants were additionally ordered to publish advertisements in trade publications warning others not to use pesticides to illegally kill birds. On or about Jan. 20, 2003, Roger Kahn and Glen Bramlett spread corn laced with a chemical known as Warbex around a pond on property owned by Kahn Cattle Company. The tainted corn was spread in order to kill nuisance birds. Warbex is a topical preparation that is applied to cattle to control insect pests. It contains Famphur, which is a highly toxic substance that is not meant for ingestion.

As a result of this act, federal and state agents ultimately collected 3,326 dead birds, including a great horned owl, red-tailed hawks, mourning doves, Canada geese, a mallard duck, a cardinal, blue jays, red-winged blackbirds, a brown thrasher, grackles, crows and cowbirds. The case was investigated by the Atlanta Office of EPA's Criminal Investigation Division and the U.S. Fish and Wildlife Service with support from the Georgia Department of Natural Resources. It was prosecuted by the U.S. attorney's office in Atlanta.

Submitted by Rick Van Vranken, Agricultural Agent. ❑

Cranberry Weed Control

Bradley A. Majek, Ph.D., Specialist in Weed Science

Apply Casoron 4G to cranberry bogs after the winter flood has been removed, but before the vines break winter dormancy and begin to grow. Casoron will control most **annual broadleaf weeds** and suppress or control many **perennial broadleaf weeds** in cranberries. Use 50 to 75 pounds per acre on most bogs. Consider increasing the rate, up to but not over 100 pounds per acre, only where perennial broadleaf weeds are severe and where organic matter is high.

Research at Rutgers Blueberry/Cranberry Research and Extension Center has indicated that Casoron 4G applied at 150 pounds per acre (6.0 lb ai/A) caused temporary yellowing of foliage around the leaf margins of treated vines in mid summer and slight to moderate yield reductions. Treatment for four consecutive years did not result in increased injury, or thin or kill the vines, however. The results do indicate that the margin of crop safety is narrow and care is needed to insure that the recommended rate is applied. Calibrate applicators carefully, and do not apply Casoron 4G (or any other pesticide) while turning. ❑

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3. Blossom Worm: Blossom worm overwinters on cranberry beds in the egg stage and the eggs typically begin hatching in early May. Early instar larvae are fairly easy to collect in sweep net samples but become distinctly nocturnal as the season progresses. The factors that control the exact timing of the switch to nocturnal behavior are not well understood, but day length and larval instar are involved. Blossom worm larvae can be detected during daylight hours early in the season when they are small, but as bloom approaches sampling is necessary.

4. Blackheaded Fireworm: Blackheaded fireworm overwinters as eggs laid on the undersides of leaves the preceding summer. The eggs hatch when the vines have @ ¼″ - ½″ of new growth. Blackheaded fireworm larvae develop very quickly and therefore it is important to detect infestations quickly in the spring. Growers should pay particular attention to ditch edges and other areas of the bed that tend to break bud earliest. Blackheaded fireworm have two generations per year and second generation larvae show up during bloom. This was a very serious problem until the advent of compounds such as Confirm and Intrepid which can be used without harming bees.

Pesticide News

Actara (thiamethoxam) has been registered in all areas for control of **cranberry weevil** and **cranberry flea beetle**. This material is important for control of cranberry weevil in Massachusetts, but is unlikely to be necessary here in New Jersey. Cranberry weevil is more of a problem on blueberry than cranberry in New Jersey. As for flea beetle, we currently have plenty of useful materials for flea beetle control, but Actara may be a good additional weapon for our arsenal.

Intrepid (methoxyfenozide) is now labeled for chemigation. This is a welcome development because Confirm, the immediate predecessor of Intrepid, has not seemed to work all that well with chemigation. The take home message for Intrepid is the same as all other materials used via chemigation; optimize your system as much as possible. Limited wash-off time is a must. Intrepid and Confirm both need to be consumed by the target organisms, so appropriate residue levels must remain on the leaves. Older, inefficient irrigation systems may be problematic for the use of these materials. ❑

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For back issues, visit our web site at:
www.rce.rutgers.edu/pubs/plantandpestadvisory

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