RUTGERS COOPERATIVE EXTENSION AT THE NEW JERSEY AGRICULTURAL EXPERIMENT STATION

PLANT & PEST ADVISORY

CRANBERRY EDITION $1.50 JUNE 14, 2000

INSIDE

Pest Notes

Sridhar Polavarapu, Ph.D., Entomology and IPM

✔ **Confirm 2F for the management of Spotted fireworm during bloom: Spotted fireworm e**gg masses are beginning to appear on many weed species. This moth lays most of its egg masses on several weed species, most notably **leather leaf**, **red maple**, **red root**, **loosestrife**, **briars**, and **grasses**. Removal of these weeds may discourage egg laying by spotted fireworm in the bog and thereby reduce the larval populations.

Traditionally **spotted fireworm** and **sparganothis fruitworm** larvae have been managed with an organophosphate insecticide applied soon after the removal of honeybees (post bloom). While this strategy has been generally effective, at times we see growers applying this spray very late in the season (late third week of July) because of operational difficulties. Some fruit damage may have already occurred by this time, especially as a result of spotted fireworm feeding. Another potential problem with this timing is that some of the spotted fireworm larvae may have started to web leaves and fruit together and are generally more difficult to control at this stage.

An alternative strategy is to apply Confirm 2F during bloom, targeting the early instar spotted fireworm larvae. Spotted fireworm egg masses begin hatching from the third week of June onwards. Eggs continue to hatch over a 2-3 week period. Most of the eggs will hatch by the end of the first week in June. Two applications of Confirm 2F are suggested for managing high population levels. The first application should be made around June 22-25, followed by a second application 7-10 days later. For low to moderate populations, a single spray of Confirm 2F applied around 26-28 June (approximately 75% hatch) may be sufficient. You may not need an organophosphate application specifically for managing spotted fireworm and sparganothis fruitworm, if you use Confirm 2F during bloom.

The advantages of this strategy include 1) better survival of natural enemies and beneficials as Confirm 2F is practically non-toxic to insects other than caterpillars; 2) extended pollination as honeybees can be kept as long as needed; and 3) control of other caterpillar pests such as **sparganothis fruitworm**, **blackheaded fireworm**, and **spanworms**. This alternative strategy also has several disadvantages. First, Confirm 2F being a target-specific

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EPA Announces Changes to Chlorpyrifos Labeling

George Hamilton, Ph.D., Pest Management

On June 8, 2000, the United States Environmental Protection Agency (EPA) announced that it would be reclassifying chlorpyrifos (Dursban and Lorsban) as a restricted use product, phasing out certain uses, and limit the use of chlorpyrifos in areas where children may come in contact with product residues. While the bulk of these changes affect uses not related to fruit, you should be aware of the following items:

- Beginning in December of 2000 you will be required to have a state applicator's license in order to purchase and use chlorpyrifos products.
- The restricted entry intervals for chlorpyrifos may change as of 12/1/00 for newly purchased materials. You will need to check newly purchased materials for any changes that might have occurred.
- Beginning in August and September of this year, all new products will carry labels for pre-bloom uses only. The tolerances for apples will also be lowered in order to lower the residue levels in apple products that children may consume.
- As of 12/31/00, all post-bloom uses of chlorpyrifos on apples will no longer be allowed.
- The tolerances for grapes will be lowered in order to better protect children. This change will continue to allow dormant applications of chlorpyrifos but not foliar applications. Since dormant applications are the only use allowed in the United States, this change will not impact U.S. grape growers. The change, however, will impact foreign production areas where foliar use is still allowed.

If you have any questions about these changes, further information can be obtained from the USEPA website at: http://www.epa.gov/pesticides/announcement6800.htm ❑

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insecticide, has activity only against caterpillar pests. Minor pests such as **bluntnosed leafhoppers**, **flea beetles** etc., which are controlled by organophosphate sprays will not be controlled by Confirm 2F. Secondly, Confirm 2F applications will be more expensive than organophosphate applications.

✔ **Blackheaded fireworm:** Pheromone trap catches in commercial bogs are close to peak at this time. In our research bog, trap catches peaked last week. As of June 14, more than 50% of **blackheaded fireworm** eggs in our research bog have hatched.

Blackheaded fireworm eggs are flat and light yellow, and laid singly on the underside of the leaves. Confirm 2F (Tebufenozide) is labeled for managing blackheaded fireworm. This insecticide is safe to pollinators and works best when applied before the early instars begin to web up the foliage. If insecticide applications are required for managing blackheaded fireworm, Confirm 2F should be applied at this time.

Please remember that high trap counts may not necessarily mean high larval numbers. For this reason, before deciding to apply insecticides, you should closely monitor the bogs with a history of blackheaded fireworm populations (and with high trap counts) for eggs and larvae. Conversely, bogs with very few adult moths in pheromone traps (less than 20 moths per trap per week during peak flight) will rarely have infestations that justify insecticide treatments.

✔ **Sparganothis fruitworm:** Adults are emerging and a few moths have been caught in pheromone traps so far. Pheromone trap catches are not expected to peak for another 10-12 days.

✔ **Cranberry rootworm:** Adult **Cranberry rootworm beetles** are beginning to emerge. We have seen only a few adults so far. Most of the grub population at this time is in the pupal stage. Adult emergence is expected to peak in the following 7-10 days. Adults will continue to emerge over the following 3-4 week period.

The grubs of this insect feed on fine roots as well as the bark of larger roots and runners that are in contact with ground. Infestations are very spotty and appear as brown irregular circular patches. Damaged vines can be easily pulled and rolled back like a mat. Adults also feed on the cranberry foliage and cause the vines to turn brown, similar to fireworm damage.

The adult is about 1/5 of an inch long, and shiny mahogany brown. Eggs are laid singly or in masses on bog trash and in surface soil in June and July. They hatch in about a week, and the young grubs continue to feed on roots until October. This insect overwinters as a grub in the soil and generally has a one-year life cycle, but a few grubs may take more than one season to mature.

While there are no soil insecticides registered to control the grub stage this year, you may want to identify areas with heavy adult activity so that insecticide applications can be made next year when a new insecticide is expected to become available. ❑

Weekly Weather Summary

Keith Arnesen, Ph.D., Agricultural Meteorologist

Temperatures averaged above normal. Extremes were 97 at Woodstown and Pemberton on the 12th and 42 degrees at Charlotteburg on the 7th. Weekly rainfall averaged 2.63 inches north, 1.12 inches central, and 0.50 inches south. The heaviest 24 hour total was 2.65 inches at Charlotteburg on the 6th to the 7th. Estimated soil moisture, in percent of field capacity, this past week averaged 86 percent north, 67 percent central and 67 percent south. Four inch soil temperatures averaged 64 degrees north, 68 degrees central and 67 degrees south.

Weather Summary for the Week Ending 8 am Monday 6/12/00

	RAINFALL			TEMPERATURE				GDD	BASE50	MON
WEATHER STATIONS	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	%FC
BELVIDERE BRIDGE	2.67	16.54	3.61	93	49	67.	0	620	89	100
CHARLOTTEBURG	3.38	15.47	1.40	92	42	64.	0	457	92	97
FLEMINGTON	1.91	13.95	.55	93	49	70.	2	735	219	86
LONG VALLEY	2.58	14.74	.35	88	49	65.	0	530	117	100
FREEHOLD	1.07	10.27	-3.00	94	48	70.	1	771	178	73
LONG BRANCH	1.68	12.65	-.86	94	50	70.	2	619	83	62
NEW BRUNSWICK	1.57	13.24	.23	94	49	70.	1	741	107	86
PEMBERTON	.64	11.62	-1.10	97	51	75.	6	1098	475	39
TOMS RIVER	1.27	11.48	-1.72	95	49	69.	2	715	178	63
TRENTON	.49	11.60	-.43	93	50	70.	0	796	122	50
CAPE MAY COURT HOUSE	.54	12.99	1.32	92	50	70.	2	735	134	33
DOWNSTOWN	.39	11.84	-.09	94	51	70.	0	810	112	41
GLASSBORO	.48	12.71	-.10	95	53	72.	2	888	211	45
HAMMONTON	.35	10.24	-2.23	95	50	69.	-1	767	99	29
POMONA	.36	9.82	-1.69	94	50	70.	1	722	116	37
SEABROOK	.56	13.40	2.20	94	53	72.	2	883	180	43
ATLANTIC CITY MARINA	.83	11.04	.15	86	52	69.	2	736	181	44
WOODSTOWN	.44	14.57	1.87	97	51	71	NA	899	NA	NA

WES KLINE — GDD BASE 40 PINEY HOLLOW
Last Week 175 (Ending 6/5/00)
This Week 209 (Ending 6/12/00)

Cranberry Grower Twilight Meeting

Raymond J. Samulis, Burlington County Agricultural Agent

Rutgers Cooperative Extension will be holding this year's second Cranberry Growers Twilight Meeting on Thursday, June 15, 2000. The program will be held at J.J. White on Route 70 in Browns Mills, which is operated by the Darlington Family. We will be having a tour of the bogs as well as informal discussions, demonstrations, and speakers on disease control, wildlife damage, entomology, weed control, weather information and much more. The program will begin at 6:30 p.m. and will include a "light dinner" (yet to be determined). As usual, we will also have pesticide re-certification credits available. I encourage all growers, employees, and others interested in the science of cranberry growing to attend this informative program. I hope to see you all there. ❑

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