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**FFF05-08**  
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**Crop Conditions:** Late season peaches are pretty much done around the state and apple harvest is in full swing. I'd heard varying reports of harvest being a little ahead and at other places a little behind usual. I guess that means we're having an average year! A little bit of hail damage is showing up in places but mostly crops are good. Grape harvest is winding down in the southern part of the state with only the late ripening varieties remaining. In central and northern areas harvest is well underway. Fall bearing raspberry harvest continues.

### ***New plant pathologist joins Purdue:***

Janna Beckerman is the new extension fruit and ornamentals pathologist at Purdue, in the Department of Botany and Plant Pathology. Janna grew up in Ohio, and received her B.S. and M.S. degrees at the State University of New York College of Environmental Science and Forestry, and her Ph.D. from Texas A&M University. Janna's research will be focusing on evaluating the incidence and prevalence of fungicide resistance in Indiana orchards, nurseries, and greenhouses. With student Ryan Deford, we are currently collecting samples of apple scab and flyspeck/sooty blotch complex for evaluation. If you are interested in submitting samples for evaluation, please contact her at 765-494-4628.

### ***Fall Small Fruit Care:***

Grapes-

Grapes should be encouraged to harden off for winter by avoiding nitrogen fertilizers at this time. Apply non-nitrogen fertilizers and lime, as needed based on soil and tissue test results. It is especially important to maintain healthy leaves through fall to promote proper hardening.

Downy and powdery mildews often build to epidemic levels on susceptible cultivars in fall. Both can cause defoliation and reduced winter hardiness so it's important to maintain protection against these diseases throughout the fall until leaves drop naturally.

Blueberries-

Blueberry plants should be encouraged to harden off for the winter. However, growers should continue to irrigate if dry weather persists. Fruit buds are developing now for next year's crop so it is important to avoid water stress on the plants during this time. Apply non-nitrogen fertilizers and materials for soil pH adjustment based on foliar analysis and soil tests. Apply these before fall rains begin and also before adding any supplemental mulch to plantings.

Strawberries-

Flower bud initiation occurs during late summer and fall, so maintaining good plant health into the fall is important for high yield potential next year. Dry conditions can significantly reduce fruitfulness

next year. Irrigate to provide at least 1 inch of water per week through October if rainfall is not adequate. We mentioned the importance of an application of nitrogen fertilizer in the last issue of this newsletter. If it hasn't been done yet, it's not too late. If tissue analysis shows deficiencies in magnesium or boron, early fall is a good time for foliar applications of Epsom salts (15 lb./100 gal./acre) for magnesium and Solubor (3 lb./100 gal./acre) for boron. Phytotoxicity can be a problem with these materials, so read the labels. In addition to fertility, controlling leaf diseases improves the ability of the plant to carry on photosynthesis and store starch in the crowns. Check fields for infestations of leafhopper or aphids. Generally, plants can take a fair amount of feeding by these insects, but heavy infestations can be a problem.

#### Brambles-

Encourage hardening off of canes in summer bearing varieties of brambles by avoiding nitrogen fertilizers and supplemental watering at this time. Spent floricanes can be removed now, or later during fall, winter or early spring. Fall bearing raspberries can still benefit from irrigation in dry weather to help maintain fruit size. Apply non-nitrogen fertilizers and lime, as needed based on soil and tissue test results. If Phytophthora root rot has been identified in a field, treat the affected area with Ridomil Gold EC, Alliette or phosphorous acid in September or early October. This timing is important to get the material in place in the root zone before the onset of cool wet weather in the fall. We've seen a considerable amount of raspberry leaf spot in our plantings, and it has caused defoliation of some varieties. Growers may want to consider fungicide applications if they have a problem. See the Midwest Commercial Small Fruit and Grape Spray Guide for details. (Bordelon)

#### ***New Rust Disease of Blackberries May Spread Across the U.S.:***

Source: Marvin Pritts, Cornell Dept. of Horticulture

Himalaya blackberry (*R. armeniacus/R. procerus*) is considered a noxious weed in Australia, New Zealand, and Chile. A rust

fungus was introduced in these countries to help control its spread. Now this fungus has shown up in Oregon and Washington and has begun to infect commercial plantings of certain blackberry cultivars, causing significant losses. Most of the varieties grown in California, Washington, and Oregon are not closely related to the susceptible varieties; however, many eastern varieties have susceptible species in their parental background. It is possible that this rust disease could spread to eastern plantings in the next couple of years. We do not yet know which varieties are susceptible, so screening will be underway shortly.

The rust disease does not kill the plant completely, but can weaken it over time and significantly reduce fruit production. Wine-colored spots appear on the top of infected leaves. Directly under these spots, on the bottom of these leaves there will be circular patches of cream to yellow spore masses surrounded by a violet tinge. Advanced stages of the disease will also have black spores mixed in with the yellow spores. Older leaves close to the canes are the first infected and can eventually die. Defoliation of entire canes has been seen in severe cases.

Spores can also often be found on the blossoms and unripened fruit. All green portions of both primocanes and floricanes can be infected. Information and images of this rust can be found online at: <http://www.nwipm.info/blkrust-05.htm>.

If the rust appears, we should be able to control it with fungicides. Pathologists in Oregon and Washington will likely have figured out how to manage the disease if and when it gets into the eastern United States.

***Cider contest:*** The Indiana State Cider Contest will again be held in 2006 in conjunction with the Indianapolis Horticultural Congress, January 23-25, 2006. If you are currently making cider, you may want to freeze some for your entry. Remember that you need to submit 2 gallons per entry. (Hirst)

***Update on cider regulations:*** I have just received a letter from the FDA containing

guidance to the fruit juice industry (including cider). This letter, containing recommendations, is being sent out to state regulatory agencies. Although these recommendations are non-binding, I urge all cider makers to read this carefully. The letter can be found at: <http://www.cfsan.fda.gov/~dms/juicgu14.html> (Hirst)

**Interesting tidbits:** According to the strategic plan of the newly formed Indiana State Department of Agriculture (ISDA):

- The US agriculture and food system contributes 12% (\$12.3 trillion) to the national economy and employs 17% of the labor force
- Production agriculture and forestry and fishing services accounts for \$2.5 billion of Indiana's \$204.9 billion Gross State Product (GSP) – that's about 1.2%
- Indiana's population was 6.2 million in 2004 – making it the 14<sup>th</sup> most populated State in the nation. However the proportion of people living in rural areas is declining, with currently 22% in rural areas.
- The number of farms in the state has declined by one third in the last 30 years. Currently there are about 60,000 farms in Indiana, with an average size of 250 acres.
- Since 1974, the total area devoted to major field crops has only decreased 2%. Currently about 13 million of the 23 million acres in the state is used for agriculture (57%).
- In 2003, nearly 27,000 of Indiana's farmers (about 45%) received subsidies from the federal government. That year, nearly 30% (\$446 million) of Indiana's net cash income (nearly \$1.6 billion) was derived from the federal government in the form of direct payments or marketing loan gains.

The following table shows the size and output of farms in Indiana.

Farm Sales Category	Number	% of Total	% of Output
Over \$500,000	1,856	3.1	68.0
\$100,000 - \$500,000	8,505	14.1	19.0
Under \$100,000	49,935	82.8	13.0
<b>Total</b>	<b>60,296</b>	<b>100.0</b>	<b>100.0</b>

Note that over 80% of the farms in the state have farm sales of less than \$100,000 and that the largest 3% of farms produce the majority (68%) of the output.

For more information of the ISDA strategic plan, see [http://www.in.gov/isda/strategic\\_plan/index.html](http://www.in.gov/isda/strategic_plan/index.html)

**Upcoming meetings:**

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

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