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**Crop Conditions:** The cool weather of the past couple of weeks has slowed plant development. Grapes are finally post-bloom. Similarly, raspberries and blackberries are still blooming. Blue-berry fruit appear to be sizing nicely with the recent rains and return of normal temperatures. Strawberry harvest is underway across the state. It has been a good season for many growers, but excess rainfall has hurt others, especially in the southeastern part of the state.

**Farm Markets and U-Pick Farms Web Listing:** Many of you already know that the Indiana's Office of the Commissioner of Agriculture maintains a web page dedicated to listing all the farm markets, u-pick farms, and agri-tourism enterprises in the state. For those that are not familiar with this service, we urge you to take advantage of this opportunity for increased exposure of your farm at no cost. The url is <http://www.IN.gov/oca/>. The link to Farm Markets and U-pick Farms takes you to the listing. Visit the site for a printable form to request listing or contact DeeDee Sigler at (317) 233-2207 or [dsigler@commerce.state.in.us](mailto:dsigler@commerce.state.in.us). You can even submit a picture of your operation to be included in the listing. The site is very user-friendly, allowing the visitor to select a county for a list of attractions in that area. (Bordelon)

**Washington Apple Commission Reaches Settlement:** The Washington Apple Commission (WAC) has reached a tentative settlement agreement with all parties in its recent court case. The settlement allows for the WAC to

survive and continue in its non-speech functions. Earlier the court found the WAC to be unconstitutional because it infringed on the free speech rights of organic growers. The current settlement calls for the WAC to be funded by a reduced assessment of 3.5 cents per packed bushel down from the earlier 25 cents per bushel. The non-speech relation functions of the WAC are expected to include administering Market Access Program funds for Washington and supporting industry organizations such as the US Apple Association, and the Northwest Horticultural Society. (Hirst, adapted from the US Apple Association)

**Grape Leaf Phylloxera:** I've had several calls recently about the leaf or aerial form of phylloxera on grapes. We treated some of our plots where we've had serious infestations in the past but left others untreated. Untreated plots are showing fairly heavy infestation. The aerial form of phylloxera causes galling of grape leaves. The damage is usually minor and insecticide control is usually not justified. If chemi-

cal control is desired, timing is critical. First application should be made at bloom with a second application made 10 days later. It's too late this year for effective chemical control. Danitol and Thiodan are the labeled products effective against phylloxera. Thiodan can cause phytotoxicity on certain varieties so Danitol is probably the product of choice for most growers. Evaluate your plantings and make notes of infested areas to treat next year. (Bordelon)

***Shoot Positioning in Grapes:*** Shoot positioning in grapes is done to reduce shading of the renewal zone for improved fruitfulness next year, and to improve sunlight exposure of fruit clusters. Varieties differ in their need for shoot position due to their growth habit and vigor. Some varieties such as Vignoles and Chancellor tend to have relatively short shoots that stand up well on their own, so shoot positioning is seldom needed. Other varieties such as Traminette, Foch and all the American varieties produce horizontally growing shoots that tend to run along the top of the trellis and cause significant shading of the fruit and renewal zone. Shoot positioning is very important with these varieties. The need for shoot positioning on other varieties vary depending on vigor of the particular site.

For high cordon systems, shoots are positioned downward on both sides of the row to improve sunlight exposure to the fruit and renewal zone. The first positioning can usually be done just after bloom. Wait a week if significant shoot breakage occurs. Repeat the positioning about 2 weeks after the first round. If you wait too long, the tendrils will begin to attach, and significant shoot breakage can occur. Timing is very important to reduce shoot breakage and accomplish reduced shading in the renewal zone in time to improve fruitfulness. Fruit bud development begins about bloom so shading during this time can reduce fruitfulness for next year.

With mid-wire cordon, vertically shoot-positioned (VSP) training, the shoots are vertically trained upright above the cordon (or cane). Catch wires are used to support the shoots which are manual tucked into position. Shoot positioning on VSP is done as shoot length warrants. The first set of catch wires is typically at 8 to 12"

above the cordon. When the majority of shoots are at or above this point, the first round of positioning is done. If positioning is delayed too long the cordon (or cane) may rotate and shoots will be pointing down or to the side. It is difficult to turn shoots back up to a vertical plane once they've fallen. The same problem can occur if the first set of catch wires is placed too high above the cordon. Some growers use movable catch wires to help position shoots. The wires are released from their holders and kept beneath the cordon during the winter. Pairs of wires, one on each side of trellis posts, are brought up to a fixed position above the cordon, bringing the shoots into a vertical plane in the process. Various shoot "taping" or tying systems are commercially available to attach shoots to the trellis wires if necessary. (Bordelon)

***Effect of Rain on Fungicide Wash-Off:*** I've had several calls this year (and in years past) from growers wanting to know what they should do about spraying their grapes with all the rain we've had lately. They "can't spray because it's always raining" is the common complaint. That reminded me that we ran an article about this time last year written by Jim Travis, Plant Pathologist at Penn State. Jim noted that if you are using protectant fungicides, you need to consider the effect of rain on wash-off of the materials. The strobilurin (Abound, Sovran, Flint) and sterol inhibitor (Nova, Procure, Rubigan) fungicides are absorbed into the leaf and fruit tissue after application (once the residue has dried) and are not affected by rain wash-off. The protectant (Dithane, Manzate, Penncozeb, Captan, Ziram, Thiram, Polyram) fungicide residues can be affected by rain. A general rule-of-thumb for the effect of rain on washing-off protectant fungicides follows:

- Less than one inch of rain since the last spray will not significantly affect residues.
- One to two inches of rain will reduce the residue by one half. Reduce the number of days until the next spray by one half.

- Over two inches of rain since the last spray will remove most of the spray residue. Renew the fungicide deposit as soon as possible.

So, during all this rainy weather, growers have a couple of options. They can use the new strobilurins or sterol inhibitors and time sprays so that residues dry on the plants before the next rain event, or they can continue to use protectants and monitor rainfall to determine appropriate timing of the next spray. NOT spraying because of frequent rainfall is not an option unless you want to have a major disease outbreak. We are still in the critical period for control of black rot. The first two post-bloom sprays are critical. So don't let a little rain stop you from getting your job done. (Bordelon).

**Codling Moth:** We are continuing to catch substantial numbers of codling moths in pheromone traps in several locations. In some traps we have caught in excess of 30 moths during some nights. Most of us should be between the first and second generation moth flights at this point. There are two reasons why we are continuing to catch moths. First, the extended period of cool weather has delayed the development of many insects and pushed back the end of the first generation moth flight. Second, my entomologist colleagues and I have been observing for several years that in the lower Midwest our generations of codling moths are not very distinct. In other words, during the time that would normally be between generations, we continue to catch fairly high numbers of moths in pheromone traps. We believe that this is one reason many growers have had difficulty controlling codling moths, especially if they were using some of the insect growth regulators, such as Confirm and Intrepid. The bottom line is that whatever insecticide you are using now should be one that has activity against codling moth (Foster).

**Potato Leafhopper:** We are seeing large numbers of potato leafhoppers on a variety of crops, as well as flying around porch lights at night. Potato leafhoppers can be a pest of a number of fruit crops. They use their sucking mouthparts to

remove plant juices and can cause hopperburn to the leaves as well. Potato leafhoppers tend to be more serious on non-bearing trees and on young, tender foliage. On apples you can distinguish potato leafhoppers from white apple leafhoppers because potato leafhopper nymphs tend to crawl sideways rather than straight ahead. Excellent control of potato leafhoppers can be achieved with a number of insecticides, including Imidan, Guthion, Lannate, Provado, Actara, and Assail. Be sure to choose an insecticide that is labeled for the crop(s) you are treating. On apples, I would prefer to not use Lannate because of the potential for flaring mite problems (Foster).

**Aphids:** Our unusual weather this spring has not been very good for most insects, but aphids have seemed to do pretty well. I have observed several species of aphids that are starting to increase in numbers, including rosy apple aphid, green apple aphid, and green peach aphids. In addition to the older standards such as Thiodan and Dimethoate, there are a number of newer products on the market that would be worth trying if you have an aphid problem. Provado, Danitol, Actara, Es-teem, and Assail are all possibilities, depending on the particular aphid species and crop you need to treat (Foster).

**A Banner Year for Apple Summer Diseases:** Black rot, white rot, bitter rot, sooty blotch & flyspeck will all be on the increase as we progress into the summer months. With all the rain we've had it could be a banner year for apple rot and smut diseases as we (plant pathologists) so affectionately call them. Since I can no longer remember which fungicides are most effective for the summer rots, I turn to page 32 of the '2003 Commercial Tree Fruit Spray Guide' to check out the table on effectiveness of fungicides against apple diseases. I first note that the SI fungicides (Nova, Rubigan, Procure and Bayleton) are pretty much worthless for control of most summer rot diseases. On the other hand, mancozeb and Polyram are excellent for control of summer diseases, however they can only be applied up to 77 days of harvest. After the 77-day to harvest restriction has passed captan and ziram remain our best options for summer cover

sprays; they should be used at the full-labeled rate and on a tight schedule if cool, wet summer weather prevails. We also suggest tank mixing with Topsin-M or Benlate if it turns into a ‘sooty blotch/fly speck year’; however, Benlate and Topsin-M should be used sparingly (no more than once a month) to avoid harm to predator mites and lessen the possibility of the development of resistance. NOTE: Benlate, and to a lesser extent Topsin-M, are reported to cause ‘scarf skin’ if used within 40 days of petal fall. Scarf skin is a physiological condition in which the fruit surface develops a milky white or grayish appearance. Scarf skin has no effect on fruit quality or storage ability, but impairs the appearance and shine on a red apple. Added help in control of sooty blotch and flyspeck is now available with the strobilurin fungicides, Flint and Sovran - See below article on Sovran & Flint for details.

Infection from summer diseases, especially sooty blotch and flyspeck, can further be reduced through IPM strategies that lower humidity and promote rapid drying. These include keeping grass mowed during summer and keeping trees well pruned. Tree spacing within and between rows should allow air movement between all trees. Removing adjacent woods or cutting breaks in hedgerows will also help improve airflow in the orchard. Of course it goes without saying (so I’ll say it) that all the above suggestions are pretty much a waste of time if **good sanitation** measures are not strictly followed (Pecknold).

***Sovran & Flint for Control of Sooty Blotch & Flyspeck:*** As mentioned above, we now have added help in control of sooty blotch and flyspeck with the strobilurin fungicides, Sovran and Flint. In an earlier edition of this newsletter we suggested a 1<sup>st</sup>, 3<sup>rd</sup>, and 7<sup>th</sup> cover spray program using Sovran or Flint. This program is based on our research in which Sovran was applied at the maximum rate of 1.6 oz per 100 gallons to Golden Delicious at first cover (May 11th), third cover (June 9th), and seventh cover (August 3rd). The 1-3-7 program provided excellent control of both fruit scab and sooty blotch and flyspeck under extremely high disease pressure

for all diseases. The 3<sup>rd</sup> and 7<sup>th</sup> cover sprays were especially critical in control of sooty blotch and flyspeck. Just so there is no confusion, this program is IN ADDITION TO your regular summer fungicide cover sprays, we simply are suggesting you substitute Sovran or Flint for those fungicides you generally use in the 1<sup>st</sup>, 3<sup>rd</sup> and 7<sup>th</sup> covers. Also, a reminder...we STRONGLY suggest no more than three sprays of the strobilurins per year, and as the label states: “do not apply as the final spray of the season.” (Pecknold).

***Apples May Speed Weight Loss, Research Says:***

The apple of the famed old health adage may also help reduce the feminine pear shape more rapidly, according to new research from Brazil. Adding apples and pears to your daily diet may melt pounds away faster, per study findings recently published in *Nutrition*, the international journal of applied and basic nutritional sciences.

Researchers from the State University of Rio de Janeiro studying the impact of fruit intake on weight loss report that overweight women who ate just 300 grams of apples or pears — that’s the equivalent of three small fruits a day — lost more weight on a low-calorie diet than women who didn’t add fruit to their diet. In addition, the fruit eaters ate fewer calories overall, boosting their weight loss efforts.

“Results indicated that overweight, [high cholesterol] women have important changes in their body weights and metabolic profiles by adding fruits to their diet,” Maria Conceição de Oliveira, R.D., Ph.D., and her colleagues wrote.

Researchers suggested several theories as to why apple and pear consumption may promote weight loss. First, fruits like apples and pears are “low energy-density” foods — that is, they have a relatively low calorie count compared to other non-fruit foods. Second, research has shown that eating a high-fiber diet (calorie intake being equal) promotes postmeal “satiety”, meaning we feel fuller and for longer after eating a high-fiber meal. Apples and pears are both important sources of fiber, delivering 5 grams per medium-

sized apple and 4 grams per medium-sized pear. Finally, research has also established that eating a high-fiber diet decreases total calorie intake, thus contributing to weight loss. In other words, eating a high-fruit diet tends to make it more difficult to overeat, because eating a lot of low-energy dense fruits like apples and pears crowds out other foods, reducing our total caloric intake.

“While several recent studies have suggested apples may provide a ‘whole body’ range of health benefits, this is the first published study to demonstrate that eating an apple before every meal can help increase weight loss,” said Nancy Foster, president of the U.S. Apple Association. “This has intriguing implications for those of us who are trying to lose a few pounds.”

“We are excited to see a published study that has established a connection between weight loss and daily intake of fresh pears,” said Kevin Moffitt, Pear Bureau Northwest president and chief executive officer. “We’ve long been saying that fresh pears are healthy, delicious and sweet, and now we have an additional tool to help us convey this message.”

Citation: Nutrition 19: 253-256, 2003; online at [www.up-state.edu/nutrition\\_journal](http://www.up-state.edu/nutrition_journal).

(from US Apple Association)

***ASEV-ES Annual Meeting:*** The 2003 American Society for Enology and Viticulture/Eastern Section conference will be held July 8-11 in Corning, NY Raddison Hotel. The program is now available online at [www.nysaes.cornell.edu/fst/asev](http://www.nysaes.cornell.edu/fst/asev). A pre-conference tour of the Finger lakes will be held on Tuesday July 8. The Symposium title this year is Wine Closures – Put a Cork in It? and will provide a complete coverage of issues relating to wine bottle closures. The ASEV-ES technical session begin Thursday afternoon and the conference concludes Friday evening. For details and to download the registration forms please check the web site.

***Upcoming Meetings:***

**June 23-24** Summer meeting, Indiana Horticultural Society and Indiana Farm Market Association. Tuttle Orchard, Greenfield IN. For more information look at: [www.hort.purdue.edu/fruitveg](http://www.hort.purdue.edu/fruitveg) or call Peter Hirst.

**July 8-11** American Society for Enology and Viticulture-Eastern Section conference. Corning, NY. Contact [www.nysaes.cornell.edu/fst/asev](http://www.nysaes.cornell.edu/fst/asev).

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