



Issue 6 - May 7, 2002

Chemical Thinning at Petal Fall

Petal fall is the first generally recognized opportunity a grower has to start the thinning process. We encourage you to start the thinning process now. Petal fall thinning is an important component in the "nibble approach." This may be followed by a second less aggressive thinner application if necessary at the 8 to 10 mm stage of fruit development. Carbaryl is the most common petal fall thinner and it is used at a rate of 1 pint (liquid Sevin) per 100 gal. Over-thinning is rarely if ever observed. Frequently, more aggressive thinning measures are appropriate, especially on hard to thin varieties. In this case NAA used at a rate of 8 to 10 ppm or a combination spray of carbaryl and NAA are necessary. Another petal fall thinning option that is sometimes used is naphthaleneacetamide (NAD) applied at a rate of 25 to 50 ppm.

Many orchards have experienced some degree of frost damage this spring. There may be hesitation on the part of growers to thin. If you take a wait-and-see approach to thinning in orchards where frost damage has been light, you run the chance of having heavy initial set and a need for very aggressive thinning later. We suggest that you go into individual blocks and cut flowers. Flowers with black centers have been severely damaged and they will not set fruit. Do this activity in a number of locations in the orchard as well as in both the tops and bottoms of trees. If 25% or fewer of the flowers are damaged it is appropriate to apply a thinner at petal fall. If there is a large discrepancy in the number of flowers damaged between the tops and the bottoms of trees, direct your thinning spray primarily to the tops of trees.

Carbaryl is very toxic to bees. Do not apply any petal fall sprays containing carbaryl in your orchard until the bees have been removed.

Petal Fall - Time to Apply Apogee®

It is appropriate to use Apogee to control vegetative growth on very vigorous apple trees. The first application should go on when shoot growth is 1 to 2 inches. This coincides with late bloom or petal fall in most varieties. Keys to success using Apogee include:

- C Make the first application when shoot growth is 1 to 2 inches.
- C Apply Apogee at this time at a rate of 4-oz/100 gal based upon dilute tree row volume (TRV). In the spray tank include a non-ionic surfactant at the label

recommended rate and either the same weight of ammonium sulfate or 2 pints of a water conditioner such as Quest or Choice. It is not necessary to apply Apogee as a dilute spray, but it must be in large enough volume to assure good coverage.

- C Follow this application 2 weeks later with a second Apogee application at a rate of 2 to 3 oz/100 gal based on TRV dilute, again including surfactant and water conditioner.
- C A third application (and possibly a fourth) of Apogee may be needed in July or August in blocks that are vigorous or if we have a warm, moist summer.

It is important not to apply Apogee at a rate higher than the 6-oz/100 gal rate, even though it is allowed on the label. Recent reports from New York indicate that when rates ranging from 9 to 12 oz/100 gal (adjusted to TRV dilute) are used there can be a substantial reduction in return bloom. It may be prudent to use either NAA or Ethrel after June drop is completed to enhance flower bud formation on Apogee-treated trees. Specific recommendations for the use of these growth regulators will be given in Healthy Fruit at the appropriate time.

Finally, be aware that Apogee may increase fruit set. (This can be good or bad – you are the judge.) Plan on using a more aggressive thinning program in Apogee treated blocks.

Quadris/Abound Warning

Crop diversity in most cases is good, however, growers who cultivate vegetables or small fruit (strawberry, grape) in addition to apples are warned to be extremely careful if the new fungicides Quadris and Abound are used on the farm. These fungicides have vegetable/strawberry/grape labels, but also state on the label that they need to be used in a separate sprayer that is NEVER, EVER used on apples and to avoid any spray drift onto apples. Quadris and Abound are extremely phytotoxic to certain apple varieties, particularly McIntosh and Cortland, and any drift or tank contamination will damage foliage of sensitive apple varieties. In fact, tree death can even be the result. *This is such a serious risk that apple growers who also raise vegetables, strawberries, or grapes ought to consider alternatives to these fungicides (which there are) on those crops on their farms.*

The Curc at Work

Ron Prokopy reports that a second large immigration of

curculio is taking place, with the return of warmer weather on Sunday and Monday. This means that substantial numbers of curculio are in the orchard, waiting for the two conditions needed for them to start their feeding and egg-laying activities on fruit: higher humidity and fruit size of 1/4 inch or so. Growers should plan a full-orchard insecticide (not border sprays) promptly at petal fall, especially considering the intermittent showery weather predicted for the next few days.

Later-developing areas in the hill towns that have yet to reach bloom do not need to worry about controls for PC as yet, but growers should assume that PC are present in the orchard and react accordingly when petal fall occurs.

As noted in the March message, 2001 trials in the Hudson Valley and Michigan indicated that Guthion is still the most effective material against PC, followed by Calypso, Warrior, Actara and Avaunt in descending order of effectiveness.

When Is a Fly Not a Fly?

Answer: When it's a Sawfly:

Sawfly trap captures to date have been fairly low, indicating that sawflies may be slightly behind tree phenology. The highest capture on 5/6 was 12 on a single trap, compared to 50 or more per trap in some recent years. More sawflies are being caught on plant bug traps - hung at knee height - than on the traditional sawfly trap height - head height - so perhaps they have also been disrupted by the windy conditions. The treatment threshold is 9 per trap where a pre-bloom insecticide was applied, and 4 per trap where no insecticide has been applied yet; thus far, no orchard has reached either threshold. Despite the long bloom period, it appears that growers should be able to control sawfly damage well with the petal fall spray, because their flight has been significantly delayed by the cold weather.

Mite We Have a Problem?

Red Mite eggs have likely hatched in virtually all locations by now, though most growers have been able to get on at least one application of oil. The next several weeks is a critical time to scout for mite activity in the orchard; early season mite populations are important because they can be more damaging to the trees at this time, as well as the fact that a small number of mites now, can explode into very large numbers later on. Check at least 5 fruit clusters per tree, concentrating on the older fruit cluster leaves, and plan a miticide if 1-2 mites per cluster are found and no predators are present. Miticide options at this time include Agri-Mek, Apollo, Savey, Acramite, and Pyramite; in addition, summer oil is an option, but this should be used with great caution at this time because of potential synergistic effects with thinning sprays.

Who's Bugging Your Plants?

After a burst of activity in mid-April, plant bug activity had tapered off during the cool weather, but some bugs were observed on buds on 5/6. The white traps are less effective once bloom has begun, because the blossoms compete effectively with the traps at this time, so put more reliance on bud observations. Petal fall sprays directed at curculio and sawfly should take care of the remaining plant bug population.

Small Sucking Psylla

Young nymphs will be present in the orchard soon; monitor fruit clusters for small droplets of honeydew sheltering the nymphs. Agri-Mek should go on as close to petal fall as possible to maximize uptake of the material into the leaves; it is often necessary to apply this material in advance of evidence of insect activity, so growers may prefer to use last year's level of psylla in the orchard as a guideline. Other effective control options at Petal Fall include; Actara, Pyramite and Provado. A season-long program (first through sixth cover) of Surround also provides a no-toxic option for managing Psylla that gives good control

Hop to it

A few white apple leafhopper nymphs have appeared on fruit cluster leaves in the past week; these will generally be controlled by Sevin used as a thinner.

Cell Chewers on a Micro Scale

Flight of apple blotch leafminers appears to have peaked; most orchards are below the threshold level for this insect. In a few weeks the small sap-feeding mines will begin to appear; this is the best time to monitor and decide whether to apply an insecticide directed against the mines, such as Provado or SpinTor (bear in mind that these materials need to be applied when the mines are small sap-feeders for best results, so time is of the essence!). Since Agri-Mek needs to be applied soon after petal fall, it would be better to use the trap captures as a threshold guideline for this material rather than waiting for the mines to appear.

Powdery Mildew

Tight cluster through petal fall is the critical time for controlling powdery mildew on sensitive varieties. Where mildew has been a problem, an SI or strobilurin fungicide at this time will help control mildew as well as apple scab.

Fire Blight

According to the current forecast and the Maryblite model, it looks as if we'll just miss reaching the conditions needed for fire blight this week. As of Tuesday 5/7, two days with an average temperature of 60 would bring us to the degree-hour threshold, at which point a rain or trauma event could induce blight. But it looks as if the temperatures for the next few days will be too low for this to happen. Keep watching the daily temperature and the forecast, and plan on a Streptomycin spray on sensitive varieties if the above-mentioned conditions occur while blossoms are still open.

Rotten Peaches Have No Redeeming Social Value

Peaches remain fairly sensitive to brown rot infection through shuck fall, so keep them covered through this time if warm, rainy weather is predicted.