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Update on Pest Management
and Crop Development

F R U I T J O U R N A L

March 30, 1998

VOLUME 7, No. 2

Geneva, NY

GENERAL

DELAY
FQPA?

THE
UNKINDEST
CUT
(Art Agnello,
Entomology,
Geneva)



❖❖ There has been a lot of disquiet evident recently among various people in the fruit industry — growers, fieldmen, consultants, and researchers — about potential changes in pesticide availability that could come about as a result of the Food Quality Protection Act. The feelings of frustration seem to derive as much from a lack of certainty over what may occur (and when), as they do from the extreme nature of the proposed changes. Most of us at the university level have spent more time and effort than we can say responding to surveys, formulating management summaries, tabulating lists, and doing a lot of hand-wringing and shoulder-shrugging over “the situation”, in absence of actually knowing what the situation is or how best to respond to it.

Naturally, we can understand the rationale behind examining pesticide uses to make sure that food and environmental safety is not sacrificed in pursuit of effective and economical pest control. We can also probably agree that the days of broad-spectrum prophylactic pesticide sprays are numbered, and will likely be replaced by safer, more selective, less toxicant-based approaches as time goes on. However, it's not too difficult to see that these alternatives won't be available next week, next month, or necessarily next year. Harvey Reissig and I just returned from a meeting of eastern fruit entomologists sponsored by the US Apple Association to ad-

dress the research needs, both long- and short-term, that will result from any elimination or restrictions in the use of OP's and carbamates in tree fruits. It was apparent to us that in every state where apples are being grown, a number of different projects are under way or ready to start this season to look at some of the challenges

that this “situation” would pose. I expect that, given a bit of time (1–2 years at least) and the cooperation of other segments of the fruit industry, some good answers will be forthcoming.

The disquiet I feel comes from the feeling that we might not get the needed time to make this transition properly, and that a lot of unrealistic demands will end up being made on the industry before we can figure out which way to go. In the best of all worlds, a problem that's technical and scientific in nature should be resolved through a process that depends more on science than it does politics. Unfortunately, the people steering this issue are not fruit growers, they're not agriculturists, and they may not even be scientists. So, instead of running around like a lot of headless chickens, it might be time for us to let our esteemed legislative representatives know just what sorts of problems the horticultural industry would have playing this high-stakes game if a well-meaning but premature ruling confiscates most of the marbles. For perspective, you might consider how our apple insect recommendations would look if we simply erase all the OP's and carbamates:

continued...

Pest	Pesticide Option	Efficacy Rating
Apple Maggot	Asana	3
Plum Curculio	Asana	3
Obliquebanded Leafroller		
	Asana	2-3
	Ambush, Pounce	2-3
	B.t.	2-3
	Thiodan	2
Codling Moth	Asana	3
	B.t.	3
Redbanded Leafroller		
	Asana	2
	Ambush, Pounce	2
	B.t.	3
	Thiodan	2

[2 = fair; 3 = good]

You can probably get the picture from the above examples: potentially good control using a very limited selection of products for the short term, but prospects of some serious secondary pest outbreaks, and selection pressure for resistance in these species and several others not listed. A plea for a reasonable timetable for incorporation of proposed pesticide use changes would not be out of place here. ♦♦

PEST FOCUS

Highland: 1st **pear psylla** observed 3/23. 1st **speckled green fruitworm** and **spotted tentiform leafminer** trap catch 3/30.

**YES,
SPRING HAS
SPRUNG!**

APPLE SCAB
(Dave Rosenberger,
Plant Pathology,
Highland)

Apple scab ascospore counts as determined from squash mounts(Highland):

Date	Imm.	Mature	Dis- charged	Tower Dis- charge
3/17	84%	16%	0%	7
3/26	77%	22%	1%	2

♦♦ An unusually high proportion of apple scab ascospores were mature (colored) by the time trees reached the green-tip bud stage on March 27. Spore maturity was hastened by a mild winter with enough rains to keep leaf litter moist. In many years with limited snow cover, leaf litter becomes "freeze-dried", development of apple scab in the leaf litter is arrested, and spore maturation is delayed in spring. This year we had relatively little snow cover, but mild temperatures and adequate moisture (especially during February and March) allowed for rapid

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is published weekly from March to September by Cornell University—NYS Agricultural Experiment Station (Geneva) and Ithaca—with the assistance of Cornell Cooperative Extension. New York field reports welcomed. Send submissions by 3 pm Monday to:

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This newsletter available on CENET at: news://newsstand.cce.cornell.edu/cce.ag.tree-fruit
and on the World Wide Web at:
<http://www.nysaes.cornell.edu/ent/scaffolds/>

ascospore development.

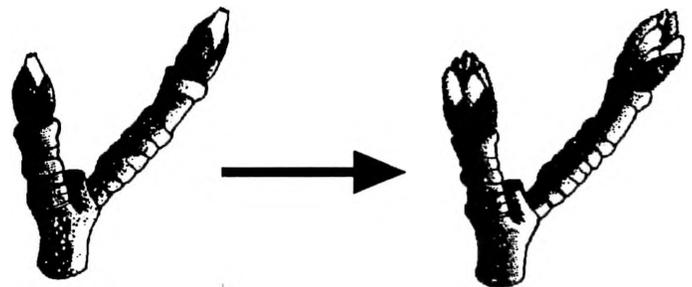
As of March 26, maturity was at 22% but spore discharges in the shooting tower were still quite low. With the squash-mount method of assessing spore maturity, there is always a lag between the time that spores appear mature in squash mounts and the time that they actually begin discharging. Based on previous experience, we expect significant ascospore discharges to begin when spore maturity reaches 15–17%. Warm weather over the past weekend has certainly promoted further rapid development of ascospores. Significant spore discharges are expected with the next rain.

Do orchards need to be sprayed as soon as spores are mature? Not necessarily! It really doesn't matter what proportion of spores are mature if there is no overwintering inoculum in the orchard. Because dry weather prevailed throughout most of New York last year, most orchards had little or no apple scab. Low inoculum levels reduce the risks that would otherwise be associated with early spore maturity. However, orchards growing next to abandoned blocks or adjacent to other unusual sources of inoculum should be protected against scab before the next rain.

An early season can increase the risks of scab epidemics. Scab problems are always worse if scab gets an early start. When scab infections occur early in the season, there is more opportunity for the fungus to produce conidia and initiate secondary infections while fruit and leaves are still at peak susceptibility. Under normal fungicide programs, apples are at peak susceptibility for economic damage from apple scab when trees are between full bloom and first cover because this is the period when total leaf area is expanding most rapidly and fruit is at peak susceptibility. Within a week after petal fall, the risk of scab infections begins to decrease because leaves produced during the initial growth flush are by then protected with fungicide and act as reservoirs for fungicide residues that can be distributed to other new leaves during subsequent rains. Fruit gradually become less susceptible to scab infection, and hot weather may decrease the viability of apple scab conidia produced during this post-bloom period.

An early spring such as we appear to be having this year often produces an extended period of high-risk period for apple scab because there are usually more days between bud-break and petal fall. That means more days when rain can wash off fungicide residues and potentially more days for primary infections to become established and produce conidia before trees reach petal fall.

The bottom line: Consider all of the risk factors when deciding when and what to spray for apple scab. Controlling apple scab at minimal cost is still as much an art as it is a science. Eliminating one or two early season scab sprays in low-inoculum orchards can significantly reduce costs, but allowing scab to become established before bloom can also be costly, especially in a year with an early spring. ❖❖



PHENOLOGIES

Geneva:

Apple (Mac)-green tip
 Apple (Red Delicious) - silver tip
 Pear (Bartlett) - swollen bud
 Sweet cherry (Darrow), Tart cherry (Montmorency), Peach - swollen bud

Highland:

Apple (Mac) - 1/2 inch green
 Pear (Bartlett) - 30% bud burst
 Plum (Stanley) - green cluster
 Apricot - bloom

UPCOMING PEST EVENTS

	<u>43°F</u>	<u>50°F</u>
Current DD accumulations (Geneva 1/1- 3/30):	112	59
(Highland 1/1-3/30):	186	84

<u>Coming Events(Geneva):</u>	<u>Ranges:</u>	
Green fruitworm 1st catch	41-143	9-69
Pear psylla adults active	2-121	0-49
Pear psylla 1st oviposition	25-147	1-72
McIntosh at half-inch green	112-221	54-101
STLM 1st catch	73-433	17-251
Redbanded leafroller 1st catch	32-480	5-251

INSECT TRAP CATCHES (Number/Trap/Day)

Geneva, NY

HVL, Highland, NY

	<u>3/23</u>	<u>3/27</u>	<u>3/30</u>		<u>3/23</u>	<u>3/27</u>	<u>3/30</u>
Green fruitworm	-	-	-	Pear psylla eggs/bud	0	3.0	9.7
Spotted tentiform leafminer	-	-	-	Green fruitworm	-	0	3.0
Redbanded leafroller	-	-	-	Spotted tentiform leafminer	-	0	0.1
				Redbanded leafroller	-	-	-

NOTE: Every effort has been made to provide correct, complete and up-to-date pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly, and human errors are possible. These recommendations are not a substitute for pesticide labelling. Please read the label before applying any pesticide.

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