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Update on Pest Management and Crop Development

FRUIT JOURNAL

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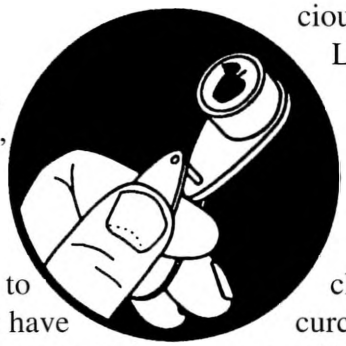
INSECTS

(ALMOST) IN THE PINK

SPROING BREAK
(Art Agnello, Entomology, Geneva)



❖❖ OK, so I guess it's safe to assume that the remains of winter have gotten worked out of the system by now, and although we aren't actually past the frost-free date (May 15 in Geneva), the snoozing insects and mites should be well on their way to doing what they do. Not all of the following performances will happen during the next week, of course, but just to keep you from being taken by surprise when all the excitement begins, here's a brief checklist of some prebloom arthropod activity to consider before the season cranks up.

Mites: Oil applications should go on before we reach pink in apples or white bud in pears, and as there's not much freezing weather in the extended forecast, any calm period of sufficient duration would be a suitable spray window. Start with 1.5-2.0% at first, and reduce to 1.0-1.5% as the trees reach tight/green cluster. Also, don't forget the usefulness of this tactic in stone fruit plantings (cherry, peach and plum) with a history of ERM. In apples, Savey and Apollo can be *delayed until pink*, and if everything else runs away with your time and a miticide application before bloom is impossible, consider Agri-Mek or Zeal at petal fall in problem blocks. Besides saving some time during the hectic prebloom period, this is also a sensible rotation program for purposes of resistance management.

Rosy Apple Aphid: In particularly susceptible varieties (Cortland, Ida Red, Golden Delicious, R.I. Greening), a material such as Lorsban or Supracide can provide effective prevention through tight cluster, and will pick up any San Jose scale at the same time. Actara is also a good prebloom fit for rosy apple aphid and other pests besides, including leafminers and early plum curculio. You'll also get some side rosy control if you're using Esteem for scale at this time.

San Jose Scale: Besides the Lorsban and Supracide noted above, delayed dormant oil applications will do a good job of reducing scale populations. If you're not treating for rosies but are concerned that SJS might be increasing in some blocks, Esteem is an insect growth regulator with good activity on scale. The label calls for it to be mixed with oil, so if you're applying oil for mites anyway, this might be a tactic to try in severe cases.

continued...

IN THIS ISSUE...

Dogwood Borer/American Plum Borer: A coarse spray of Lorsban directed at trunk burr knots between half-inch green and petal fall is effective against both species that can be a problem in dwarf plantings.

Pear Midge: The first adults generally appear when Bartletts and Clapps are in the swollen bud to tight cluster bud stage, but no successful egg-laying occurs until the flower buds are a little more developed. In pear blocks with a history of midge infestation, concentrate on those portions of the orchard most protected from the wind by trees, high ground, or buildings, as the midges tend to be most numerous in these spots. Organophosphates like Guthion are the most effective materials; 2 sprays are recommended, one between swollen bud and first separation of the sepals, and another 7 days later (or at white bud, whichever comes first).

Pear Psylla: If you're just starting on your oil sprays, one application at 2% or two at 1% until white bud should provide adequate protection against egg deposition until an insecticide spray might be elected. Actara, Assail, and Esteem at white bud or after petal fall have all shown good activity in suppressing psylla numbers. Agri-Mek used shortly after petal fall has given good control if applied correctly (well-timed, adequate coverage, combined with an oil adjuvant), and split applications of Nexter or Provado, also starting soon after petal fall, will keep nymph numbers down through the early summer.

Oriental Fruit Moth: The first adults could start flying during the next two weeks, depending on how much of a warming trend we get, but we don't necessarily recommend pheromone disruption against this brood in peaches or apples, as your plum curculio sprays will serve double duty against OFM as well. However, be prepared to start these at petal fall even in peaches, as shuck split will be too late to get the first egg-laying moths.

Black Cherry Aphid: In (sweet especially) cherry plantings with a history of infestation by this pest, which curls and stunts leaves, a prebloom inspection for these shiny black metallic insects can warrant an application of Thionex or a pyrethroid (Warrior or Asana).

Tarnished Plant Bug: Early season feeding by overwintered adults in peaches can damage flower buds and cause bleeding of sap from twigs and shoots. If you note several bleeding sites per tree, a pink application of a pyrethroid or Carzol can offer some control. Also, a late bloom application of Assail (yes, it's labeled—just don't apply during the heat of the day when bees are foraging) has activity against this pest, and the timing may be just what's needed to ensure protection when it's needed most. In apricots, choose either Asana or Warrior.❖❖

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ERRATA

INTO THE LIGHT

PENTIMENTO AND GORY DETAILS
(Art Agnello, Entomology, Geneva)

Recommends

❖❖ There's always a certain sense of satisfaction that accompanies the first appearance (however delayed) of the new year's Pest Management Guidelines for Tree Fruit Production, deriving from the many hours of revisions and fact-checking by all of the authors, not to mention the technical tasks required for layout and actual publication of the book. This generally lasts about two weeks, which gives people sufficient time to leaf through it and discover all the typos, which are not too disturbing, and factual errors, which almost always are.

First up is our plum curculio oviposition model (p. 111, comment 25.1), which ties the need for fruit protection to a number of accumulated degree days past petal fall corresponding to the insect's period of immigration and egg-laying. Because of a metric conversion error, the "340" should in fact be "308". (The fact that this mistake has gone so long without discovery is certainly embarrassing, but at least it didn't cause, say, the loss of a Martian exploration probe.)

Next, Julie Carroll's efforts to 'harmonize' the information in the Recommends with the NYS IPM Trac Spray Record-Keeping and Reporting Software have turned up a substantial list of little corrections that I probably wouldn't have caught otherwise, so get out your pencils:

p. 32: In the Crop Protectants Cross-Reference list, the Pristine (pyraclostrobin + boscalid) code should be (F), not (B), in both the Common Names and Trade Names lists.

p. 122 and 129: Under European red mite, delete the entry for Ultra Fine Oil (which is no longer registered in NYS).

p. 214-217: In Table 50 (Common names, formulations and days-to-harvest, etc.)

- chlorpyrifos, Lorsban 50WS should say "14(C)" for cherries
- clofentezine, Apollo 4SC should say "-", not "21" for plums
- diazinon, D.z.n. should say "21/PF(A)" for apples
- endosulfan, Thiodan/Thionex 50WP should say "21" for apples
- kaolin, Surround 95WP should say "0" for plums
- malathion, Malathion 57EC, 5EC should say "-" for apples, pears and plums
- pyrethrin/rotenone, PyGanic 1.4EC should say "0" for all crops (including apricots), and replace the entire "Bonide" entry with "Pyrenone 6.0% EC", with a "0" for all crops
- In the Fungicides list, captan, delete the "7.5D" in the list of formulations
- delete the entire "metalaxyl, Ridomil 2E" entry
- myclobutanil, Nova 40WP should say "0" for apricots, cherries, peaches, and plums
- propiconazole, Orbit 3.6EC should say "-", not "0" for pears
- trifloxystrobin, Flint 50WG should say "1" for apricots, cherries, peaches, and plums

p. 220: In Table 51 (Common names, etc. for herbicides)

- simazine, Princep 4L, the EPA Reg. Number is "100-526"
- Add a line after the last footnote: "NB = non-bearing"

p. 222: In Table 53 (EPA numbers, REI's and PPE guidelines)

- Apollo 4SC, EPA Reg. number is "66222-47"
- Brigade 10WS, EPA Reg. number is "279-3108"
- Kelthane 50WSP, REI is "48"
- In the Fungicides section, Abound 2.08F, EPA Reg. number is "100-1098"

Finally, you'll be pleased to know that all of the above corrections have been incorporated into the HTML version of the Recommends (we're still working on the pdf format corrections), which is now active, along with the pdf version, at www.nysaes.cornell.edu/ent/treefruit. ❖❖

CHECKIN' IT TWICE

Errata for 4/11 Issue of Scaffolds

❖❖ In the article on San Jose scale, the statement that the use of Esteem or Assail at half-inch green is 'off-label' is incorrect; the Esteem label recommends 'delayed dormant through pink', and the Assail label lists no phenology restrictions. Also, please note that the pesticide rates listed in Fig. 1 are handgun amounts per 100 gal based on 400 gal/A dilute, which translates to 4 oz/A of Esteem, etc.

We're all anticipating the onset of insect activity, or at least some of us are, but it turns out that the first oriental fruit moth catch at Highland reported in the "Pest Focus" was erroneous. *Something* was caught in the trap, but it must have been the notorious false OFM.❖❖

CHEM NEWS

FRUIT AIDS

NEW FRUIT FUNGICIDES REGISTERED FOR USE IN NEW YORK STATE (Dave Rosenberger, Plant Pathology, Highland)

❖❖ New York State DEC recently approved state registrations for two new fungicide products that contain pyrimethanil as the active ingredient. Scala 600SC was labeled for control of scab on pome fruits and for control of brown rot blossom blight on stone fruits other than cherries. (Scala is NOT labeled for use on either sweet or tart cherries.) On apricots, peaches, nectarines, plums, and plumcots, Scala is also labeled to control shot hole disease, peach scab, and gray mold. The NY label requires some additional protective equipment (chemical resistant gloves) for mixers, loaders, and handlers of Scala: check the NY supplemental label before applying Scala to ensure that workers have the appropriate PPE.

The second new fungicide recently labeled in NY is Penbotec. Penbotec contains the same active ingredient as Scala and is registered for postharvest applications on apples to control blue mold and gray mold during storage. We will provide more information on uses of Penbotec in a subsequent article.

Scala is in the same fungicide class (anilinopyrimidine, or AP group) as Vangard, and the two fungicides share many of the same characteristics. Like Vangard, Scala will not control mildew or rust diseases. Scala will probably perform best in cool weather because this class of fungicides tends to break down rapidly under hot conditions. Therefore, I suggest using Scala on apples only during the prebloom period even though the label allows application up until 72 days before harvest.

On pome fruits, Scala can be applied alone at 7–10 fl oz/A or at 5 fl oz/A in combination with another scab fungicide. Captan or mancozeb would be the preferred materials for combinations with Scala. Growers who are using mancozeb + captan combinations to control apple scab in high inoculum orchards could use a mancozeb + Scala combination to work around oil sprays where captan would pose compatibility problems. When used alone at the rate of 10 oz/A in my field trials last year, Scala provided protectant activity against apple scab similar to that provided by 3 lb/A of mancozeb. When using Scala, plan on a 7-day spray interval similar to the intervals recommended for captan or mancozeb during the prebloom period. Do not apply Scala in the rain because the product must dry on the leaf for maximum effectiveness.

Like Vangard, Scala should provide roughly 48 hr of post-infection activity against apple scab, a fact that could prove useful in orchards where apple scab has become resistant to dodine and the SI fungicides. Duration of post-infection activity (how many hours of "kick-back") will probably be affected by the

continued...

temperatures during that interval and by the rate of Scala that is applied, but I have not seen definitive data showing the relationships between fungicide rate, temperature, and "kick-back" activity.

On stone fruits (excluding cherries), Scala may prove useful for preventing blossom blight, especially in years when long, relatively cool (<55 to 60°F.) wetting periods occur during bloom. Under cool conditions, blossom blight can be caused by both *Botrytis* (gray mold) and *Monilinia* (brown rot). Scala and Vangard are both very effective against *Botrytis,* whereas most of the other fungicides used for blossom blight are not. This fact, combined with the propensity of Scala and Vangard to perform best under cool conditions, may give these AP fungicides an edge for controlling blossom blight during cool and wet bloom periods. Check the label for recommended rates. I would not recommend Scala for brown rot control after petal fall because other brown rot fungicides are more effective for controlling brown rot during the preharvest interval.❖❖

PEST FOCUS

Geneva: 1st **redbanded leafroller** caught today.

UPCOMING PEST EVENTS

	43°F	50°F
Current DD accumulations (Geneva 1/1–4/18):	131.4	53.2
(Geneva 1/1–4/18/2004):	125.5	48.0
(Geneva "Normal"):	158	69
(Geneva 4/25 Predicted):	195	87

Coming Events:	**Ranges(Normal± StDev):**	
Spotted tentiform leafminer 1st catch	112–236	39–113
STLM 1st oviposition	143–273	58–130
Green apple aphid present	111–265	38–134
Rosy apple aphid nymphs present	134–244	56–116
Obliquebanded leafroller larvae active	158–314	64–160
Pear thrips in pear buds	118–214	50–98
Pear psylla 1st egg hatch	174–328	60–166
McIntosh at half inch green	151–197	64–90
Red Delicious at half inch green	162–212	70–98
Peach at pink	187–251	78–118
Pear at green cluster	210–262	88–124
Plum at bud burst	118–220	49–97
Sweet cherry at white bud	192–242	84–110
Tart cherry at white bud	234–298	103–143

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PHENOLOGIES

Geneva:
Apple (McIntosh): 1/4 inch green
Apple (Red Delicious): 1/4 inch green
Apple (Empire): 1/4 inch green
Sweet cherry: Bud burst
Tart cherry (Mont.): Late swollen bud
Pear: Bud burst
Plum: Late swollen bud
Peach: 1/4 inch green

Highland:
Apple (McIntosh): 3/4 inch green
Apple (Red/Golden Delicious): 1/2 inch green
Sweet cherry: Bud burst
Pear (Bartlett): Bud burst
Plum (Stanley): Green cluster
Apricot: Full bloom
Peach: pink

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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