

scaffolds

Update on Pest Management
and Crop Development

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

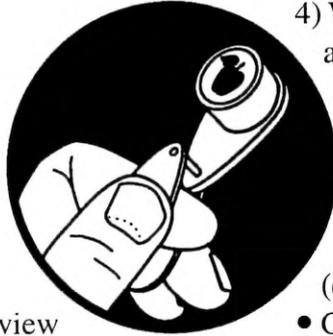
May 8, 2000

VOLUME 9, No. 8

Geneva, NY

BEFORE THE FALL

TOSSING
PETALS IN
YOUR PATH
(Art Agnello and
Harvey Reissig,
Entomology,
Geneva)



❖❖ Last weekend's sneak preview of summer left little doubt that the other weather shoe has finally dropped, and that everyone should now be officially up to their proverbial necks in alligators. Even allowing for any cool-front slowdowns, many eastern N.Y. apple orchards will be entering the petal fall period this week, and the rest of us won't be far behind. According to the expert advice just made available from getcheractgether.com, petal fall is the pivotal time for establishing a foundation for the control of many of the most important arthropod pests. Here once again are some important points to keep in mind for the petal fall insecticide sprays:

1) To minimize the hazard to honey bees, apply pesticides only after ALL petals have fallen in the block and when no bees are actively foraging on blooming weeds (evening is better than early morning).

2) Do not use Lannate on early McIntosh, Wealthy, or Dutchess because of possible injury to fruit and foliage.

3) Although our research trials haven't consistently borne this out, postbloom use of pyrethroid insecticides has been known to encourage the buildup of certain pests such as mites and woolly apple aphid. Try to limit use of these materials to one application per season to delay resistance development and extend their useful field life.

4) When choosing an insecticide for this application, keep in mind its range of activity, both adverse and beneficial. For example,

- if Sevin is applied for thinning, it will also help to control plum curculio and white apple leafhopper (even at the 1 lb rate).
- Carzol acts not only against European red mite, but will also control white apple leafhopper; however, it is not kind to predatory mites.

• Agri-Mek is recommended at petal fall for maximum efficacy against mites; this is also the timing at which it will have its greatest effect against white apple leafhopper nymphs and sapfeeding spotted tentiform leafminers. It is not likely to be too useful against rosy apple aphid.

continued...

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5) Be aware of the destructive effects of any spray materials on beneficial mites and insects (refer to Tables 5 and 12 on pp. 34 and 42 in the 2000 Recommends.)

6) Do not use Vydate or Sevin during the first 30 days after bloom without taking into account their thinning effects.

Mites

Because of the on-again, off-again winter/spring weather shifts in March and April, many growers were probably unable to do as good a job as they would have liked with their early season mite programs. Conditions were fairly lousy for oil spraying in western N.Y., and the pink period didn't last nearly long enough for some of the other prebloom acaricide products. Consequently, many European red mite management strategies will need to compensate for some atypical situations this season. First, we don't have any firsthand reports of mite hatch yet, but there's no reason to assume they haven't started. As the trees in many spots are well past the traditional tight cluster/pink stage when this is supposed to occur, it might be tempting to think that mite population development is 'delayed' this year. However, the post-hatch weather looks like it will be more favorable than normal for mite growth, so if anything, the mites are probably better primed for a rapid buildup than they normally would be by this date. Furthermore, with the availability of a good threshold-response product like Pyramite, there's probably going to be a lot of waiting-until-they-show management decisions this summer. This approach carries the implicit requirement of vigilant monitoring for threshold numbers and timely action when a rescue treatment is needed. The predictions call for this summer to be drier and warmer than normal, which means that high numbers and significant leaf damage can develop very rapidly when the mites do show up.

Our message, as ever, is that it is always wise to keep an eye on the foliage throughout June and July to detect unreasonable mite buildup, because it doesn't take much to boost numbers into the problem category. Until June 30, we recommend a

threshold of 2.5 motile stages (anything except eggs) per leaf. You can determine the mite densities on the foliage by using the presence/absence technique:

Examine intermediate-aged leaves (from the middle of the fruit cluster) for motile stages. Check at least 50 leaves (5 per tree), for the presence of any number of mites; no treatment is recommended if <62% of the leaves examined are infested. A sequential sampling chart (Fig. 4, p. 50) is provided in the Recommends. The choices are as follows if you detect over-threshold levels:

Pyramite applied in a timely manner should generally do the best job, and is most likely to give you control for the remainder of the season, but don't stop examining the foliage altogether. It's advisable not to use this product more than once per season, even though 2 applications are allowable. This is not only out of consideration for potential resistance development, but also because Pyramite has some toxicity to predator mites, and hitting them twice won't do much to allow their establishment.

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scaffolds

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Kelthane can be used if you have no reason to suspect resistance in your populations, or if none has been applied in a given block for at least 5 years. Carzol is another choice if you don't mind eliminating any predator mites in the block; back-to-back sprays of this product would probably be needed. Vendex is still available, and has been shown in some of Dick Straub's trials to be one of the more effective treatments for twospotted spider mites. Keep in mind that TSSM populations can increase faster than red mites.

Plum Curculio

Plum curculio (PC) adults move into orchards from overwintering sites in hedgerows or the edges of woods and are present in the trees from late pink to early bloom before the fruit is susceptible to damage. Adults are active in the spring when temperatures exceed 60°F, which means that more than likely they've already started. Adult females oviposit in fruit during both day and night but feed mostly at night. Depending on temperature, overwintering adults remain active for two to six weeks after petal fall. Although adults may feed on blossoms, apples are not susceptible to damage until petal fall, at which time adults damage fruit by both feeding and ovipositing. Unlike fruit injured by other pests, many apples damaged by plum curculio will remain on the tree until harvest. 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.

Monitoring for plum curculio is not currently recommended in New York because of the amount of time and labor involved and because plum curculio is generally assumed to be present in every orchard. Although growers realize that initial post-bloom sprays for plum curculio control should begin at petal fall, they 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 greatly affected by temperature, an oviposition model has been developed 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 control sprays after petal fall only need be maintained on fruit and foliage until about 40% of the oviposition cycle is complete, which is predicted by the model to occur at 340 DD (base 50°F) after petal fall. Probably, this strategy works because, after 40% of PC oviposition is complete, adults usually are not moving into the orchard from outside sources, or moving around 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 (base 50°F). (3) No additional sprays are necessary whenever the date of accumulation of 340 DD falls within 10–14 days after a previous spray.

This conventional strategy is probably only necessary for commercial apple orchards in which PC fruit damage has been observed frequently, or for orchards thought to be particularly vulnerable to infestation from codling moth or the European apple sawfly. Usually, orchards that chronically suffer fruit damage from PC are relatively small blocks located next to abandoned orchards or surrounded by woods or woodlots, which are favorable sites for overwintering of PC adults. Some larger orchards bordered by woods on one or more sides may also be at risk for chronic infestations of PC.

In moderate problem orchards, a petal fall application followed by a second spray 10 to 14 days later will provide adequate control. In orchards with

continued...

more severe chronic problems, or in seasons when adult activity is prolonged by unusually cool and wet weather, two cover sprays applied 10 to 14 days apart after petal fall may be necessary to prevent late damage. Guthion, Imidan, Lorsban, and all pyrethroid insecticides are effective at controlling plum curculio. These materials will also control codling moth later on.

Obliquebanded Leafroller

Many growers like to get a jump on their OBLR management programs by putting in some Lorsban at pink or a B.t. at bloom, to head off damage by the overwintered brood. If the decision whether or not to make such an application was based on monitoring even as late as last Thursday or Friday (May 4–5), many scouts may have come away with the impression of fairly low populations because the OBLR larvae that were out there then were still quite tiny and difficult to find. However, as one might expect, 3+ days of summer weather has brought the boys out in force, and they are both more numerous and much larger now, so a quick second look might be in order to ensure that these early populations haven't been underestimated.

White Apple Leafhopper

WALH nymphs can be numerous in some blocks, especially in the eastern part of the state. Provado has proven itself effective against this pest, and a petal fall application also gives leafminer control. Furthermore, it will have an added effect on green aphid populations, which might otherwise be more problematic this spring, owing to the advanced tree development and sustained availability of succulent green tissue. Rosy apple aphids can similarly be cleaned up with this strategy, although petal fall is often too late to prevent fruit damage that their feeding may have caused. Growers using Sevin in their thinning sprays will get some WALH control at the 1 lb rate. Alternative choices include Thiodan and Lannate; Agri-Mek or Carzol used for mites now will also do the job, but Carzol will be harmful to predator mites. The damage potential of this first generation should be evaluated carefully before deciding on the need for a specific control of this pest ❖❖

PEST FOCUS

Geneva:
Pear psylla nymphs present.

Highland:
Codling moth 1st catch. Leaf curl caused by **pear leaf midge** observed on Bartlett.

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❖❖ After a long and involved reformatting process, the 2000 edition of the Tree Fruit “Recommendations” (now disingenuously renamed “Guidelines” to placate certain legal minds who evidently don’t think Cornell should be recommending anything) has finally been delivered and should be making its way to all intended readers. Although inexcusably late — a thousand pardons, but publishing is not an exact science — we feel that this new format represents a much-needed improvement over its predecessor, and that it will be easier to first of all find, and ultimately use, all the information it contains. Within the next week, this publication should also be available in pdf format on the web.

Following the age-old tradition of continually revising our advice even as it is being dispensed, we need to point out a couple of glaring errors that got by us, and tentatively ask your gentle assistance in passing along to us any further errors you may happen upon, preferably in a non-threatening manner:

- Of most immediate concern, the main thinning table on page 103 (Table 21b) is missing several tabs on many of the varieties, which

continued...

TABLE 21b. Recommendations for thinning specific apple varieties in New York.

The chemicals and rates suggested in this table are the “best suggestion” of the authors for mature trees with a heavy fruit set and a “normal” fruit thinning weather. Our rates should be adjusted up or down by 50% depending on weather conditions, pollination, fruit set and tree sensitivity. Other chemicals, rates, timings and combinations may also work.

VARIETY	APPLICATION TIMING			
	50% Full Bloom	Petal Fall (1 week after bloom)	7-13 mm fruit size (2-3 weeks after bloom)	Return Bloom Enhancer (6 weeks after bloom)
<i>Rates are per 100 gallons based on a full dilute TRV application*</i>				
Ben Davis			7.5 ppm NAA plus 0.5 lb ai Carbaryl	
Cameo		5 ppm NAA plus 0.5 lb ai Carbaryl	7.5 ppm NAA plus 0.5 lb ai Carbaryl	
Cortland			5 ppm NAA plus 0.5 lb ai Carbaryl	
Delicious (Spur Type)	3 pt Wilthin plus 1.5 pt Promalin		50 ppm Accel plus 0.5 lb ai Carbaryl plus 1qt Ultrafine spray oil OR 7.5 ppm NAA plus 0.5 lb ai Carbaryl	
Delicious (Non-Spur Type)	3 pt Wilthin plus 1.5 pt Promalin		35 ppm Accel plus 0.5 lb ai Carbaryl OR 5 ppm NAA plus 0.5 lb ai Carbaryl	
Early McIntosh		35 ppm Amide Thin plus 0.5 lb ai Carbaryl		
Empire		5 ppm NAA plus 0.5 lb ai Carbaryl	65 ppm Accel plus 0.5 lb ai Carbaryl OR 7.5 ppm NAA plus 0.5 lb ai Carbaryl	
Fortune		5 ppm NAA plus 0.5 lb ai Carbaryl	7.5 ppm NAA plus 0.5 lb ai Carbaryl	0.5 pt Ethephon
Fuji		5 ppm NAA plus 0.5 lb ai Carbaryl	7.5 ppm NAA plus 0.5 lb ai Carbaryl	0.5 pt Ethephon
Gala		7.5 ppm NAA plus 0.5 lb ai Carbaryl	65 ppm Accel plus 0.5 lb ai Carbaryl OR 7.5 ppm NAA plus 0.5 lb ai Carbaryl	
Gingergold			2.5 ppm NAA plus 0.5 lb ai Carbaryl	
Golden Delicious (without use of Provide growth regulator)		7.5 ppm NAA plus 0.5 lb ai Carbaryl	65 ppm Accel plus 0.5 lb ai Carbaryl OR 10 ppm NAA plus 0.5 lb ai Carbaryl	0.5 pt Ethephon

continued

TABLE 21b. Recommendations for thinning specific apple varieties in New York. (continued)

VARIETY	APPLICATION TIMING			
	50% Full Bloom	Petal Fall (1 week after bloom)	7-13 mm fruit size (2-3 weeks after bloom)	Return Bloom Enhancer (6 weeks after bloom)
<i>Rates are per 100 gallons based on a full dilute TRV application*</i>				
Golden Delicious (with use of Provide)			7.5 ppm NAA plus 0.5 lb ai Carbaryl	0.5 pt Ethephon
Honeycrisp			2.5 ppm NAA plus 0.5 lb ai Carbaryl	
Idared			2.5 ppm NAA plus 0.5 lb ai Carbaryl	
Jerseymac		5 ppm NAA plus 0.5 lb ai Carbaryl	7.5 ppm NAA plus 0.5 lb ai Carbaryl	
Jonagold			7.5 ppm NAA plus 0.5 lb ai Carbaryl	0.5 pt Ethephon
Jonamac		7.5 ppm NAA plus 0.5 lb ai Carbaryl	65 ppm Accel plus 0.5 lb ai Carbaryl OR 7.5 ppm NAA plus 0.5 lb ai Carbaryl	
Jonathan			5 ppm NAA plus 0.5 lb ai Carbaryl	
Lady Apples			5 ppm NAA plus 0.5 lb ai Carbaryl	
Liberty		7.5 ppm NAA plus 0.5 lb ai Carbaryl	65 ppm Accel plus 0.5 lb ai Carbaryl OR 7.5 ppm NAA plus 0.5 lb ai Carbaryl	
Lodi		35 ppm Amide Thin plus 0.5 lb ai Carbaryl		
Macoun		75 ppm Accel plus 0.5 lb ai Carbaryl	7.5 ppm NAA plus 0.5 lb ai Carbaryl	0.5 pt Ethephon
Milton			5 ppm NAA plus 0.5 lb ai Carbaryl	
McIntosh (Non Spur Type)			5 ppm NAA plus 0.5 lb ai Carbaryl OR 35 ppm Accel plus 0.5 lb ai Carbaryl	
McIntosh (Spur Type)			7.5 ppm NAA plus 0.5 lb ai Carbaryl OR 50 ppm Accel plus 0.5 lb ai Carbaryl	
Mutsu			5 ppm NAA plus 0.5 lb ai Carbaryl	0.5 pt Ethephon
Northern Spy			5 ppm NAA plus 0.5 lb ai Carbaryl	0.5 pt Ethephon

TABLE 21b. Recommendations for thinning specific apple varieties in NY. (continued)

VARIETY	APPLICATION TIMING			
	50% Full Bloom	Petal Fall (1 week after bloom)	7-13 mm fruit size (2-3 weeks after bloom)	Return Bloom Enhancer (6 weeks after bloom)
	<i>Rates are per 100 gallons based on a full dilute TRV application*</i>			
NY674			7.5 ppm NAA plus 0.5 lb ai Carbaryl OR 50 ppm Accel plus 0.5 lb ai Carbaryl	
Paulared		5 ppm NAA plus 0.5 lb ai Carbaryl	7.5 ppm NAA plus 0.5 lb ai Carbaryl	
Quinte		35 ppm Amide Thin plus 0.5 lb ai Carbaryl		
R.I. Greening			7.5 ppm NAA plus 0.5 lb ai Carbaryl	
Rome Beauty (Non Spur)			5 ppm NAA plus 0.5 lb ai Carbaryl	
Rome Beauty (Law Spur)		5 ppm NAA plus 0.5 lb ai Carbaryl	7.5 ppm NAA plus 0.5 lb ai Carbaryl OR 65 ppm Accel plus 0.5 lb ai Carbaryl	
Spartan and Acey Mac			7.5 ppm NAA plus 0.5 lb ai Carbaryl OR 50 ppm Accel plus 0.5 lb ai Carbaryl	
Stayman			5 ppm NAA plus 0.5 lb ai Carbaryl	
Tydemar			5 ppm NAA plus 0.5 lb ai Carbaryl	
Vista Bella			5 ppm NAA plus 0.5 lb ai Carbaryl	
Wealthy			7.5 ppm NAA plus 0.5 lb ai Carbaryl	
Yellow Newtown			7.5 ppm NAA plus 0.5 lb ai Carbaryl	
Yellow Transparent		35 ppm AmideThin plus 0.5 lb ai Carbaryl		

* All rates are amounts per 100 gal assuming a full dilute tree row volume (TRV) spray. Rate per acre = amount/hundred gallons X hundreds of gallons per acre TRV dilute. Tree Row Volume dilute gallonage (TRV)= (Tree Height X Tree Width X 43560 X 0.7) / (Between Row Spacing X1000). The rate per acre may safely be concentrated 2X.

shifts thinning recommendations to the wrong timings (bloom instead of petal fall, petal fall instead of 10 mm, etc.). This is a very serious error that will lead to major thinning problems if growers follow what is printed. The hard copy version of this newsletter contains inserts of errata sheets with the correct formatting of these tables. Furthermore, each of the county and regional fruit specialists has been provided with copies of the corrections for distribution to their growers; contact your CCE Fruit Extension Staff if you need one.

- In Table 20, the Apple Pesticide Spray Table, the PHI value for Asana is incorrectly given as 28 days instead of 21. This error is found on pp. 85 (tarnished plant bug), 86 (leafminers), 89 (green fruitworms and OBLR), 91 (tarnished plant bug), and 95 (OBLR).

- The captions were omitted from the last two photos in each series of figures that show the growth stages of all the respective fruits, except apples. The following entries should be made for:

Fig. 16 (Pear, p. 110) – 7. Petal Fall; 8. Fruit Set

Fig. 17–18 (Tart Cherry, p. 120–121) – 6. Petal Fall; 7. Fruit Set

Fig. 19 (Peach, p. 131) – 7a. Fruit Set, shucks on; 7b. Fruit Set, shucks off

Fig. 20 (Plum and Prune, p. 144) – 7. Petal Fall; 8. Fruit Set ❖❖

PHENOLOGIES

Geneva,
 Apple (McIntosh): full bloom
 Apple (Red Delicious): 75% bloom
 Pear (Bartlett): 50% petal fall
 Tart cherry (Montmorency): 80% petal fall
 Sweet cherry: petal fall
 Peach: petal fall
 Plum: fruit set, shucks on

Highland:
 Apple (McIntosh): petal fall
 Pear (Bartlett): petal fall
 Pear (Bosc): fruit set
 Peach: fruit set
 Plum (Stanley): fruit set

DECIDING MOMENT

APPLE DISEASE MANAGEMENT AT PETAL FALL

(Dave Rosenberger,
Plant Pathology,
Highland)

Apple Scab

❖❖ The period from bloom to the first cover spray is usually the period of peak risk for scab infections on fruit. Ascospores are usually still available for discharge during bloom-time wetting periods, and secondary inoculum from earlier scab infections may become available if prebloom scab control was less than perfect. Apple fruit are highly susceptible to scab infection for the first several weeks after petal fall. Most fruit infections in commercial orchards are secondary infections that occur when conidia are washed from earlier infections on leaves or leaf petioles. Primary infections on leaves can produce and release conidia for secondary infections beginning a day or two before the lesions are visible.

The ascospore maturity model developed by Gadoury and coworkers indicates that the supply of ascospores in overwintering leaves is depleted after the first daytime rain event following accumulation of 760 degree days (base 32°F) counting from bud break. Orchards in the Hudson Valley had accumulated 845 degree days as of May 8. However, our unusually dry spring may have slowed ascospore development, and growers should assume that primary inoculum will not be exhausted until we have two good wetting periods during daylight hours. Even if all ascospores have been discharged, good fungicide coverage should be maintained for at least 14 days after petal fall to allow time for an assessment of primary scab control and to ensure protection of the small fruitlets during their period of peak susceptibility to scab.

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Petal fall is a critical time to scout orchards for evidence of primary scab. A standard approach is to examine leaves and fruit on 50 clusters on each of five trees per block. If scab is found in two or more clusters, apply cover sprays of a strobilurin fungicide (Sovran or Flint) or apply captan. In orchards with visible scab lesions, cover sprays should be applied at 10–14-day intervals either until terminal leaves stop growing or until summer temperatures exceed 85°F for three or four days. High temperatures reduce the viability of conidia. Remember that strobilurin fungicides can be applied only four times during a season with no more than three sprays in a single sequence.

Black Rot Fruit Decay

Petal fall and first cover are critical sprays for controlling black rot. Most black rot fruit decay in N.Y. probably originates from spores produced in dead fruitlets that were retained in the tree after chemical thinning the previous year. Spores from

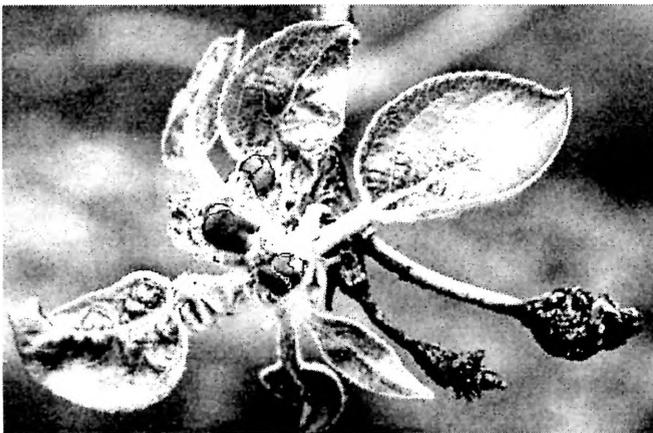


Fig. 1. Shown here at the pink bud stage, retained fruitlets from last year can carry black rot inoculum for infecting new fruitlets at petal fall.

these retained fruitlets can infect the calyx end of new fruitlets beginning at petal fall. Infections that occur at or soon after petal fall remain quiescent until fruit begin to ripen. Then they appear as calyx-end rots.

Applying effective fungicides at petal fall and first cover can prevent infection of this year's crop while at the same time reducing inoculum levels for

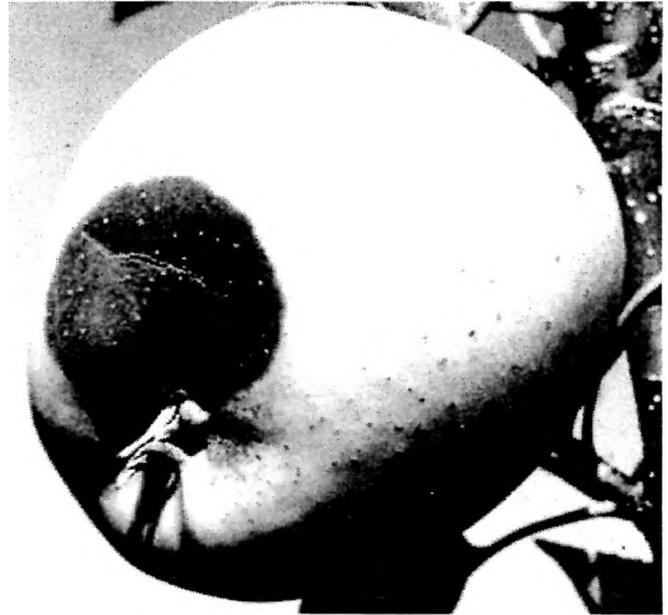


Fig. 2. Black rot fruit decay at the calyx-end of a mature fruit resulted from an infection that occurred early in the season.

next year's crop. Fruitlets killed by thinning sprays provide ideal infection sites for the black rot fungus during late May and early June. Fungicides applied at first cover can reduce the proportion of retained fruitlets that become infected this year, thereby reducing both the amount of inoculum available for causing lenticel infections during summer and the amount of inoculum that will be available at petal fall next year.

The SI fungicides (Rubigan, Nova, Procure) are not effective against black rot. Mancozeb and metiram (Polyram) at the 3-lb/A rate will not control black rot under high-pressure situations. Sovran, Flint, Topsin M, and captan have good activity against black rot and white rot. Where black rot is a problem, one of these fungicides should be used at petal fall and first cover.

Scarf Skin

Scarf skin is a disorder that makes the waxy surface of mature fruit appear milky or cloudy. Researchers in the Cumberland-Shenandoah region have also referred to this disorder as "opalescence".

continued...

The disorder is particularly severe on Stayman, Law Rome, and Gala, but it can appear on nearly all cultivars in severe years. Scarf skin does not reduce the eating quality or storage life of fruit, but it may make the fruit less acceptable to consumers because the fruit do develop a clear shine after waxing on the packing line.

Scarf skin was studied by Dr. David Ferree and coworkers in Ohio in the early 1980's. By bagging Rome Beauty fruit clusters in polyethylene bags at various times beginning at petal fall, they were able to demonstrate that scarf skin is initiated between petal fall and 60 days after petal fall. Fruit bagged for 60 days had no scarf skin. The greatest amount of scarf skin was initiated close to petal fall, and the severity of scarf skin from later exposures decreased gradually. Fruit protected for 40 days showed very little scarf skin.

Various researchers have shown that environmental conditions during the 40 days after bloom are important in determining the amount of scarf skin that develops, but the exact weather conditions that contribute to scarf skin have not been defined. Climatic changes that stress fruit during the critical period after petal fall may contribute to scarf skin. Thus, a period of cool rainy weather followed by a hot, sunny, windy day might constitute a stress that could contribute to scarf skin.

Applications of Benlate made within 40 to 50 days of petal fall can exacerbate scarf skin. The effect of Benlate is probably dependent on interactions with environmental conditions and nutritional status of the orchard. Scarf skin can still develop in the absence of Benlate sprays. However, avoiding Benlate during the 40–50 days after petal fall will reduce the severity of the problem in years and locations where it does occur.

Powdery Mildew

Sprays for mildew should have been initiated before petal fall (see the April 24 issue of *Scaffolds*). However, the petal fall spray is especially important because of the rapid shoot growth that begins shortly

before petal fall. Apply Sovran, Flint, or an SI fungicide to control mildew at petal fall and first cover. ❖❖

24c
CONFIRMED

CHEM NEWS –
CONFIRM HAS N.Y.
LABEL

❖❖ We have just found out that on Monday (May 8), the N.Y.S. DEC granted Rohm & Haas a 24c Special Local Need label for Confirm 2F for use in apples and pears in N.Y.; the DEC is still reviewing the total package, which includes all crops. The only difference between the N.Y. label and other state labels is that N.Y. is restricted to three applications per season while other states are restricted to a total of 120 fl. oz. per season. Growers who would like to apply this product at petal fall against overwintered brood OBLR should now have this option available to them. The SLN labeling must be in the possession of the user at the time of application. ❖❖



UPCOMING PEST EVENTS

	<u>43°F</u>	<u>50°F</u>
Current DD accumulations (Geneva 1/1-5/8):	411	206
(Geneva 1999 1/1-5/8):	350	170
(Geneva "Normal" 1/1-5/8):	339	162
(Highland 1/1-5/8):	527	268

<u>Coming Events:</u>	<u>Ranges:</u>	
San Jose scale 1st catch	189-704	69-385
American plum borer 1st catch	194-567	55-294
Codling moth 1st catch	273-805	141-491
Oriental fruit moth 1st flight peak	259-606	96-298
Lesser appleworm 1st flight peak	372-851	181-483
European red mite egg hatch complete	361-484	183-298
Green fruitworm flight subsides	170-544	69-280
Redbanded leafroller 1st flight peak	180-455	65-221
STLM sap-feeders present	295-628	130-325
White apple leafhopper nymphs present	236-708	123-404
Mirid bugs 1st hatch	322-432	156-231
McIntosh at petal fall	418-563	210-317
Peach at shuck split	362-518	174-287
Pear at petal fall	343-544	144-275
Plum at shuck split	343-546	144-283
Sweet cherry at fruit set	381-518	171-287
Tart cherry at petal fall	385-563	185-289

INSECT TRAP CATCHES (Number/Trap/Day)

	Geneva, NY			Highland, NY		
	<u>5/1</u>	<u>5/4</u>	<u>5/8</u>		<u>5/1</u>	<u>5/8</u>
Green fruitworm	0	0.2	0	Green fruitworm	0	0
Redbanded leafroller	3.6	5.0	6.1	Redbanded leafroller	5.9	6.5
Spotted tentiform leafminer	265	413	392	Spotted tentiform leafminer	9.9	31.1
Oriental fruit moth	-	96.5*	73.8	Oriental fruit moth	2.5*	13.5
Lesser appleworm	-	9.7*	81.5	Codling moth	0	0.1*
San Jose scale	-	0	0.3*	San Jose scale	-	0
American plum borer	-	-	0.3*	Pear psylla (eggs/50 leaves)	18	0
				Pear psylla (nymphs/50leaves)	0	22

* first catch

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.

scaffolds

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