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2006 Season Review

Apples:

Scattered hail storms took the shine off what would otherwise have been a very good apple year. A mild winter was followed by a warm spring with adequate moisture, leading to good early fruit growth. (Hirst)

Peaches:

Conditions were favorable for a very good peach crop throughout the state this year, however a moist spring led to a number of disease problems (see below). Japanese beetle damage is increasingly becoming more problematic. (Hirst)

Blueberries

Indiana produced a large crop this year, estimated to be 3.5 to 4.0 million pounds and prices were at an all-time high. Fruit size and quality were good due to plentiful rain. No major disease or insect problems were reported. Phomopsis shoot blight and mummyberry continue to be the major disease problems. Cranberry fruit worm, Japanese beetles, and blueberry maggot are the major insect pests. (Bordelon)

Brambles

Winter kill was not a big problem this year on blackberries. Japanese beetles are a major problem, especially on flowers of Arkansas Primocane Fruiter. Heat during the season lead to a high incidence of white druplet disorder in blackberries. Rainfall in August lead to severe gray mold problems in fall bearing red raspberries. Raspberry Leaf spot was mild this year compared to 2005. (Bordelon)

Strawberries

The strawberry crop was good this year. Gray mold was a problem in some areas and the heat spell in June shortened the harvest season. Black root rot complex continues to be a problem on heavier soils. (Bordelon)

Grapes

The 2006 vintage will not be as good as the excellent 2005 vintage due to excessive fall rains that coincided with harvest in many areas. Fruit rots were the biggest problems. Rots caused by *Phomopsis viticola* were particularly bad due to an extended period of cool, wet conditions early in the season. Black rot was also quite common. The excessive summer heat lead to "uneven ripening" disorder in Concord grapes in the southern part of the state. Late season downy mildew was severe

in some areas. Japanese beetles and leaf phylloxera continue to be significant insect pests. Multicolored Asian lady beetles were not a problem this year. (Bordelon)

Plant Pathology

It was a good year to be a fruit pathologist in Indiana!

The moderate winter temperatures of 2005 resulted in an above normal carry over of apple powdery mildew and increase in mildew infection, especially on Jonathan and other mildew-prone varieties. The moderate winter became a really wet spring in parts of the state, resulting in what seemed to be one continuous scab infection period from late March through May. This resulted in a bad year for apple scab, with fruit infection very high in those orchards lacking a good, early spray program for scab. This higher than normal infection rate has resulted in greater grower concern about resistance issues. Our preliminary data suggests two things: 1). These concerns are well founded, but 2). Timing of sprays could have been better. In the northern part of the state, unusually dry weather prevented serious scab development, but powdery mildew was higher than normal.

Wet weather in the central and southern part of the state brought a much higher incidence of cedar-apple (leaves and fruit), cedar-hawthorn (leaves only), and cedar-quince (fruit only) rust. The extremely wet weather this spring made for orange blobs, instead of the usual cute, or at least interesting “kooshballs” we usually see on junipers. Squishing the telial spore horns that release the spores that infect the apple leaves and fruit just wasn’t as much fun as in previous years—in fact, it was downright gross.

The situation with fire blight is quiet. I haven’t heard any reports of worse-than-usual outbreaks of fire blight, and in looking at orchards, I don’t see them, either. Now I know the fire blight bacterium doesn’t read the books, but with all the wet weather, and severe

hail of 2006, it seems that this should be a bigger problem than it appears. It certainly is a bigger problem in the landscape! Come spring, be extra careful, and do a thorough scouting of cankers, just to be on the safe side. And in the spring, don’t forget that dormant application of copper, too.

Sooty blotch and flyspeck of apple intensified as the wet weather continued throughout the summer. At harvest, both diseases were severe in orchards that had not maintained an adequate spray program. The strobilurins, used in combination with captan gives excellent control of this disease complex. Management of the other rots (bitter rot, white rot and black rot) remains tricky. Reports continue to come in on bitter rot control, particularly with respect to the 77-day PHI when using EBDCs. Current work is underway to address EBDC usage and Reregistration Eligibility Decision (RED) document.

You would’ve thought that the early wet weather would cause an increase in reports of Phytophthora crown rot on both apples and stone fruit. We thought so, too--And we were wrong. The constant moisture never caused any of the drought stress needed for symptom development. When that drought stress does occur, I suspect we will see an unusually bad “year” for phytophthora root and crown rot. For this reason, it is important to continue your treatment in the spring, with either Ridomyl, or phosphorous acid based fungicide (Aliette, AgriFos).

We had peaches this year! We also had tremendous outbreaks of every peach pathogen, due to the unusually wet conditions. I saw a lot of leaf curl on peach, but even more misdiagnosed peach scab. Many growers confused the symptoms of scab with bacterial spot. Peach scab primarily occurs on the shoulders, and doesn’t cause foliar symptoms. Peach bacterial spot occurs on the fruit, leaves, and new growth. If the spots didn’t get your peaches,

brown rot might have, especially where mid and late season fungicide sprays had not been maintained. Fungicide resistance is an emerging issue with this disease as well.

Plum pox virus (PPV) was found in Michigan and New York this summer. In Michigan, the good news is that the one and only positive tree has been destroyed, and no additional trees have been found. The bad news is that the source of the PPV in the positive tree at SWMREC is still unknown. PPV is a plant disease infecting stone fruits, including plums, peaches, nectarines and apricots. The strain of PPV found in North America, PPV strain D, is less virulent than other strains, does not infect cherry trees and is not seedborne. Because the strain is not seedborne, it is not necessary to regulate the movement of fruit to prevent the spread of the disease. Several aphid species can serve as carriers of the virus. Symptoms of PPV infection include distortion and discoloration of fruit, yield reduction, and shortened lifespan of an already short-lived tree. The virus was first detected in Canada back in 2000, and was found in Pennsylvania in 1999. (Beckerman)

Azinphos Methyl (Guthion) to be phased out:

Last week, the EPA announced its decision to phased out the use of the insecticide azinphos methyl, commonly known as Guthion. While the EPA were determined to phase out the use of this material on apple, the US Apple Association negotiated to make some improvements for growers in the final decision. The main points of the decision are:

1. Annual per acre applications will be reduced as follows:

2007	8 lbs formulated max. per acre
2008-09	6 lbs formulated max. per acre
2010	4 lbs formulated max. per acre
2011-12	3 lbs formulated max. per acre

2. Growers must observe a 60 foot buffer from permanent bodies of water.

3. Growers must observe a 60 foot buffer from occupied dwellings, which do not include farm buildings and barns.

- 4.. Pick-Your-Own growers must observe a preharvest interval of 44 days when applying between 2.02 lbs. per acre and 3 lbs. per acre of formulated product, 39 days when applying 1.2 lbs. per acre and 2 lbs. per acre of formulated product and 33 days when applying 1.2 lbs. per acre or less.

Full details can be found at:

http://www.epa.gov/oppsrrd1/op/azm/phase-out_fs.htm

(Hirst with information from the US Apple Association)

Indiana Horticultural Congress: Most of the planning is in place for the 2007 Indiana Horticultural Congress. The Congress will be held January 29-31 at the Adam's Mark Hotel in Indianapolis. The trade show is filling up fast and we hope to have a sold out trade show once again. A few of the highlights of the 2007 Congress are:

- new grape varieties to wine about (hey don't blame me folks, I don't write these jokes!)
- beginning apple production workshop
- cover crops for vegetables
- farmers' market workshop
- high tunnels for vegetable poroduction
- private applicators certification credits
- Hort Congress social hour, with door prizes

We hope to have the program finalized by early December. If you have attended the Congress during the last 2 years, you'll receive a program in the mail. If you would like a program and haven't received one by mid December, please contact Connie Holderfield (phone 765-494-1296 or email cholderf@purdue.edu). The program and other information will be posted on our website <http://inhortcongress.org>

Melon recall: Just when you thought it was safe to go back into the supermarket following the spinach outbreak... According to the Produce Marketing Association (PMA), Rio Vista Led is recalling over 62,000 cantaloupes because they may be contaminated with Salmonella. Although there have been no reports of illness, testing by FDA showed some of the cantaloupes to contain the bacteria. The cantaloupes were of the Llano and Nature's Partner brands. It is being emphasized that this is not an outbreak – it is a recall based on a positive lab test and no other action is planned beyond the recall. This is cited as an example of the system working. (Dennis and Hirst)

Tomato outbreak: There has been a second outbreak of food borne illness attributed to tomatoes, according to the PMA. The illness was apparently caused by tomatoes containing Salmonella eaten in restaurants. This outbreak caused illness in 98 people in 19 states, and has been linked to outbreaks in tomatoes from Virginia in 2002 and 2005. (Dennis and Hirst)

Cider Workshop: Cornell University is hosting a workshop on January 5-8, "Cider making – a foundation". This is being at the NY State Agricultural Experiment Station in Geneva NY. More details and an application form are available at our website at: <http://www.hort.purdue.edu/fruitveg/>

Honeycrisp one of the best technologies of 2006: In the 2006 edition of the Better World Report, there are listed 25 innovations that changed the world. "The Association of University Technology Managers launched the Better World Project in 2005 to promote public understanding of how academic research and technology transfer have changed our way of life and made the world a better place" according to the introduction of the report. One of the top 25 of 2006 is the Honeycrisp apple. The chapter describing this is titled "The Honeycrisp: a Sweet, Tart Jump-Start for a Sagging Limb of the Apple Industry". The report goes on to state "The Honeycrisp apple has brought

much-needed revenue to small family-run orchards in the upper Midwest and New York state. Developed by professor James Luby and research scientist David Bedford at the Minnesota Agricultural Experiment Station, the apple was introduced to the public in 1991 and sells at a premium price because of a sweet-tart flavor and firm texture that appeals to a wide range of consumers." The Honeycrisp is in good company too. Among the other technologies listed in the report are the nicotine patch for helping to stop smoking, the V-chip to protect children from television violence, the PSA test for diagnosing prostate cancer, the google search engine, cochlear ear implants, and the taxol anti-cancer drug. (Hirst)

Coming Meetings:

Dec. 5-7. Great Lakes Fruit and Vegetable Expo, Grand Rapids, MI.

Dec. 5-8. Cider making workshop, Cornell University. For more details refer to: <http://www.hort.purdue.edu/fruitveg/>

January 7-9, Wisconsin Fresh Fruit and Vegetable Conference, Olympia Resort and Conference Center, Oconomowoc. <http://www.wisconsinfreshproduce.org>

January 8-9, Kentucky Fruit and Vegetable Conference and Trade Show, Holiday Inn North, Lexington, KY. For more information contact John Strang 859-257-5685; e-mail jstrang@uky.edu

January 11-13, Illinois Specialty Crop and Agritourism Conference Crown Plaza Hotel, Springfield IL. For more information contact Rick Weinzierl, 217-244-2126

January 15-17, Ohio Fruit and Vegetable Growers Congress, Ohio Direct Agricultural Marketing Conference, Mid American Human Resource Conference and National Bramble Conference, Greater Columbus Convention Center.

January 25-28, Southern Sustainable Agriculture Conference. The Galt House Hotel and Suites, Louisville, KY. For more information (678) 494-0696.

Jan. 29. Beginning Commercial Apple Production workshop. Indianapolis. For more info contact Peter Hirst or visit: <http://www.inhort-congress.org>

Jan. 29-31. Indiana Horticultural Congress and Trade Show, Indianapolis. <http://www.inhort-congress.org>

January 30-February 1, Mid-Atlantic Fruit & Vegetable Convention. Hershey Lodge & Convention Center, Hershey PA

February 6, Southern Illinois Tree Fruit School, Holiday Inn, Mt. Vernon, Illinois. For more information contact Elizabeth Wahle, 618-692-9434.

February 9-12, North American Strawberry Growers Association Strawberry Symposium. Ventura, California. For more information <http://www.nasga.org/>.

February 12-13, Ohio Grape-Wine Short Course, OARDC, Wooster, OH.

February 14-15, Empire State Fruit and Vegetable Expo Syracuse, N.Y. For more information <http://www.nysaes.cornell.edu/hort/expo/>

February 16-17, North American Farmers' Direct Marketing Conference and Trade Show. Hyatt Regency Hotel, Calgary, Alberta, Canada. For more information <http://www.nafdma.com>.

February 27-28, Illinois Small Fruit and Strawberry Schools Holiday Inn, Mt. Vernon, Illinois. For more information contact Bronwyn Aly, 618-695-2444

March 6-9, 2007: 31st Wineries Unlimited, the largest trade show and seminar program for the wine industry east of the Rockies, will take place at the Valley Forge Convention Center in King of Prussia, PA (suburban Philadelphia). Includes a day of newcomer-oriented seminars, two days of regular seminars, and a day-long workshop on "Roostock, Plant and Fruit Quality for Fine Wine", with exhibits 3/7-8. Winery Planning and Design workshop by Dr. Bruce Zoecklein held 3/5 at the same location. Features a benefit auction fundraiser for ASEV/ES on 3/8. For more information and online registration please visit: www.vwm-online.com/wu.

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