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FFF 07-06

July 19, 2007

Crop conditions: Blueberry harvest is winding down across central and southern areas. The warm conditions speed up the already shortened season. Black and summer red raspberry harvest was similarly short due to the April freeze and warm conditions. Fall bearing reds are suffering from the dry and hot conditions, but should begin harvest soon. Early grapes are at the beginning of the ripening period. Harvest appears to be on pace to be normal this year. Peach season is going well (for those who have peaches) and quality appears to be very good. Early apples will be ripening soon.

Successful Summer Meeting: The Indiana Horticultural society had a very interesting and enjoyable summer meeting on July 2-3. We extend our thanks to the Beiersdorfer and Wesler families for their hospitality and willingness to open their farms to us.

State Requests Disaster Designation to Help Farmers: Governor Mitch Daniels is asking the U.S. Department of Agriculture to designate 26 Indiana counties as disaster areas to make farmers eligible for low-interest emergency loans from the USDA Farm Service Agency (FSA). The request says cold weather from April 4-10 and a tornado on April 11 severely affected fruit and wheat crops. Federal

officials are now working with the Indiana FSA office to determine the extent of disaster in each county. Unusually cold spring weather and an April tornado prompted Governor Mitch Daniels to ask that several Indiana counties receive disaster designation from the U.S. Department of Agriculture. The designation was sought because of cold weather (frost and snow) from April 4-10 and tornado damage on April 11. Disaster designation makes farmers eligible for low-interest emergency loans from the USDA Farm Service Agency (FSA).

“April’s unusual cold snap severely affected Indiana’s apple, peach and fruit crops, as well as some wheat crops,” said Indiana Agriculture Director Andy Miller. “Disaster designations would provide assistance for Hoosier farmers who need it.”

From April 4-10, the following 26 counties reported to their local Farm Service Agency offices damage to one or more crops due to cold weather (frost and snow). The most common crops that were reported to have damage were orchard crops (apples, peaches), nursery crops (fruit) and wheat.

Brown, Clark, Dearborn, Hancock, Henry, Howard, Jackson, Jasper, Jefferson, Johnson,

Knox, Lake, Lawrence, Monroe, Morgan, Newton, Ohio, Orange, Owen, Posey, Rush, Scott, Shelby, Starke, Washington, and Wayne.

In addition to the counties affected by cold weather this spring, Hamilton County's FSA office reported damage to the local wheat crop because of a tornado on April 11, 2007.

Governor Daniels requested disaster designation for the affected counties from USDA earlier this month. USDA will now work with the Indiana FSA office to determine the extent of disaster in each county. If these counties meet USDA requirements, they and the counties contiguous to them will be declared disaster areas, making farmers eligible for low-interest emergency loans. Source: Indiana State Department of Agriculture

Looking to Source Apples? Many Indiana growers have short crops this year and may be looking to buy in apples for their markets. One possible source is Ohio Fruit Growers Marketing Association – for more information including contact info refer to <http://web.tusco.net/fruitgrowers/> or to find Ohio growers look at <http://www.ohioapples.org/> (Hirst)

Apples look good, but labor concern looms: Apple grower-shippers and officials in the Northeast look forward to continued strong demand as the 2006 storage deal winds down and the new crop begins shipping, though labor and drought could complicate matters.

Gardners, Pa.-based Rice Fruit Co., one of the last Northeast growers still shipping storage apples in early July, should wrap up its controlled-atmosphere deal about the fourth week of July, said marketing director Brenda Briggs. The company will kick off the 2007 harvest with Ginger Golds the third or fourth week of August. Galas will follow in early September, with Reds, Goldens, McIntosh and other varieties coming later in September and October,

Briggs said. We could use some rain, but at this point, the crop looks very nice, she said. The fruit is sizing well and the finish looks good. New-crop apples to be marketed by Waynesboro, Pa.-based Five Forks Fruit were very clean with no insect or disease pressures, said Lee Showalter, owner.

Both Briggs and Showalter said finding enough workers to pick the 2007 crop could be an issue. While Showalter said no problems had yet materialized as of early July, Briggs said labor was very much a concern.

Briggs expects the strong markets growers enjoyed throughout the 2006-2007 season to continue in the new season. With very few Goldens still in the pipeline in July, she expected very strong demand for Ginger Golds in August. Also forecasting strong markets is Peter Gregg, spokesman for the Fishers-based New York Apple Association. Our retailers are telling us sales are very strong for New York apples, he said. We're working very hard to promote our crops, and it's paying off.

Packinghouse returns for New York apples were an average of 27 cents per pound in June, up from 23 cents at the same time last year, according to the U.S. Department of Agriculture's July Noncitrus Fruits & Nuts report. As of July 1, fresh holdings of Northeast apples were 5% lower than a year ago and 32% below the five-year average, according to the Vienna, Va.-based U.S. Apple Association's July Market News report. On July 10, the U.S. Department of Agriculture reported prices of \$16-18 for carton tray packs of red delicious 72-125s from Washington, down from \$18-20 last year at the same time. (Andy Nelson, The Packer)

RMA Fact Sheets: Updated fact sheets are now available on the RMA website and the Regional Office website. Of particular importance to most of you is the new fact sheet that outlines the procedure of requesting a written agreement in a county with no actuarial

documents. Below is a link to the regional office site where most of the fact sheets can be located: http://www.rma.usda.gov/aboutrma/fields/il_rso/

The fact sheet that explains the procedure of requesting insurance in a county with no actuaries: <http://www.rma.usda.gov/pubs/2007/requestinginsurance.pdf>
(Jennifer Dammerman, RMA, Springfield, IL and John Wargowsky, MAAHS)

2007 Produce Availability and Merchandising Guide Now Available: The Packer has distributed the 2007 Produce guide. This guide is a great resource for new fruit and vegetable growers as well as others who are transitioning into the industry or looking for general information on produce merchandising and availability. Information provided includes merchandising information by commodity, commodity availability by competing states, average retail price per pound for 2005 and 2006, retail sales, commodity promotion tips, food service recommendations, shipping requirements, USDA grades, common PLUs, handling tips (varies by commodity), nutritional facts, and shippers by state. Select specialty crop information such as flowering kale, jack fruit, and lemon specialty cucumbers is also available. Other resources include food safety tips, food inspections, product load compatibility, and a Red Book Buyers guide. This year's new feature is a section devoted to ideas on how to position and promote produce and produce sales broken into number of pounds sold and the price per pound. Finally, as the "5 A Day Campaign" has ended, an update is given about the "Fruits & Veggies: More Matters!" program. The 2007 Guide is available online at: <http://www.thepacker.com/theguide/theguide-home.asp> Paper copies are \$35. (Dennis)

Food Safety Will Become A Bigger Concern for Growers & Consumers As Outbreaks Continue to Occur: Health officials say mis-handled lettuce may have been responsible for

sickening 18 people with E. coli at a northern Alabama fast-food Mexican restaurant. The Huntsville-Madison County Health Department identified the 18 as testing positive for E. coli 0157:H7 after eating at Little Rosie's Taqueria in Huntsville, Ala., on June 28-29. Debra Williams, department assistant director, said investigators didn't visit the restaurant's produce supplier because inspectors think the problem might be traced to restaurant worker cross-contamination with shredded lettuce. "The people that became ill were more associated with eating the shredded lettuce than anyone who stayed well," Williams said. "We have seen them (the restaurant workers) with cross-contamination problems otherwise while we were watching them. They were handling raw and uncooked food with the same tongs, which is gross contamination."

Jim Quillin, owner of Huntsville-based Quillin Produce, July 12 said inspectors had cleared his 60-year-old family-owned foodservice produce distribution operation. He said he expected a visit from health inspectors but that state investigators have focused on the restaurant. "We check our temperatures and have them documented every day in these coolers," Quillin said. "I'm convinced it (the E. coli) wasn't here. The problem the health department said is not with us but with the restaurant. They said they're not even sure if it involves lettuce."

Quillin said the restaurant, which manually shreds iceberg lettuce instead of using pre-cut product, has long been known as a clean operation. He said his drivers often tell him how clean the operation is. Quillin Produce distributes throughout a 75-mile radius of Huntsville. The grandfather of a sickened child that was quoted in the Huntsville Times said he didn't think lettuce was involved because his grandson, who doesn't like to eat lettuce, gave the lettuce in his chicken fajita to his mother. (Doug Ohlemeier, The Packer)

Shoot Positioning and Canopy Management:

Early grapes varieties are in nearing veraison across the central and southern parts of Indiana. At this stage it's time to evaluate the vine canopy and the status of shoot positioning. Varieties differ in their need for shoot positioning due to their growth habit and vigor. Some varieties such as Vignoles and Chancellor tend to have an semi-upright growth habit and relatively short shoots that stand up well on their own, so shoot positioning is seldom needed. Other varieties such as Traminette, Chambourcin 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. In high cordon-trained vines, shoot positioning involves pulling lateral-growing shoots off the top of the trellis to hang vertically downward. In mid-wire cordon-trained vines, shoot positioning is done by tucking shoots between sets of catch wires, or pulling catch wires up into position so that the shoots grow vertically upward. Shoot positioning is critical for improving sunlight exposure of fruit and increasing fruit quality. Additionally, it improves fruitfulness of the basal nodes on the shoots for full fruiting potential next year. Shoot positioning normally begins after bloom in mid-June and needs to be repeated two or three times during the summer. At this point in the season, the final shoot positioning should be accomplished so that leaf removal can be accomplished. Leaf removal is another important component of canopy management. While most commonly associated with mid-wire cordon vertically shoot positioned training systems, it can be used on high cordon trained vines as well. Removal of 2-3 basal leaves in the cluster zone anytime prior to veraison can significantly improve fruit quality by decreasing fruit rot potential, and improving sunlight exposure of clusters. We generally recommend removal of leaves mainly on the east side of the rows. Our work with Traminette has shown a significant increase in important flavor and

aroma compounds (monoterpenes) and wine quality scores when fruit gets partial sun exposure. (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 strawberry, 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. A list of certified soil and plant analysis testing labs serving Indiana growers is located at <http://www.agry.purdue.edu/ext/soiltest.html> 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)

Warm, humid weather is conducive for powdery mildew in grapes: Keep scouting vineyards for powdery mildew as warm, humid weather is conducive to disease development. Don't depend upon a cursory observation of your vines from the seat of your tractor or pick-up truck, but be prepared to "wrestle" with the vine to look at leaves and clusters in dense, shaded portions of the canopy. As a reminder, once powdery mildew gets out of control, it is extremely difficult to arrest the disease. It takes very little diseased fruit (less than five percent) to impart a moldy flavor to the wine. Symptoms of powdery mildew are a white to gray powdery patches on the surface of the leaves and berries.

By now in most areas of the state, the critical period of the highest susceptibility of the fruit clusters to infection should have passed (two to three weeks after bloom). However, there may be late-developing clusters in the canopy that may still be susceptible to infection. There is also a risk of late (diffuse) fruit infections (e.g., between three and five weeks after bloom) that are barely visible but can compromise the integrity of the berry skin by creating small dead spots, which can provide entry points for pathogens that cause Botrytis and sour bunch rots. Soon, though, we will start focusing mainly protection of the foliage as severe powdery mildew infections can reduce the ability of the vine to produce sugars to ripen the fruit. Most grapevines can withstand some foliar disease, especially late in the season, since they are usually not operating at "full capacity". The susceptibility of the grape cultivar and the crop load are the main factors that determine how much disease the vine can withstand before losses in yield and fruit quality become evident. The weather is also an important factor in this equation.

Unlike other grape pathogens, the fungus does not need free water for infection; moderate to high relative humidity (40-100 percent) is sufficient for germination of conidia. In fact, rainfall is detrimental to survival of conidia as they tend to burst in water. Although infections can occur at temperatures from 59 to 90°F, temperatures between 68 and 77°F are optimal for disease development. Temperatures above 95°F inhibit spore germination, and the fungus may be killed at temperatures above 104°F.

For infection prevention, good fungicide options include sulfur, sterol inhibitors (Nova, Elite, Procure, Rubigan, Vintage), strobilurins (Pristine, Sovran, Abound, Flint), Endura, and Quintec. Remember that some grape varieties are sensitive to sulfur, Pristine or Flint, and that fungicides differ in their pre-harvest intervals. Also, sulfur applied late in the season may interfere with wine-making so is not advised beyond veraison. Alternating fungicides with different modes of action is important for fungicide resistance development.

If powdery mildew is already present, there are several possible eradicants available: JMS Stylet Oil (paraffinic oil); Armicarb, Kaligreen and MilStop (all potassium bicarbonate salts); and Oxidate (hydrogen peroxide). JMS Stylet Oil (1.5 to 2 percent) appears to offer the best results. Any of the eradicant approaches to powdery mildew require high (at least 100 gallons of water/acre) spray volumes in order to achieve complete tissue coverage as the product needs to come in contact with the powdery mildew hyphae to be effective. One concern with JMS Stylet Oil is that it can delay Brix accumulation, so it is best not to use it after veraison. Also, do not apply oil and sulfur within 14 days of each other. Removing leaves in the fruiting zone for Botrytis bunch rot control can also help reduce powdery mildew severity by increasing airflow, light penetration and fungicide penetration. (Annemiek Schilder, Michigan State Univ.)

Management of Bird Damage: I recently saw a great article on bird management by Cathy Heidenreich in the June 22 issue of Cornell University's New York Berry News. It's titled "Bye Bye Birdie--Bird Management Strategies for Small Fruit," and it's online at <http://www.nysaes.cornell.edu/pp/extension/tfabp/newslett/nybn66a.pdf>. It includes information on bird identification, cultural practices to deter birds, chemical repellents, scare devices, predators, and visual deterrents. It has a good list of product suppliers as well. If you are unable to access it online, let us know, and we'll send you a printed copy. (Bordelon)

Upcoming meetings:

July 31. Eastern Indiana grafting workshop and meeting, Tuttle Orchard. Contact Dave Clamme for more details, phone 765-747-7732, email: dclamme@purdue.edu

Jan. 28-30, 2008. Indiana Horticultural Congress, Adam's Mark Hotel, Indianapolis.
www.inhortcongress.org

Department of Horticulture &
Landscape Architecture
Purdue University
625 Agriculture Mall Drive
West Lafayette, IN 47907-2010

Bruce Bordelon
Dept. of Horticulture &
Landscape Architecture
Purdue University
625 Agriculture Mall Drive
West Lafayette, IN 47907-2010
765/494-8212
e-mail: bordelon@purdue.edu

Janna Beckerman
Dept. of Botany & Plant Path.
Purdue University
915 West State Street
West Lafayette, IN 47907-1155
765/494-4614
e-mail: jbeckerm@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

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

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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