



INDEX

A Grower Self-Assessment of Food Safety Risks
Apple Fruit Quality After Storage
Mites Like Hot, Dry Weather
July Is Leaf Analysis Month
Japanese Beetles on Grapes and Berry Crops
Tissue Analysis of Grapes and Small Fruits
Weed Worries
Pristine Phytotoxicity on NY 73.0136.17
Agritourism Opportunities for Indiana Farms & Rural Communities
A Farewell from Paul Pecknold
Upcoming Meetings

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Crop Conditions:

Peach harvest has started in more southern areas of the state and crops are generally looking good. The dry weather has probably hurt fruit size somewhat. Bramble and blueberry harvest is well underway, and fruit quality has been very good. Potato leafhoppers and Japanese beetles are being found attacking a number of crops. Grape leaf phylloxera and some other miscellaneous galling insects have been prevalent. Phomopsis, downy mildew, and black rot are the main diseases showing up on grapes despite the relatively dry conditions.

A Grower Self-Assessment of Food Safety Risks: This publication is one of a series of Good Agricultural Practices (GAPs) tools available for on-farm use by commercial fruit and vegetable producers. The self-assessment walks farmers through GAPs and helps them to identify the practices requiring attention. These practices include the areas of record keeping, worker hygiene, toilets and hand washing, water use, pesticide use, manure use, compost use, herd health, wild animals, harvest sanitation, postharvest handling, juice and cider, direct marketing, u-pick operations, petting zoos, farm biosecurity and crisis management.

This self-assessment is available to Ohio and Indiana fruit and vegetable producers free of charge while supplies last through the Ohio and Indiana Specialty Crop Food Safety Initiative. Other GAPs tools for farm use include a basic GAPs brochure (Spanish and English), a grower's guide, worker training video (Spanish and English), and laminated posters addressing

hand washing, toilet use and toilet paper disposal (Spanish and English). Producers in other states may order these materials and more by visiting www.gaps.cornell.edu/.

Contact Mid American Ag and Hort Services by phone at 614-246-8286, fax at 614-246-8686, or email at maahs@ofbf.org. More information about the Ohio and Indiana Specialty Crop Food Safety Initiative may be found at www.midamservices.org by clicking on "Projects." The Initiative is conducted in partnership with the USDA Risk Management Agency and numerous other organizations. (John Wargowsky, Executive Director – Mid American Ag and Hort Services)

Apple Fruit Quality After Storage: If you're like me you probably can't go into the supermarket without checking out the produce section, just to see what they have, what the quality looks like, and what price the produce

is selling for. I was in a local supermarket in Lafayette a few weeks ago and saw some Gala from Washington. Bear in mind that Gala typically stores well for a few months then loses quality quickly, but the fruit looked excellent, so I bought a few. I ate one when I walked out of the store and was surprised to find that it was crisp, juicy and in really good condition. This was after about 10 months of storage. I'm sure the fruit had been treated with SmartFresh™ (1-MCP) and probably stored in CA storage also. Remember that SmartFresh™ is a relatively new product from Rohm and Haas that blocks the ripening action of ethylene within the fruit, thereby extending storage life and improving fruit quality after storage. In the past there was no way a Gala would be fit to eat after 10 months in storage.

So why am I telling you about my little trip to the store? Two reasons. The first is to say this stuff really works. But most Indiana growers don't store their fruit that long anyway. The second reason is that this material has the potential to really change the dynamics of wholesale fruit marketing on a worldwide scale. It doesn't take a rocket scientist to figure out what the effect on prices could be if at the time you are ready to market your fruit, there is still fruit available on the market in excellent condition. This could be fruit from Washington, New York or even New Zealand. The best insulation against this is, of course, to sell fruit retail directly to the consumer through farm markets, community farmers' markets and the like. Large growers will tell you that the wholesale business has been getting tougher to make money in, and the advent of SmartFresh™ looks like it could make the wholesale business even more competitive. (Hirst)

Mites Like Hot, Dry Weather: The weather conditions we have been experiencing in most areas of the state have been perfect for development of serious spider mite problems. On apples, European red mite populations are starting to build to damaging levels in many orchards. At this time of year, we would consider populations above 7.5-10 mites per leaf

to be high enough to justify treatment. In the past, we have seen European red mite populations' peak sometime in mid to late July. We can expect to see the populations we have now continue to increase for several weeks, especially if the weather stays hot and dry.

Some growers who used Danitol last year to control periodical cicadas are seeing mite outbreaks, likely because of the toxicity of Danitol to predator mites. If you used Danitol last year or earlier this year, I recommend that you watch your mite populations closely. If you need to use a rescue miticide now, I have had good luck with Acramite and Nexter (formerly Pyramite). My experience has been that Nexter may give slightly better control of European red mite than Acramite, but Nexter also is harder on the predator mites. So, in the long run, you likely won't see a lot of difference in the overall control you receive. A word of caution: Acramite will not perform well if you use hard water. You must condition your water to lower the hardness if you use Acramite. There are a couple of other miticides available that I have not tested, Fujimite and Zeal. I would expect them to work well, but I don't have any personal experience. (Foster)

July Is Leaf Analysis Month: The only sure way to know the nutritional status of your fruit trees is to collect a leaf sample and have it analyzed by a reputable laboratory. Unlike animals trees can't tell us when they are hungry. Numerous factors impinge upon the accuracy of your leaf analysis. For example, heavy crop loads may lead to a dilution of mineral content found in leaves. On the other hand light crop loads usually result in lower N values and higher K values. Other factors that affect the results include rootstock, cultivar, tree age, soil type and composition, and fertilizer practices.

One of the key areas that impact leaf analysis results is the time of sampling. Depending upon the time of season nutrient levels may be higher or lower. Over a number of years scientists have determined that the nutrient levels are most stable during the early to mid portion

of the growing season. Therefore, all recommendations are based on collecting samples from the middle of July to about the middle of August. Even if you do not have time to mail the sample in you still should collect it during this period.

The following are some rules to utilize when collecting leaf samples:

1. Samples should only be collected from plantings old enough to bear a commercial crop or where a nutritional problem is suspected.
2. A single sample should not represent an area larger than about 5 acres.
3. Include only one cultivar or strain in a sample and preferably only one rootstock type.
4. Mark or map each plant or area sampled for future resampling.
5. On large trees, select leaves from the periphery of trees at shoulder height or higher from the middle of the current season's terminal shoots of about average vigor.
6. On dwarf trees select the same type of leaf but on shoots approximately midway on the tree height.
7. Collect 10 leaves per tree from shoots randomly selected from all sides of the tree. Select leaves free of disease or damage (unless diagnosing a trouble spot).
8. 50 leaves per sample are sufficient unless leaves are small.
9. Remove leaves with the petiole (use a downward pull).
10. For trouble spots, take a composite sample from five affected trees and five non-affected trees and label bags accordingly.
11. Contaminated samples (by soil, spray, or other residues that would interfere with analysis) should be cleaned with a nonionic detergent solution and rinsed with soft water (not tap water). Wash leaves ASAP and quickly (for one minute or less).
12. Dry leaves at 80°C or air dry. Samples should not be stored in a location that is moist where mold or damage may occur.
13. Submit the dried sample to a laboratory for analysis along with appropriate informa-

tion on supplied forms. Make sure the samples are labeled in a fashion that the corresponding location in the orchard can be found easily.

This year's dry weather further complicates leaf analysis interpretation. You may see the following trends with our current dry weather pattern:

1. Nitrogen may be lower in light cropping trees that were over thinned.
2. Potassium levels may be lower due to a lack of moisture, which may in turn result in reduced fruit size
3. Calcium may not be moved to the fruits; therefore, you may see an increase in calcium related disorders. However, with increased moisture stress shoot growth is suppressed therefore calcium supply may be evened out.
4. Magnesium, like calcium is absorbed as a divalent ion (Mg+2) and may also be lower due to moisture stress. (Rob Crassweller, Penn. State University)

Japanese Beetles on Grapes and Berry Crops:

The first of this year's Japanese beetles started to emerge in the Lafayette area last week. Growers familiar with this pest know that they have a voracious appetite for leaves of a number of crop and non-crop plants, and the fruit of some crops such as blueberries and brambles. Control of adult beetles is relatively easy with insecticide applications. However, due to the continual emergence of adults over a several week period, re-application may be necessary several times during the season. Sevin is the most effective material labeled for use on most fruit crops. The preharvest interval (PHI) on small fruits is 7 days, which can present a problem during harvest. Imidan is moderately effective and has a 3-day PHI, which may help somewhat. Malathion has a 1-day PHI on blueberries and brambles, although it is not the most effective insecticide. Insecticides containing pyrethrum can be used up to the day of harvest, but provide only very short-term control. Insecticides that contain Neem extract appear to have some repellency against Japanese beetle. Be sure to adhere to the preharvest restriction and Restricted Entry Intervals for

whatever pesticide you choose to use. Traps are generally not recommended as they likely attract more beetles to the crop area. In recent years research has found that use of soil-applied insecticide, imadicloprid (Admire) at egg laying will significantly reduce the number of larvae in the soil. However, it is unclear whether reduction of larvae in and around a planting will significantly reduce the number of adults feeding on a planting since they can travel quite a distance to feed. (Foster and Bordelon)

Tissue Analysis Grapes and Small Fruits:

Plant nutritional status is important for all phases of plant growth and has a direct effect on vigor, fruitfulness, cold hardiness, and other factors. Tissue analysis is the most reliable means of determining plant nutritional status. Combined with soil testing, tissue analysis can help pinpoint the source of problems and determine what measures may be needed to ensure proper nutrition of the crop. Tissue analysis samples should be collected at the appropriate time to give the most meaningful results. For strawberries, sample the first fully expanded leaves after renovation, usually in mid to late July. For brambles, sample leaves on non-fruiting canes (primocanes) between August 1 and 20. For blueberries sample leaves during the first week of harvest. For grapes, samples should be taken about 70 days after full bloom, usually early to mid August. Samples should be adequate in size. Collect 30-60 leaves for strawberries, brambles, and blueberries, and 100 leaf petioles for grapes (for grapes submit only the leaf petiole, or stem, for analysis, discard the leaf blade). Collect samples to represent the entire field, not just from a few plants. Sample different varieties separately. If specific problems exist, collect separate samples from both normal and problematic areas of the planting. After collection, leaves should be washed gently to remove any pesticide residues and dust that might affect analysis, laid out to dry for a couple of days, then bagged in paper bags for submission to the lab. Some labs offer tissue analysis sample kits.

There are several private companies and a few universities that provide tissue analysis. Your county extension office has a list of the ACP Certified plant and soil analysis labs in Indiana. The Midwest Small Fruit Pest Management Handbook has a chapter on tissue analysis and fertilizer recommendations. It is available online at <http://www.ag.ohio-state.edu/~sfgnet/> (Bordelon)

Weed Worries: The Indiana Forestry Service has released a Pest-Alert for an invasive plant called “mile-a-minute” (*Polygonum perfoliatum*). There have been no reports of mile-a-minute in Indiana, but it has been reported in Ohio.

Identification is an easy task. It forms dense mats, similar to kudzu. It has light green triangular leaves 1.5-2.75 inch long and 2-3.5 inch wide. The stems have curved hook-like barbs with ocreas (a saucer shaped sheath). The fruit are quite obvious, resembling blueberries and are about 0.15 to 0.2 inches in diameter. For more information on mile-a-minute visit the web sites at www.invasive.org/eastern/biocontrol/26MileAMinute.html or www.nps.gov/plants/alien/fact/pope1.htm

Pristine Phytotoxicity on NY 73.0136.17: A New York grower who has the numbered grape hybrid NY 73.0136.17 has reported phytotoxicity (leaf burn) after applying Pristine to this particular variety. No other varieties (the grower has about 15, and applied Pristine to everything except Concord and Niagara) were affected. This is consistent with an earlier information passed on by Wayne Wilcox from a 2004 spray trial in New Jersey, where there was about 20% leaf burn following Pristine application. So far, there are no indications of similar effects on other hybrids. So don't use Pristine on 73.0136.17. (From Tim Martinson, Finger Lakes Update June 27, 2005)

Agritourism Opportunities for Indiana Farms & Rural Communities: Purdue University Extension, the Resource Conservation & Devel-

opment Office, Indiana Department of Tourism, Indiana Cooperative Development Center, and the Indiana Commissioner of Agriculture's Office are sponsoring several daylong workshops on agritourism throughout the state this summer and fall.

The purpose of this series of daylong sessions is to provide local agriculture and business development professionals such as Extension Educators, RC&D staff, tourism professionals and local economic development staff, an opportunity to learn more about potential opportunities and related issues in order to assist in the development of agritourism and related rural enterprises on the farm and in rural areas throughout Indiana. The workshop series will examine tourism on the family farm and provide information to farmers/growers and educators who advise farmers that may be considering an agritourism enterprise on their farm. The workshop will also:

- Assess the potential for success of agritourism as an alternative on-farm enterprise.
- Identify and address potential risks and liabilities involved.
- Identify the components of a successful business plan and related resources.
- Showcase examples of successful agritourism efforts in the region/state.
- Identify needs of participants as they initiate or expand or agritourism enterprises.

Regional workshops will be held as follows:
Monday, July 18, 2005, Northeast ~ McClure-Tate Orchard & Apple Dumpling Inn, Wabash and Miami County CES

Wednesday, August 3, 2005, South Central ~ Freeman Family Farms, Hoosier Heartland RC&D

Thursday, August 25, 2005, West Central ~ White Violet Center for Eco Justice, Sycamore Trails RC&D

Wednesday, September 28, 2005, East Central ~ Ratcliff Tree Farm, Henry County CES

More information is available from:
Four Rivers RC&D (Resource Conservation & Development),
112 South Lakeside Drive,
Petersburg, Indiana 47567-9040
Phone 812-354-6808 ext. 5
Fax 812-354-2785
Email: rivers4@sigeecom.net

A Farewell from Paul Pecknold: Well its time to go. Thanks to everyone for your friendship and kindness over the years. A very special thanks to Dick Hayden, Dave Matthew, Rick Foster, and yes, even the Kiwi, Peter Hirst. I truly could not have asked for four better comrades-in-arms to share the road with. The plan is to pack the car, throw the poodle in the rear seat, give Cris a map with LARGE arrows pointing west, then cross my fingers and say a few prayers that we make it over the Rockies. It will be amazing if we make it all the way to California, but I'm hopeful. My very Best Wishes to you all for Health and Happiness. Paul & Cris & the poodle...

Upcoming meetings:

July 26: Seminar on grape growing with Richard Smart, international viticulture consultant. Galena Cellars Winery, Galena, IL. For more information see: <http://www.illinoiswine.com/cgi-local/calendar1/calendar.pl>

July 29: Seminar on grape growing with Richard Smart, international viticulture consultant. SIU Vineyard at the Horticultural Research Center (HRC) in Carbondale, IL. For more information see: <http://www.illinoiswine.com/cgi-local/calendar1/calendar.pl>

August 5: Workshop, "Exploring Opportunities in Specialty Markets".

January 23-25, 2006: Indiana Horticultural Congress, Adams' Mark Hotel, Indianapolis.

Department of Horticulture &
Landscape Architecture
Purdue University
625 Agriculture Mall Drive
West Lafayette, IN 47907-1165

Bruce Bordelon
Dept. of Horticulture &
Landscape Architecture
Purdue University
625 Agriculture Mall Drive
West Lafayette, IN 47907-2010
765/494-1301
e-mail: bordelon@purdue.edu

Paul Pecknold
Dept. of Botany & Plant Path.
Purdue University
915 West State Street
West Lafayette, IN 47907-1155
765/494-4628
e-mail: pecknold@purdue.edu

Jennifer Dennis
Dept. of Horticulture &
Landscape Architecture
Purdue University
625 Agriculture Mall Drive
West Lafayette, IN 47907-2010
765/494-1352
e-mail: jhdennis@purdue.edu

Peter Hirst
Dept. of Horticulture &
Landscape Architecture
Purdue University
625 Agriculture Mall Drive
West Lafayette, IN 47907-2010
765/494-1323
e-mail: hirst@purdue.edu

Rick Foster
Dept. of Entomology
Purdue University
901 W. State St.
West Lafayette, IN 47907-1158
765/494-9572
e-mail: rfoster@purdue.edu

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