



## INDEX

A 'Light' Disease Year?  
Thinning  
Powdery Mildew of Apple  
Peach Scab  
Post Bloom Insects  
Young Tree Care  
Care of New Grape Plantings  
Herbicides for Newly Planted  
Strawberries  
Voluntary Cancellation of Benomyl  
(Benlate)  
Upcoming Meetings

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**Crop Conditions:** Above normal temperatures and below normal precipitation have been the rule over past few weeks. Rain fell across much of the state due to a recent cold front, but we are still far below normal for the year. While peach crops are generally looking good across the state, apple flowering is variable. In most places flowering has been heavy, but with some varieties the crop is light due to the frost a couple of weeks ago. We're into prime thinning time now (see article later in this newsletter). Apple fruit size ranges from about 6 mm in northern parts of the state, about 10 mm here in Lafayette and about 13 mm in the south. Grapes have 12-15 inch shoots in the south and 3-5 inch shoots north. Strawberries are finishing bloom south and just starting bloom north. Blueberries are in full bloom in the major production areas. Brambles are blooming in the south.

**A 'Light' Disease Year?** This is shaping up to be one of the best disease years ever...for growers, not plant pathologists! April is generally the month when diseases get going; when scab, rust and blight begin building to break out in a magnificent roar of epidemic diseases by May or early June. Sorry, I just got carried away with that wonderful mental image of diseases. Anyway, with the lack of rainfall this April, and now into May, I have yet to find my first scab lesion...dam! Obviously, if we have no early season disease buildup, we are less likely to have late season disease outbreaks. Also, as leaf, stem and fruit tissue mature they become much less susceptible to the disease pathogens. Of course what I am hoping for with the writing of these words is a guarantee of 40 days of rain and

floods and the worst disease year ever...for growers, not plant pathologists! If conditions do stay dry this is definitely a year where you can stretch the time between sprays, however, don't get too carried away with the amount of stretching you do, sooty blotch and flyspeck can do very well with just summer rains and morning dews. Here's hoping for a 'good' disease year, for growers, not plant pathologists! (*Pecknold*)

**Thinning:** In many ways this has been a great year for thinning. We have had little rain and generally very warm conditions. In fact, an eminent retired horticulturist, known to many of you, told me this morning that this is the warmest spring he can remember in Indiana. Chemical thinners work best when the tem-

peratures are warm, with 70-80°F being ideal. If it's cooler than about 65, thinners won't have much effect and over 85°F can result in overthinning. So across most of the state, the temperatures have been right in the ideal range for us. When you are making notes of what thinners you applied, be sure to note what the temperature was. If you got good thinning last year, you may want to step back the rate of thinners this year since it will probably be more effective due to the warmer temperatures. (Hirst)



**Powdery Mildew of Apple:** While most fungal diseases do best with wet conditions, the one exception is powdery mildew, of all crops, not just apple. Powdery mildew is more prevalent during years when weather is dry and the previous winter has been mild. Keep a close watch for the first symptoms of powdery mildew, especially on those inner, shaded, water sprouts. Growers of mildew susceptible varieties, e.g. Jonathan, Rome Beauty, Ida Red (my favorite disease apple), Cortland, etc. should be especially diligent in their watch for mildew. Apple fruit can become infected with mildew at pink. Fruit infections become evident later in the season, as netlike russet lines on the fruit surface. The tight cluster, pink, bloom, petal fall and first cover sprays are most critical for controlling mildew, but fungicide protection is needed until terminal buds are set. Your best mildewcides are the SI fungicides (Bayleton, Nova, Rubigan and Procure) and the new strobilurins, Sovran and Flint. Good old captan, Vangard, Polyram and mancozeb products do not provide adequate control of powdery mildew. I especially like the use of Sovran or Flint at first cover, not only do you get control of powdery mildew but you also get good control of fruit scab and an

early start on sooty blotch and flyspeck. (Pecknold)

**Peach Scab:** Early shuck-split and shuck-fall sprays are critical for peach scab control. The first spray should be applied about one week after petal fall. Do not wait until the shucks have slipped to begin this program. Continue to spray on a 10-day interval until 40 days before harvest. See ID-168, "2001 Indiana Commercial Tree Fruit Spray Guide", for further information. (Pecknold)

**Post Bloom Insects:** By now most of you have applied your petal spray and possibly your first cover. If you are using Imidan or Guthion for these sprays, you know that the target pests are plum curculio and codling moth. If you use Intrepid or Confirm, only codling moth will be killed. One of the benefits of the broad-spectrum insecticides like Imidan and Guthion is they also kill a number of minor pests that might otherwise become problems. However, there are three pests that those products won't control that you should be looking out for at this time.

Rosy apple aphids can become a problem before bloom, but often aren't noticed until later. This aphid is the worst aphid pest because, in addition to the direct feeding damage it does, it injects a toxin into the tree that causes nearby fruit to abort, be poorly shaped, or be small. It is important to control this insect early, before damage occurs. If you see curled leaves with aphids inside, you may have waited too long. At this point, you should treat if 5% or more of the terminals have live colonies present. Provado will provide excellent control of rosy apple aphids. Thiodan can also do a good job.

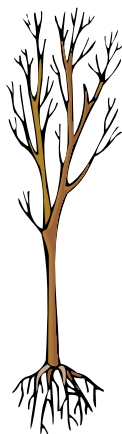
Spotted tentiform leafminers can also be a problem now. Look for young mines in the leaves and treat if you average at least one mine per leaf. It is easy to overestimate the number of mines on leaves, so be sure to count mines on randomly selected leaves to get an accurate estimate. Both Provado and Agri-

Mek will provide excellent control of leafminers.

The white apple leafhopper overwinters in the egg stage and nymphs become active around pink. You should be looking for the nymphs feeding on the underside of leaves now. With all the southerly winds we have had, I expect the potato leafhopper, which does not overwinter here, to make an early appearance this year. If you find an average of three or more leafhoppers per leaf, treatment is recommended. Once again, Provado will provide excellent control.

When making spray decisions for these insects, there are several things you should consider. If you have problems with more than one of these pests, then Provado might be the best choice, since it controls all three. If you have leafminer problems and need to treat for mites, Agri-Mek might be the best choice.

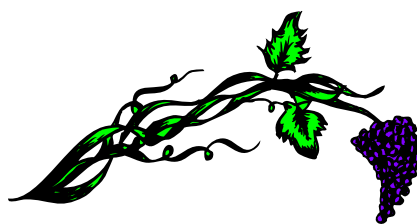
(Foster)



**Young Tree Care:** If you have just planted trees, don't get too busy with your other trees and forget about the new ones. Good weed control around young trees will speed up their establishment and also increase their growth in the critical early years. Good weed control will also reduce damage from mouse and rodent feeding. Also, if you identify unwanted lateral branches early (when they are only 1-2 inches long) then it's worth the time to eliminate them at this early stage. This practice is called "pinching" in some books and involves removing unwanted shoots very early rather than allowing them to grow and then pruning

them out later. This way, the tree puts its energies into branches you want to keep and those branches end up longer at the end of the season. It also decreases the need for winter pruning - remember that heavy pruning of a young tree delays cropping. Pinching is also very quick since it can be done by simply breaking out the tender young shoots before they become woody. Several passes may be needed over new trees, but they will probably require less than 30 seconds per tree. A little time invested now can pay off big later on.

(Hirst)



**Care of New Grape Plantings:** There have been several new vineyards planted around the state over the past few years. Those planted this spring should be starting to grow if there has been sufficient soil moisture. Lack or rainfall this spring has allowed growers to plant on schedule, but now we need rain to get the vines established. If a source of clean water is available, trickle irrigation can really improve vine establishment. Once the vines are 2-3 years old, irrigation is usually not needed on deep soils with moderate moisture holding capacity.

Over the next couple of weeks, newly planted vines should be at a point where they will need some initial training. If your vines are in grow tubes, be sure to provide support for shoots above the tube to avoid damage from the shoot scraping across the edge of the tube. Either use a string tied between the mid and upper trellis wires (if the trellis is established) or tie the shoot to the stake supporting the grow tube. If you are not using grow tubes for vine establishment best results are obtained when the vine is supported rather than being left to grow on the ground. The support can be

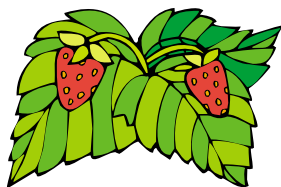
a stake or, if the trellis is established, twine tied to the wires. “Tapeners” work well for quick, easy tying of shoots to the support, but any type of tie will work so long as it doesn’t girdle the shoot.

Some removal of shoots is usually necessary. Newly planted vines are often thinned back to 2 to 6 shoots (depending of if grow tubes are used or not). On 1-2 year old vines shoots should be removed along the trunk to concentrate growth along the top wire for cordon establishment. Shoot removal usually needs to be done two or three times during the season on young vines.

I can’t overemphasize the importance of controlling weeds in new grape plantings. There have been several studies across the region recently that have shown that weed growth near young vines has a dramatic effect on vine growth. In my opinion, a weed free strip at least 4 feet wide (6 to 8 feet is better!) should be maintained under the vine row on all plantings less than 4 years old. Cultivation or post emergent herbicide application will be necessary if pre-emergent material wasn’t used at planting or has lost effectiveness.

Glyphosate (e.g. Roundup) can safely be used on vines in grow tubes, but extreme care must be taken using glyphosate around unprotected vines. If grasses are the main weed problem then grass-specific herbicides such as Poast, Fusilade, or Prism may be better choices. See the weed control section in the Commercial Small Fruit & Grape Spray Guide for complete information on herbicide use in grapes.

*(Bordelon)*



### ***Herbicides for Newly Planted Strawberries:***

(Adapted from an article by Richard C. Funt, OSU Dept. of Horticulture and Crop Science in Ohio Fruit ICM News, Volume 5, Issue 14, April 27, 2001) Management of weeds is the

most important aspect of strawberry production in the Midwest. Cultivation, plastic, fumigation and/or herbicides are generally used. Each have their advantages in weed control, but the cost of either one or a combination of methods is a major consideration. At Cornell University in 1998, new cultivation tools were evaluated along with costs for the first growing season. Over 100 hours of labor were required and costs ranged from \$650 to \$1400/acre. Yields were highest with cultivation and herbicide.

Management of weeds prior to planting is an important part of the weed control program. A 2- to 5-year plan (strategy) of field location, crop rotation, perennial weed control before strawberries, adding weed free mulches, green manures or composts, and reduction of weeds blowing into the field is vital.

The best chance of maintaining a weed free strawberry field is to start with post emergent herbicide control of weeds and soil cultivation before planting. Applying the appropriate weed control or pre emergent herbicide to weed free soil after planting provides for maximum plant establishment. Herbicide choices for newly set plantings have been limited until recently when Dacthal (DCPA) was reintroduced. Many growers have wondered about using Devrinol at planting. An older study at Michigan State University using 4 to 6 pounds of Devrinol per acre applied prior to May 15 showed good weed control and no reduction in number of runners rooted in July. A more recent report from Penn State showed that the treatment with Devrinol 50 WP at 4 lbs/A at planting, plus Sinbar at 2 oz. on June 11, hand weeding on July 16, then Devrinol 50 WP at 4 lbs/A on July 19 provided the lowest percent weed cover in early September. Weed cover in this treatment was comparable to a hand weeding at three times during the establishing year. Further, the Devrinol treatment had similar yields as the hand weeded treatment. The percentage of daughter plants rooted was not

decreased significantly. So growers have some options for weed control in newly set plantings. (Bordelon)

### ***Voluntary Cancellation of Benomyl***

**(Benlate):** (From Massachusetts Berry Notes Source: Massachusetts Berry Notes April/May 2001 by Sonia Schloemann) On April 19, we received news from DuPont and from the US EPA stating that DuPont will discontinue the manufacture of its fungicide benomyl and will phase out sales of Benlate in all its forms from the global market. No sales will occur after December 31, 2001, and all product is expected to clear channels of trade by the end of 2002. DuPont advised customers that this is not a product recall, but a voluntary business decision based on a review of global market conditions and other factors. The decision is part of the recently announced re-structuring to improve the overall competitiveness of its agricultural businesses.

DuPont's statement and the one from the US EPA carried slightly different "spins." DuPont stated that "a significant element of the reason to withdraw benomyl is that the company is no longer willing to bear the high and continuing costs of defending the product in the U.S. legal system where factors other than good science can influence outcomes. In addition, there are significant on-going costs and resources necessary to meet increased regulatory requirements around the world and keep the product active. The company believes those resources are better applied to other areas of the business." The EPA statement noted that the EPA has been in the process of reviewing the human health and ecological effects of benomyl in order to complete a reregistration eligibility decision (RED) next year. The agency noted that the next step under FIFRA will be for EPA to publish a Section 6(f) Federal Register notice announcing receipt of the request for voluntary cancellation and inviting public comment for 30 days.

DuPont noted that any question on the

phase-out of benomyl may be addressed to Richard A. Carver, Product Registration Manager, DuPont Crop Protection, at 302-451-4517 or at his email address:

[Richard.A.Carver@usa.dupont.com](mailto:Richard.A.Carver@usa.dupont.com).

(Bordelon)

### ***Upcoming Meetings:***

**May 10 -** Northeast fruitgrowers meeting. Curtis Orchard, Angola. 6.30 pm. Contact Ricky Kemery (phone 219-481-6826).

**June 5 -** Twilight fruit meeting, East Indiana Fruitgrowers Society. Adsit Orchard (Northern Henry County). 6:00 pm. Contact Harold Brown (phone 765-747-7732) or Peter Hirst (phone 765-494-1323)

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