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Update on Pest Management
and Crop Development

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

May 31, 1994

VOLUME 3

Geneva, NY

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INSECT BITES

(Art Agnello)



OBLIQUEBANDED LEAFROLLER

❖❖ According to various field reports, as well as our own scouting forays, there is a fearfully large OBLR population in the trees this season, as evidenced by inordinately healthy fruit cluster infestations by overwintered generation larvae. Although the economics of controlling this brood don't always work out in terms of early-season damage prevented, it might be a good idea to hedge your bets against the summer brood numbers by including something in the petal fall spray to take care of as many susceptible larvae as possible. For problem blocks, we would recommend Dipel, Lannate or Lorsban, together with an admonition to be extremely timely with summer brood sprays when they become necessary.❖❖

ROSY APPLE APHID

❖❖ Some field reports alert us to the presence of substantial RAA numbers in parts of Western New York, particularly in late-blooming varieties such as Ida Red. Although these insects are difficult to control by the time petal fall arrives, an honest effort to keep colonies down might be worth the effort. Thiodan is recommended, and some consultants report good success combining it with Cygon.❖❖

SPOTTED TENTIFORM LEAFMINER

❖❖ Despite the fact that egg-laying should normally be finished by this time of year, our unorthodox weather trends seem to have caused

a delay in STLM development. Thus, we are still seeing many eggs on fruit cluster leaves, and only starting to notice sapfeeding mines. The fortunate part is that many of the eggs appear not to be viable, having a darkish yellow cast uncharacteristic of healthy eggs. Maybe we'll luck out of having to deal with this pest until later in the summer.❖❖

PEAR PSYLLA

❖❖ Psylla numbers are on the rise in most pear orchards we've been in, easily approaching the 1-2 nymph/leaf threshold we consider appropriate for an Agri-Mek application. This should be the week designated as the suitable time to begin those sprays in the Hudson Valley, with most western New York orchards coming due by week's end and next week. Tree condition appears to be good, so foliage should be succulent enough to absorb the material. We would reiterate our recommendation to use the high rate of 20 fl. oz. of product mixed with 1 gallon of Ultra Fine oil per acre, in order to maximize the treatment's effectiveness.❖❖

CHERRY FRUIT FLIES

❖❖ No adults have been reported caught on sticky boards yet, but because of the zero tolerance in cherries for insect damage or presence, this absence does not diminish the need for sprays in your cherries now (for these pests as well as for curculio). Guthion, Imidan (tart cherries only), Sevin, the synthetic pyrethroids, or PennCap-M are all effective treatments. Sevin, Imidan and PennCap-M will also control black cherry aphid.❖❖

<p>HUDSON VALLEY</p>

HUDSON VALLEY
DISEASE UPDATE
(Dave Rosenberger)

Apple scab ascospore maturity counts, Highland,
NY, May 26

<u>Immature</u>	<u>Mature</u>	<u>Discharged</u>	<u>Lower shoot</u>
5%	19%	76%	692

FIRE BLIGHT

❖❖ Temperatures during bloom were generally too cool to favor fire blight — until last week! On May 24 and 25, we still had some blossoms on Romes, and short rains triggered predicted infection periods in the MaryBlyt model. Varieties other than Romes were past petal fall.

This is the time of year when newly planted trees may be at risk for fire blight if the trees develop flowers. Flowering during the year of planting is not unusual for some varieties when they are propagated on M.9 or M.26 rootstock. Newly planted trees flower later than established trees. As a result, they are more at risk for fire blight, both because of the warmer temperatures and because most of us forget to think about fire blight after bloom is completed on established trees. If newly planted trees develop flowers, they should be treated with a copper spray during bloom. Copper sprays applied during bloom will cause extensive fruit russetting and should not be applied to trees that are fruiting. However, newly planted trees are defruited to promote vegetative growth and phytotoxicity of copper sprays to fruit is therefore of no concern.❖❖

CANKERS AND TWIG BLIGHTS

❖❖ Various kinds of cankers, twig blights, and tree die-backs are appearing in eastern New York. At least some of these are developing as a result of cold weather last winter. In the

Hudson Valley, damage is spotty with only a few blocks where tree damage is extensive. In many other blocks, the occasional die-back is more a curiosity than a commercial concern.

Nectria twig blight was observed in several orchards on Long Island. It occurred on Mutsu and Fuji where pulled stems (fruit pedicels) remained on the trees after harvest. The fungus *Nectria cinnabarina* invades the pulled stems after harvest and progresses into the twigs below the stem. Infection may be promoted by a cold shock in late fall or early winter. Some *Nectria* infections are walled off in late spring and cause no visible damage to the tree. In other cases, however, the fungus continues to grow and eventually girdles the twigs. Terminal shoots beyond the infection point wilt suddenly after the twig is girdled. The resulting symptoms can be confused with fire blight at first glance, but the origin of the canker can usually be traced to a pulled stem remaining from the previous year. During late June and July, bright orange fruiting structures 2–3 mm in diameter will erupt through the bark of the node just below the pulled stem. Although the wilted and dying shoots can make a tree look sick, *Nectria* canker generally causes minimal damage to trees. No fungicides have proven effective for limiting spread of this disease.

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scaffolds FRUIT JOURNAL

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This newsletter available on CENET, on the Tree Fruit News bulletin board under FRUIT.

Marshall Mac canker has been observed again in an orchard in Saratoga County. This phenomenon has occurred sporadically over the last 10 years in plantings of Marshall McIntosh. It usually occurs when trees are 4–8 years old. Scaffold limbs and/or the entire central leader in affected trees are killed or severely injured during winter. The affected limbs usually have retained petioles from the previous year still attached at the end of last year's shoot growth. The retained petioles are an indication that the trees failed to 'harden off' in the fall. At this point, our best guess is that the so-called 'Marshall Mac canker' is a winter-injury problem. In the Champlain Valley, similar symptoms are sometimes noted on other McIntosh strains. In orchards with this problem, limbs that are damaged or killed should be pruned out. If weak limbs are left in the tree, they frequently develop the perennial cankers for which the disease was named. I suspect the cankers occur only because weak pathogens gain a foot-hold in the winter damaged tissue.

Schizophyllum decline is a name that I am applying to a phenomenon I have observed in numerous orchards over the past 10 years. *Schizophyllum commune* is a basidiomycete fungus that is commonly found in the discolored xylem of winter-damaged apple trees in eastern New York. Very little is known about this fungus in apple trees. However, I have frequently recovered the fungus from dying limbs on older trees and from the trunks of declining trees on dwarfing root stocks. The fungus invades the tree from the inside out; it probably enters through pruning wounds, colonizes the older xylem tissue, and gradually expands radially to colonize more and more xylem until the limb or entire tree declines. I suspect this fungus is responsible for most of the cases in older orchards in eastern New York where scaffold limbs that are 2–4 inches in diameter gradually fade out and die during summer. I have also seen several cases where this fungus appeared to be the cause of severe decline of trees on M.9 and M.26 root stocks. The fungus sometimes produces very small white bracts on the surface of severely affected limbs, but positive identification can be made only by isolating the fungus from the affected wood because the bracts

are frequently absent. No control measures for this problem have been determined. However, *Schizophyllum* appears to take advantage of winter injury and other stresses that compromise the abilities of trees to defend themselves.

White rot cankers have appeared in a number of orchards during the past year, probably as a result of the severe drought stress we experienced last summer. White rot cankers appear as diffuse bleeding or gumming on the trunk or large scaffold limbs. Only irregular patches of bark are affected, and bark between the gumming areas remains alive. In several cases I have observed, symptoms are most pronounced on the north sides of the trunks. I suspect most of the affected trees will recover if they have a good growing season this year. ❖❖



(Wayne Wilcox)

APPLE SCAB

ASCOSPORE MATURITY (5/25)

DD 32*	Maturity category (%)**					Discharge test (Spores/LP field)
	1	2	3	4	5	
-	6	6	14	38	36	122

*Accumulated degree days (base 32°F) between first date of green tip and date of assessment. Ability to discharge ascospores usually begins to increase rapidly at approx. 175–225 DD after green tip.

**Categories: 1–3 = immature; 4 = morphologically (apparently) mature; 5 = discharged. Growth stage on 5/25: McIntosh = Petal fall

FIRE BLIGHT

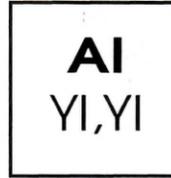
❖❖ According to the criteria of the MARYBLYT model, fire blight infection periods occurred on Tuesday the 24th and Wednesday the 25th in many (most?) areas of western and central NY. In Geneva, these infection periods occurred after 360 degree hours (base 65° F) had accumulated since first open blossom; approximately 200 degree hours is consid-

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ered the threshold value, after which infection is likely if a rain occurs.

Because of low fire blight pressure the last two years and the sporadic distribution of overwintering inoculum sources, it is unlikely that these infection periods will result in widespread outbreaks of blossom blight. However, growers with blight susceptible varieties and high risk orchards (particularly those on M.26 and M.9 rootstocks or interstems) should be keeping a close eye out in the coming days, particularly if they were unprotected. The time between a fire blight infection event and the first appearance of symptoms depends on average daily temperatures during the incubation period; i.e., about 90–100 degree DAYS (base 55° F) are required for incubation. That is, the first BLOSSOM infections should start showing up in 90–100 degree days after last week's infection periods. These blossom infections will then provide inoculum for secondary SHOOT infections, which will first show up in an additional 90–100 degree days after the blossom infections do.

Remember, efforts to slow fire blight spread by pruning out blighted shoots are most likely to be effective if done when symptoms first appear, not once the epidemic has progressed to the point you can diagnose it on the highway from the pickup truck. Keep track of these likely infection dates, watch your degree day clock, and respond early if symptoms do appear. ❖❖



GUTHION AND NEW MATH
(Art Agnello)

❖❖ After hearing a number of inquiries regarding the apparent discrepancy in labelled A.I. rates between the Guthion 3F and 50WP formulations, I spoke to Miles Co. representatives and found out that, in fact, there IS a discrepancy. Briefly stated, the rate per 100 gallons of the 50WP comes out to 0.25 lb AI, whereas for the 3F it's only 0.19 lb AI. This was due to a misinterpretation of standard dilute gallonage by the Miles formulations people when they wrote the 3F label. Efforts are under way to correct the problem, but unfortunately, the label must be adhered to for the interim period. However, since the 3F label also gives a 2 pint per acre listing for apples (which comes out to 0.75 lb AI/A, assuming a 400 gpa dilute basis), this is equivalent to using the 50WP on a 300 gallon dilute basis, so it can be reconciled, depending on what dilute base you're using. The company's intent was to provide for an equivalent AI/acre for both formulations, so do your best. ❖❖

PEST FOCUS

Geneva:

Lesser peachtree borer 1st catch

Spotted tentiform leafminer sap-feeding mines evident

Highland:

Spotted tentiform leafminer sap-feeding mines evident

INSECT TRAP CATCHES (Number/Trap/Day)								
Geneva NY				HVL, Highland NY				
	5/23	5/26	5/31		5/23	5/27	5/31	
Green fruitworm	0	0	0	Green fruitworm	0	0	0	
Redbanded leafroller	0**	0**	0**	Redbanded leafroller	0.3	0.4	0	
Spotted tentiform leafminer	573	238	95.2	Spotted tentiform leafminer	14	8	7.5	
San Jose scale	0.3	16.5	28.3	Oriental fruit moth	0.3	0.4	0.2	
Lesser appleworm	9	4.8	2	Fruittree leafroller	0.5	0	0	
Oriental fruit moth(apple)	10.3	4.3	1.6	Lesser appleworm	3.3	1.1	3.5	
Oriental fruit moth(peach)	0.5	0.3	0	Codling moth	3.5	4.6	6.8	
Codling moth	3.8*	13.5	3.8	American plum borer	0	0	3.8	
American plum borer(plum)	0.4*	0.5	0.2	Sparganothis fruitworm	0	0	0	
American plum borer(cherry)	0.8*	0.3	0.5	Tufted apple bud moth	0.3*	0.4	3	
Lesser peachtree borer(peach)		0	0.1*	Variegated leafroller	0	0	0	
Lesser peachtree borer(cherry)		0	0.3*	Obliquebanded leafroller	0	0	0	

** We are not catching any RBLR in designated traps, but have seen them in other traps at the Station, and in Wayne County.

* = 1st catch

(Dick Straub, Peter Jentsch)

UPCOMING PEST EVENTS		
	43°F	50°F
Current DD accumulations		
(Geneva 1/1 - 5/31):	581	308
(Highland 1/1 - 5/31):	667	325
Coming Events:	Ranges:	
Oriental fruit moth 1st flight subsides	781-1548	442-999
Redbanded leafroller 1st flight subsides	518-893	255-562
STLM sap feeders present	295-628	146-325
STLM 1st flight subsides	489-969	270-566
Codling moth 1st flight peak	547-1326	307-824
Pear psylla hardshell present	463-651	259-377
San Jose scale 1st flight peak	612-761	331-449
European red mite summer egg hatch	773-938	442-582
Plum curculio oviposition scars present	448-670	232-348
Obliquebanded leafroller 1st catch	686-1059	392-681
Peachtree borer 1st catch	565-1557	299-988

PHENOLOGIES

Geneva:
Apple(McIntosh) - **Fruit set** ; Pear - **Fruit set**;
Tart cherry(Montmorency) - **Fruit 10mm**
Plum(Darrow) - **Fruit 10mm**



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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