SCAFFOLDS Fruit Journal, Geneva, NY
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Update on Pest Management and Crop Development
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COMING EVENTS

	43°F	50°F
Current DD accumulations		
(Geneva 1/1-5/9):	314	145
(Geneva 1/1-5/9/2010):	514	283
(Geneva "Normal"):	363	183
(Geneva 1/1-5/16 Predicted):	433	222
(Highland 1/1-5/9):	415	206

Coming Events – Ranges (Normal +/- Std Dev):		
American plum borer 1st catch	390-484	192-262
Codling moth 1st catch	400-578	201-313
Comstock mealybug		
1st gen. crawlers in pear	215-441	80-254
European red mite egg hatch	231-337	100-168
Green fruitworm flight subsides	247-451	111-239
Lesser appleworm 1st catch	263-567	120-306
Mullein bug eggs 1st hatch	331-443	163-229
Oriental fruit moth 1st catch	222-324	94-164
Oriental fruit moth 1st flight peak	350-552	177-295
Pear psylla 1st egg hatch	174-328	60-166

Redbanded leafroller 1st flight peak	231-365	105-187
Rose leafhopper 1st nymph on rose	239-397	96-198
STLM 1st flight peak	264-394	121-203
McIntosh at bloom	346-418	170-218

Phenologies	5/9	5/16 (Predicted)
Geneva:		
Apple (McIntosh):	early pink	bloom
Apple (Empire):	pink	bloom-PF
Apple (Red Del.):	tight cluster-pink	bloom
Pear (Bartlett):	early bloom	petal fall
Sw. cherry (Hedelfingen):	bloom	fruit set
Tart cherry (Montmorency):	75% bloom	petal fall
Peach (Red Haven):	bloom	petal fall
Apricot (Harrowblush)	petal fall	–
Plum	bloom	petal fall

Highland:	
Apple (Ginger Gold):	full bloom
Apple (McIntosh):	early bloom
Apple (Red/Golden Delicious):	late pink
Pear (Bartlett/Bosc):	full bloom
Peach (early – Red Haven):	bloom
Peach (late):	bloom
Plum (Italian/Stanley):	bloom

Cherry (Sweetheart, Early): full bloom

TRAP CATCHES (Number/trap/day)

Geneva

	4/28	5/2	5/5	5/9
Green Fruitworm	0.0	0.0	0.0	0.0
Redbanded Leafroller	2.3	3.8	10.7	5.0
Spotted Tentiform Leafminer	0.0	0.4*	1.2	2.5
San Jose scale	-	-	-	3.3*
Oriental Fruit Moth	-	-	0.0	0.0
Lesser Appleworm	-	-	0.0	0.0
Codling Moth	-	-	-	0.0
Lesser Peachtree Borer	-	-	-	0.0
American Plum Borer	-	-	-	0.0

Highland (Peter Jentsch)

	4/18	4/25	5/2	5/9
Green Fruitworm	0.3	0.0	0.6	0.1
Redbanded Leafroller	3.9	4.7	10.6	5.9
Spotted Tentiform Leafminer	0.4	10.8	37.5	30.6
Oriental Fruit Moth	0.0	0.0	5.6*	21.6
Lesser Appleworm	-	0.0	0.0	0.0
Codling Moth	-	-	-	0.0

* = 1st catch

PEST FOCUS

Geneva: 1st San Jose Scale trap catch today, 5/9.

HEADS UP DISPLAY
(Art Agnello, Entomology, Geneva)
[Box Text: DO POINT]

ORCHARD RADAR DIGEST

Beginning with today's issue, we will once again be publishing pest predictions generated by the Univ. of Maine's Orchard Radar model estimation service, provided to us by Glen Koehler. This pest management tool uses commercially available weather data as an input for apple pest occurrence and development models taken from many established university and practitioner sources. It's offered as another perspective on what's happening in the orchard to compare against our own record-generated advisories and, of course, personal observations from the field. We'll be printing only some of the short-term arthropod events; the full Orchard Radar product range covers disease and horticultural events as well. The public sites available for anyone to use are located at: http://pronewengland.org/AllModels/DecisionModels.htm. Growers interested in exploring this service for their specific site may wish to contact Glen personally (glen.koehler@maine.edu).

Geneva Predictions are not yet online, so today's numbers are for
Marlboro (Hudson Valley):

Roundheaded Appletree Borer
RAB egglaying begins: June 2. Peak egglaying period roughly: June 23 to July 17.
Dogwood Borer
First DWB egg hatch roughly: June 26.
Lesser Appleworm
1st LAW flight, 1st trap catch: May 6. Peak trap catch: May 16.
Mullein Plant Bug
Expected 50% egg hatch date: May 10, which is 8 days before rough estimate of Red Delicious petal fall date.
The most accurate time for limb tapping counts, but possibly after MPB damage has occurred, is when 90% of eggs have hatched.
90% egg hatch date: May 14.
Obliquebanded Leafroller
1st generation OBLR flight, first trap catch expected: June 6.
Oriental Fruit Moth
1st OFM flight starts: April 28.
1st generation 55% egg hatch and first treatment date, if needed: May 25.

Redbanded Leafroller

1st RBLR flight peak trap catch and approximate start of egg hatch: April 29.

San Jose Scale

First adult SJS caught on trap: May 13.

Spotted Tentiform Leafminer

1st STLM flight, peak trap catch: May 6.

1st generation sapfeeding mines start showing: May 17.

Optimum sample date is around May 18, when a larger portion of the mines have become detectable.

White Apple Leafhopper

1st generation WALH found on apple foliage: May 9.

[Section: INSECTS]

PETAL FALL PREAMBLE
(Art Agnello, Entomology, Geneva)
[Box Text: BUGS]

Plum Curculio

Adults move into orchards from overwintering sites in hedgerows or the edges of woods and adults are active when temperatures exceed 60°F, something that will recur this week. Adult females oviposit in fruit during both day and night but feed mostly at night. Depending

on temperature, overwintering adults remain active for 2–6 weeks after petal fall. Because adults are not highly mobile, orchards near overwintering sites, woodlands, and hedgerows are most susceptible to attack. Fruit damage is usually most common in border rows next to sites where adults overwinter. Although initial post-bloom sprays for plum curculio control should begin at petal fall, growers are often unsure how many additional sprays will be necessary to maintain protective chemical residues to prevent subsequent damage throughout the PC oviposition cycle, which varies according to temperatures and weather patterns after petal fall.

Following from the fact that PC activity and oviposition are largely determined by temperature, we use an oviposition model to determine when control sprays after petal fall are no longer necessary to protect fruit from PC damage. This model is based on the assumption that residues from sprays applied after petal fall need to be maintained on fruit and foliage only until PC adults stop immigrating into orchards, which corresponds to the time when about 40% of the oviposition cycle is complete. This is predicted by the model to occur at 308 DD (base 50°F) after petal fall of McIntosh. Most probably, this strategy works because,

after 40% of PC oviposition is complete, adults usually do not move into the orchard from outside sources, or within orchards from tree to tree. Therefore, by this time, adults residing in treated trees have already been killed by insecticide residues and are unable to complete the remainder of their normal oviposition cycle.

In order to use this strategy: (1) Treat the entire orchard at petal fall with a broad spectrum insecticide. (2) Start calculating the accumulation of DD after petal fall of Macs (base 50°F); this is easily done from the NEWA Apple Insect Models page (http://newa.cornell.edu/index.php?page=apple-insects) by entering the petal fall date for your area. (3) No additional sprays are necessary whenever the date of accumulation of 308 DD falls within 10–14 days after a previous spray. We'll attempt to give local updates for the major fruit areas as the post-PF period progresses. In cherries and other stone fruits that are already at shuck fall, sprays should start (or should have started, as appropriate) at the first opportunity. Recall that, in addition to the industry standard broad-spectrum materials, some additional options may be considered: Lorsban 75WG can still be used at petal fall in tart cherries, but is no longer labeled for this use in

apples; also, Calypso, Avaunt and Actara are effective for plum curculio in apples and pears, and Avaunt is also labeled in stone fruit as another PC option. Delegate and Altacor both have some activity on this pest, but should not be considered as the first choices in high-pressure blocks.

European Apple Sawfly

This primitive bee and wasp relative shows a preference for early or long-blooming varieties with a heavy set of fruit. This insect is generally a pest mainly in eastern N.Y., although it has been gradually making its presence known in the more western sites, recently progressing as far as Wayne Co. (or beyond). The adult sawfly emerges about the time apple trees come into bloom and lays eggs in the apple blossoms. Young larvae begin feeding just below the skin of the fruits, creating a spiral path usually around the calyx end. This early larval feeding will persist as a scar that is very visible at harvest. Following this feeding, the larva usually begins tunneling toward the seed cavity of the fruit or an adjacent fruit, which usually causes it to abort. As the larva feeds internally, it enlarges its exit hole, which is made highly conspicuous by a mass of wet, reddish-brown frass. The frass may drip onto adjacent fruits and leaves, giving them an unsightly

appearance. The secondary feeding activity of a single sawfly larva can injure all the fruit in a cluster, causing stress on that fruit to abort during the traditional "June drop" period.

Certain insecticides that control this pest also adversely affect bees, which can pose a problem at petal fall because certain apple varieties lose their petals before others. In blocks of trees where petal fall has occurred on one variety but not the others, the variety that has lost its petals is likely to sustain some curculio or sawfly injury until the insecticide is applied. Some newer insecticides with activity against both plum curculio and sawfly -- Calypso, Avaunt and Actara -- may have a slight advantage over conventional OPs in this case. Assail represents another option for controlling sawfly; it's not very active against plum curculio, but will do a good job against rosy apple aphid and spotted tentiform leafminer, as well as sawfly, at this timing. To minimize the hazard to honey bees, apply any pesticide only when no bees are actively foraging on blooming weeds (evening is better than early morning).

Obliquebanded Leafroller

Larvae overwintering as 1st or 2nd stage caterpillars may have had the ability to grow to a noticeable size,

although we haven't actually seen any up to this point, so most are likely still relatively small. It would be prudent to have a quick look for later-stage larvae in problem blocks to determine whether a treatment against the overwintered brood should be included in your petal fall plans. Scout the blossom clusters or foliar terminals for larvae feeding within both the flowers and rolled leaves; a 3% infestation rate could justify an application to minimize overwintered fruit damage and help reduce summer populations.

Among the selective insecticides available, Intrepid has been successful at this timing, and B.t. products, which can be used while blossoms are still present, include Dipel, Deliver, Agree, Biobit and Javelin. More recently, Proclaim has been shown to be very effective at the petal fall timing, and also provides activity against early season mite populations. Delegate, Altacor, and now also Belt, all offer very good efficacy against not only OBLR, but also the internal leps. Pyrethroids such as Asana, Baythroid, Danitol, Warrior, Proaxis or Leverage may also be effective, depending on past use history, but be aware of their broad-spectrum effects, which can work both for and against you, according to how many beneficial mites and insects you can afford to lose.

Oriental Fruit Moth

Biofix will be very spread out across NY again this year, with most WNY sites yet to record any moth captures; warmer temperatures forecast for this week should bring them out in most sites. Use the NEWA Apple Insect Models page to chart current degree day (base 45°F) progress towards the recommended totals of 170 (in peaches) and 350 (in apples) as the timing at which to start a protective spray program. To maximize the efficacy of 1st brood control, peach growers should use one of the suggested OP or pyrethroid options from the Recommends starting at petal fall, backed up 10–14 days later. In apples, in addition to Delegate, Altacor, and the newly available Belt, a number of the petal fall selection of insecticides will do an acceptable job of controlling this generation, including the OPs, pyrethroids, Intrepid, Assail, Avaunt, and Calypso.

[Section: DISEASES]

ADJUSTING FUNGICIDE RATES TO MAXIMIZE CONTROL OF APPLE SCAB

(Dave Rosenberger, Plant Pathology, Highland)

[Box Text: FINE TUNING]

Frequent rains and windy conditions between rains have made this a challenging season for applying prebloom fungicides on apples. Where fungicide coverage and timing were less than ideal during the early part of the season, apple scab lesions may have already appeared in trees, or scab lesions may appear within the next week or two. New scab lesions on leaves can produce conidia in such abundance that concerns about remaining ascospores in the leaf litter become irrelevant. Keeping scab off of fruit and terminal leaves can be especially challenging in years when scab lesions appear on cluster leaves before trees reach petal fall because new leaves on terminal shoots unfold rapidly between petal fall and second cover and because fruit are highly susceptible to scab infections for the first few weeks after petal fall. Achieving good scab control is dependent not only on applying effective fungicides at the right times, but also on using appropriate rates. Following are some guidelines on rates for specific products.

Mancozeb fungicides (Dithane, Manzate, Penncozeb): Current labels allow these products to be applied in either four applications at rates of 6 lb/A with the last application at petal fall, or in seven applications at 3 lb/A with a 77-day preharvest interval. Where rust

diseases are a concern, most growers will opt for the 3-lb/A option so that they can continue using mancozeb for rust control after petal fall. When applied at only 3 lb/A on a 7-day interval, mancozeb fungicides (by themselves, with no mixing partner) will usually control scab in low-inoculum orchards so long as rainfall between applications is less than 1.5 inches. When the 7-day weather forecast suggests that heavy rains are likely during the week following an anticipated spray date, then mancozeb used alone at 3 lb/A may fail to provide effective scab control. Under these circumstances, options are to increase the potential residual activity of the spray by using 6 lb/A of mancozeb (if the spray is applied before petal fall) or to tank-mix 3 lb/A with either Captan or some other fungicide. If scab lesions are already visible on new foliage, then the orchard is no longer a "low-inoculum" orchard and using mancozeb alone at 3 lb/A will not provide effective control of secondary scab.

Inspire Super may be the best option for stopping spread of scab where protectant sprays early in the season failed to provide complete scab control. The new liquid premixed formulation of Inspire Super must be used at the full label rate of 12 fl oz/A to be effective against scab. The original Inspire Super MP (MP= multi-

pack) consisted of two separate products that were packaged together and which had to be individually measured into to the tank. Inspire Super MP has only a single rate on the label for apple scab. The newer premixed liquid formulation is labeled for apple scab at 8.5 to 12 fl oz/A, but anything less than the full label rate is likely to prove disappointing. Always use Inspire Super in combination with either captan or the 3 lb/A rate of a mancozeb fungicide to further guard against control failures from and/or selection pressure for DMI-resistant scab.

Inspire Super has more intrinsic activity against apple scab than other DMI fungicides, so it will have more activity than other DMIs against scab populations that are shifted toward resistance to DMI fungicides. Furthermore, the Vangard component of Inspire Super provides 48 to 72 hr of post-infection activity against scab on leaves, so Inspire Super provides two modes of action for arresting infections that are less than 48-72 hr old. That dual activity can be a significant advantage where sprays can be applied shortly after an infection period. As is the case for all DMIs, Inspire Super will do a better job if it is applied BEFORE lesions become visible, because it will arrest fungal development within the leaf before conidia can be produced. However, this

presymptom capability may be compromised by the presence of DMI-resistant strains within the population, especially for apple cultivars such as McIntosh that are highly susceptible to apple scab.

Indar also has more activity against apple scab than the older DMI fungicides, but Indar is relatively insoluble and therefore should be applied with a non-ionic surfactant to enhance uptake in leaves. Non-ionic surfactants are often used at low rates when a "spreader" is needed to reduce surface tension of the spray solution and improve spray coverage on the leaf. Higher rates of non-ionic surfactants are required if they are specifically meant to enhance penetration of the leaf, as is the case with Indar on apples. Thus, non-ionic surfactants used with Indar on apples should be used in the mid to upper parts of the rate ranges indicated on the surfactant labels.

Rally and Vintage (formerly Nova and Rubigan, respectively) can also provide effective suppression of incubating scab lesions if the populations are still fully sensitive to DMI fungicides. However, for post-infection activity, Rally should be used at no less than 6 oz/A and Vintage should be used at 12 fl oz/A. As indicated for Inspire Super, the other DMI fungicides

(i.e., Indar, Rally, and Vintage) must also be combined with a contact fungicide whenever they are used. Where rust is not an issue and there are no complications due to oil applications, combining these fungicides with captan will likely provide the strongest scab-control program. Captan should not be used within 7-10 days of an oil spray, and injury can sometimes occur even when captan and oil are separated by more than 10 days if cool cloudy weather persists during the interval between the two sprays.

Syllit (dodine) is also an effective tool for arresting scab epidemics, but it has no activity on mildew or rust diseases. Syllit should always be applied in combination with either captan or mancozeb because Syllit performance can be compromised by the unexpected presence of dodine resistance. The combination of 2 pt/A of Syllit plus 3 lb/A of a mancozeb fungicide is probably appropriate for preventive scab sprays, but the Syllit rate should be increased to the full label rate of 3 pt/A where post-infection and/or antisporulant activity is desired. The old literature on dodine suggests that Syllit used at 2 pt/A will gradually arrest spore production from existing scab lesions, but the effect is more immediate with higher rates.

Anyone thinking of using Syllit should note that if apples are sprayed with Syllit, pomace from any part of the crop that is used for juice cannot be fed to cattle. This is a significant deterrent for anyone who sells packing line cull fruit to large juice processors, and it could also create problems if hail storms or other unforeseen events (e.g., stink bug?) should cause higher than expected rates of cull fruit in Syllit-treated blocks.

Flint and Sovran are NOT recommended for stopping scab epidemics after scab lesions become visible on foliage. These products can reduce sporulation from visible lesions, but they do not have the presymptom activity that is almost always needed in such situations. (Presymptom activity is needed because the scab infections are never synchronized and non-visible incubating infections are almost always present along with visible lesions on leaves). Flint and Sovran can still be used where visible lesions are present, but they should only be used in combinations with the maximum label rates of captan and they cannot be expected to arrest an epidemic in the same way that DMI fungicides and Syllit are capable of doing in the absence of resistance.

Other considerations: When rescue treatments are needed to stop the spread of scab that is already visible on leaves, the first spray should always be followed by at least one and often by two more sprays of products/rates designated as appropriate for the situation. Also, while other experts may disagree, I believe that it is unwise to apply tree-row volume calculations when rescue treatments are needed for apple scab. Instead, the maximum labeled rates of fungicides should always be used until one is certain that the scab epidemic has been arrested.

[Section: GENERAL INFO]

GO STOP GO

The abnormal weather this spring has resulted in a lopsided crop development pattern around the state so far; most of the western NY apple orchards are moving into pink this week, while in the Hudson Valley, early varieties will be reaching petal fall. To try covering all the bases at least partially this week, we are running the following article Nick Calderone prepared a few years ago on pollination, bees, and hive handling tips.

GETTING THE MOST OUT OF YOUR POLLINATION EFFORTS

Nick Calerone, Entomology, Ithaca

[Box Text: BEE ATTITUDES]

Tree fruits, small fruits, and many vegetable crops, especially many of the vine crops, all require pollinating insects for a successful harvest. Remember! Not only is pollination important for a high yield, it is just as important for fruit size, shape and sweetness. A number of insects pollinate crops; but, for several reasons, the honey bee is the most versatile pollinator. Honey bees are available in large numbers throughout the growing season, they pollinate over 90 commercial crops, they are easily transported by truck, and they can be easily distributed throughout large plantings. In addition, they restrict their foraging activities to a single species on any given trip to the field. Compared with other pollinators, honey bees are very cost effective. A single strong, two-story colony provides 15–25 thousand foragers.

How many colonies

New York growers have traditionally used about one colony of bees per three acres for apple pollination. This number may have been adequate in small orchards

visited by feral honey bees and by solitary bees and bumble bees from adjacent hedgerows and woods. However, wild honey bee populations have been greatly reduced by parasitic bee mites, and modern agricultural practices have eliminated many natural nesting sites for solitary bees and bumble bees. In addition, the flight range of solitary bees is not generally sufficient to ensure coverage of the interior portions of large plantings. Growers with large blocks of apples and other tree fruits may wish to increase the number of hives to one per acre. Modern cultivars with high blossom densities, such as trellised apples, also require more pollinators. If your fruit set has been lower than expected in the past, or your fruits are lopsided or misshapen, you probably need to use more bees. Remember, if your fruit set is too high, you can always thin, but if it is too low, you are just out of luck. Move bees into apples, regardless of variety, right before the king blossoms begin to open.

Special requirements

Most other crops are adequately served by a single strong colony per acre; however, some crops have special requirements. **Red Delicious** apples have a flower structure that is different from that of most other common varieties such as McIntosh. The anthers

on Red Delicious flowers are widespread, and bees learn to insert their mouthparts between them to obtain nectar. Consequently, the bees do not contact the flower's sexual parts and pollination does not take place. Since it takes time for bees to learn to obtain nectar in this way, you can counteract this problem by using more colonies per acre to increase the number of inexperienced bees in the orchard. Up to two colonies per acre may be needed in large stands of Red Delicious apples.

Pollination of **pears** will probably always be a problem because pear nectar contains only about 15% sugar versus 40% for apples, dandelions, and yellow rocket. The answer is to move the bees into the center of the pear block when the pears are at 50% bloom. It will take some time for the bees to discover better sources farther away, and in that time, the pears may be adequately pollinated. An alternative is to use more colonies per acre, which will increase the number of bees foraging within the orchard. **Sweet cherries** should be pollinated soon after they open. Therefore, bees should be moved in the day before bloom. Since sweet cherries require a high fruit set for a commercially viable crop, and since they bloom early in the season when the weather is often unfavorable for

foraging, two colonies per acre may be required. Research at the Geneva Experiment Station has shown that **strawberries** benefit substantially from having hives of bees in the field during bloom.

Hive Placement

To obtain maximum benefit for your pollination dollar, always select good locations for the bees you rent. A good location slopes slightly to the south, is protected from the prevailing winds, is dry, and has as much exposure to sunlight as possible. It is important that colonies of honey bees be kept in full sunlight in order to warm the hives rapidly in the morning and entice the workers out of the hives on chilly spring mornings. Entrances should face south to southeast whenever possible.

Keep colonies on pallets or cinder blocks to keep the bottom boards 4–8 inches above the ground. Hives with wet bottom boards will be cooler and have less foraging activity than dry colonies. A hive stand will also keep colonies above tall grass, which may shade or block the entrance. Place colonies in groups of 4–6 to take advantage of good locations. In large orchards and fields, groups of 10–20 hives can be used to take advantage of prime locations. It is best to locate hives

near pollinizer rows where that consideration applies, such as with apples and sweet cherries.

Pesticides

Overall, pesticides are less of a problem to bees and beekeepers today than they were 10 and 20 years ago. Nevertheless, serious poisoning incidents still occur. It is important to read the pesticide label and to avoid using materials that are especially toxic to bees when there is a safer alternative available. Sevin (carbaryl), Penncap-M (microencapsulated methyl parathion) and Guthion (azinphosmethyl) are especially toxic to bees. There is also concern over the use of the neo-nicotinoids, but there is no hard evidence of any actual damage to bees at this time.

You can eliminate most pesticide damage to bees by following a few simple rules. Never apply pesticides to flowers in bloom, as this will contaminate the pollen and nectar collected by the bees. Unfortunately, pesticides often drift onto non-target crops and weeds, and honey bees are poisoned when they ingest the contaminated pollen and nectar. Therefore, do not apply pesticides when there is a danger of drift. Keep flowering ground-cover plants mowed if you are going to spray in an orchard during the summer. Clover and

dandelions are a common problem for bees on orchard floors. If mowing is not possible, use an herbicide for control.

Bees can also be poisoned when they collect water from sources that have been contaminated by drifting pesticides. Standing water in wheel ruts or old tires near your fields are prime sources of contaminated water. Provide a source of clean water near the hives. A wash tub filled with fresh water and straw works well. The straw gives the bees a place to land and drink without drowning.

You can minimize the dangers from drift by restricting spraying to periods when the winds are less than 5 mph. If possible, begin to spray in the evening, about an hour before sunset, because there is generally little wind at that time. Always use the largest droplet size possible when spraying, and check out the use of spray stickers to help minimize drift. Always dispose of empty pesticide containers in an appropriate manner. Remember! If too many bees are killed, your crops will not be adequately pollinated, and it may be necessary to rent more bees.

General Recommendations

Bees should be moved at night, and once the hives have been placed on location, they should be left there until the job is done. Moving bees in the daytime and moving them short distances at any time (less than 3 miles as the crow flies) will result in a serious loss of foragers and seriously damage the colony. Always contact the beekeepers if the need arises to move the bees. If you live in an area with known bear problems, use an electric fence to protect the bees. Keep nearby flowering plants mowed to reduce competition for the bees' attention.

The Beekeeper

I recommend establishing good working relations with several beekeepers to ensure that you have a ready supply of bees for pollination. Any individual beekeeper's situation may change over time, but if you work with several beekeepers, you should always have access to an adequate supply of colonies.

Expectations

Remember! Bees are an essential part of your crop production system, but they are only one part. In many ways, they are like the fertilizers and chemicals that you buy. Each is essential, but none of them, by themselves, can guarantee a crop. Many things

influence the quantity and quality of your crop. One is the weather. Bees will visit flowers and pollinate only if they can fly. Cool, rainy, and windy weather will delay, slow, or stop flight, and the beekeeper cannot do anything about the weather. Excessive heat during the summer can cause problems with fruit set in certain crops, like pumpkins. Again, this is beyond the beekeeper's control. Be clear up front about your expectations concerning the strength of the colonies you rent, and satisfy yourself that you have received what you expected. This will eliminate misunderstandings down the road.

TRAC SOFTWARE NOW AVAILABLE
(Julie Carroll, NYS IPM Program, Geneva)
[Box Text: DE BUGS]

Trac Software version 2011 files can now be obtained from the Cornell Center for Technology and Enterprise Commercialization (CCTEC). Find out how to obtain Trac Software at http://www.cctec.cornell.edu/express%20licensing/software/tracsoftware/index.php.

Trac Software is now longer-lasting.

Trac now has an open ChemTable (no password). This means the software never goes out-of-date, because you update the ChemTable. Complete instructions on how to do this are included in the Trac Software Manual and in the software itself, along with a sample 2010 ChemTable.

Bugs were fixed.
All the reported bugs people found in the 2010 version were fixed and Excel compatibility issues addressed.

Trac Software now comes in two releases, for ".xls" and ".xlsm" Excel compatibilities.
Make sure you obtain the correct Trac Software release for your Excel version:

.xls Trac release (compat)

Microsoft Windows

Excel 97 (version 8.0) included in Office 97 (for x86 and Alpha).
Excel 2000 (version 9.0) included in Office 2000
Excel 2002 (version 10) included in Office XP
Office Excel 2003 (version 11) included in Office 2003

Apple Macintosh

Excel 8.0 (part of Office 98)
Excel 9.0 (part of Office 2001)

Excel 10.0 (part of Office v. X)
Excel 11.0 (part of Office 2004)
Excel 12.0 (part of Office 2008) – Visual Basic not included, will not run Trac Software

.xlsm Trac release

Microsoft Windows

Office Excel 2007 (version 12) included in Office 2007
Excel 2010 (version 14) included in Office 2010

Apple Macintosh

Excel 14.0 (part of Office 2011)

Tech support is still available at jec3@cornell.edu

[Section: CHEM NEWS]

LAMBDA-CY 2(ee)

The NYS DEC has just approved a FIFRA Section 2(ee) registration for the use of Lambda-Cy (UPI, EPA Reg. No. 70506-121) in cherries (sweet and tart) for control of cherry vinegar flies: *Drosophila* spp., including Spotted Wing Drosophila. The PHI is 14 days.

ERRATUM – LINGERING LORSBAN
(Art Agnello, Entomology, Geneva)

A major oversight (on my part) in the Tree Fruit Guidelines was just brought to my attention regarding the recommendations for Lorsban 75WG in apples: The Lorsban 75WG label changed last year to prohibit foliar applications in apples at petal fall. This had been allowed for a couple of years, but this label change brought the 75WG into correspondence with the other formulations. Note that all three formulations of Lorsban (4E, Advanced, and 75WG; Lorsban 50W is no longer available) are now the same regarding use on apples, and that only one application of any chlorpyrifos product can be made per year on apples (whether foliar pre-bloom, or to the trunk throughout the season). The REI for all products is 4 days.

Unfortunately, this got by me, and Lorsban 75WG still appears in the print version of the Recommends as a petal fall option for a number of apple pests, so its entries should be deleted in the following pest sections at petal fall:

- Codling moth/Lesser appleworm/Oriental fruit moth
- Green fruitworms
- Obliquebanded leafroller
- Plum curculio

- Redbanded leafroller
- Rosy apple aphid

It also appears for Dogwood borer, but only as a trunk application, which is still allowed.

Less critically (but also mistakenly), Lorsban is mentioned in the following Comments sections pertaining to some of these pests, so it would be ideal to eliminate those as well:

11.2.5, Codling moth/Lesser appleworm/Oriental fruit moth – Comment [14.3]
11.2.15, Obliquebanded leafroller – Comment [24.2]
11.2.17, Plum curculio – Comment [26.4]
11.2.19, Rosy apple aphid – Comment [28.4]

These errors have been fixed in the online version of the Recommends.

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