INDEX

FFF05-04
June 20, 2005

Indiana Hort Society Summer Meeting:
Joe and Jane Black and their family established Apple Hill Orchard in 2000. Joe searched for a suitable property in and around Knox County for a number of years before purchasing the property where the orchard is now established, right on US 41 north of Vincennes, IN. Planting of the orchard began in the spring of 2000, with 24 varieties of apples and 16 varieties of peaches being established. In addition, about 60 pear trees were planted. The emphasis from the start has been to focus on the newer cultivars such as Honeycrisp, Zestar, Ginger Gold, Enterprise, Pink Lady, Cameo, Ambrosia, etc. Honeycrisp in particular has been very popular with customers and commands a significant price premium over other apple varieties. More apples were planted in the spring of 2004, and Apple Hill Orchard now has about 18 acres of trees planted.

Most apple trees have been planted on dwarfing rootstocks (mostly B.9) although some trees are on M.7. As on many orchards in the southern part of the state, fireblight looks like it may be a concern on susceptible varieties, despite the use of Steptomycin. Most dwarf trees have been trained using a 2-wire trellis and a small demonstration planting of dwarf trees on a V-trellis has been established near the market. Irrigation is essential on the sandy soil, and all plantings have trickle irrigation.

The Blacks have also built a very nice market that includes a full commercial kitchen where they make pies, caramel apples, slushies, tarts, turnovers, muffins, bread and seven varieties of donuts. The majority of the apples, peaches, nectarines and pears produced on the farm are sold through the market on the farm, although some produce is also sold at the Vincennes Farmers' Market. A small amount of fruit is sold wholesale to other markets. The upper level and deck can be used for receptions, weddings, etc, and this year's bookings are well up on last year. Cider production will begin this season with the recent purchase of a cider press and pasteurizer. The market opens in early July with peaches and is open until late December.

Their son, Brad, and his wife Karen join Joe and Jane Black in operating their farm and market.

Schedule:
6/31/05, 4pm; Introductions, tour or market facilities, discussion of marketing, dinner provided (modest cost)

7/1/05, 8am; Registration

8:45am; Introductions and overview of farm, walking farm tour. Lunch provided on premises (modest cost)

3pm; Conclude

Deadline Nears For Farm Equipment Sale: The deadline for bids for equipment from the old hort farm is almost here. The Hort Farm is being transferred to the Department of Forestry and Natural Resources as fruit research has moved to the Meigs farm. There are 33 items for sale from the old farm. These include:

- Apple packing line, water dumper, sizer
- Cider equipment – bin dumper, elevator, chopper, rice hull injector, press, refrigerated tanks, filters and jug filler
- 20 bu. Bins
- Weed badger, disc, other field implements
- Various sprayers, mowers
- Compressors
- Tanks
- Pruners

For a full listing, go to (http://www.hort.purdue.edu/hortfarm.html) Funds from the sale will be used to support fruit research at Purdue.

The deadline has been extended - sealed bids must be received by June 22, 2005.

Purdue Welcomes New Fruit Pathologist: We are pleased to welcome to Purdue Dr. Janna Beckerman as a new Assistant Professor of Plant Pathology. Dr. Beckerman will assume extension responsibilities for fruit and ornamental crops, and will also have significant teaching responsibilities here on campus. Currently Dr. Beckerman is extension plant pathologist at the University of Minnesota's Yard and Garden Clinic. (Pecknold)

Stopping Spread of Apple Scab: About 9 to 17 days are required from the time of infection by apple scab until the appearance of the olive-green, velvety scab lesions. Within the lesions secondary spores (conidia) are produced throughout the summer months… by the billions! All growers should start checking NOW for the first symptoms of scab. The recommended course of action **where scab lesions are present** is to apply a SI fungicide (Nova, Procure, or Rubigan) to minimize additional leaf infections **in combination with** a **FULL rate** of Captan to provide optimum control of fruit scab. However, with the introduction of the new strobilurin fungicides (Sovran and Flint) growers have a new alternative for keeping scab in check. Among the primary strengths of the strobies are their ability to suppress the formation of secondary spores and their ability to provide excellent control of fruit scab. Remember that fruit are at their maximum stage of susceptibility from pink until about 3-4 weeks after petal fall. And as always, we strongly suggest no more that 3 sprays of any strobilurin fungicide. We want these fungicides to last! (Pecknold)

***Further Information on Fireblight*:** To date it appears that fire blight is 'spotty' throughout southern Indiana, while northern Indiana has shown little if any fire blight. Some growers down south report severe twig blight while other growers report little to no blight. A reminder, even though streptomycin is registered for use until 30 days before harvest on pears and 50 days on apples we do NOT recommend the use of streptomycin after petal fall due to the fact that it does little good and you increase the potential for resistance to develop. The one exception for the use of streptomycin after petal fall is following a hailstorm or heavy wind damage. This "hail spray" should be made within 18 to 24 hours after the start of the storm, even if the foliage is not completely dry.

The late Dr. Paul Steiner, of the University of Maryland, made enormous contributions to our understanding of fire blight and posted some excellent articles about fire blight on the World Wide Web at: http://www.caf.wvu.edu/kearneysville/wvufarm10.html. I highly recommend you visit this web site and make these articles part of your permanent bookmarks. (Pecknold)

Strawberry Renovation: Matted row strawberry plantings must be renovated after harvest to establish new crowns for next year's crop.

For best results, renovation should be started immediately after the harvest is completed to promote early runner formation. The earlier a runner gets set, the higher its yield potential. Renovation should be completed by the end of July in normal years. Harvest is winding down across the state so growers should begin renovation as soon as the last marketable berries are harvested. The following steps describe renovation of commercial strawberry fields.

1. Weed control: Annual broadleaf weeds can be controlled with 2,4-D amine formulations. Check the label as only a few products are labeled for use on strawberries. (e.g. Amine 4 [Dimethylamine salt of 2,4-D (3.74 lb./gal.)] at 2 to 3 pts./acre in 25-50 gallons of water). Apply immediately after final harvest. Be extremely careful to avoid drift when applying 2,4-D. Even though the amine formulation is not highly volatile, it can volatilize under hot, humid conditions and can cause damage to desirable plants a considerable distance from the site of application. Some damage to strawberries is also possible. Read and understand the label completely before applying 2,4-D amine. If grasses are a problem, sethoxydim (Poast 1.5 EC) or clethodim (Select 2 EC) will control annual and some perennial grasses. However, do not tank mix these materials and 2,4-D. See ID 169 and the product label for rates and especially for precautions.
2. Mow the old leaves off just above the crowns 3-5 days after herbicide application. Do not mow so low as to damage the crowns.
3. Fertilize the planting. A soil test will help determine phosphorus and potassium needs, but foliar analysis is a more reliable measure of plant nutrition. For foliar analysis, sample the first fully expanded leaves following renovation. Generally, nitrogen should be applied at 25-60 lbs/acre, depending on vigor. It is more efficient to split nitrogen applications into two or three applications at regular intervals, rather than apply it all at once. A good plan is to apply about half at renovation and half again in late August when flower bud develop is occurring.
4. Subsoil: Where picker traffic has been heavy on wet soils, compaction may be severe. Subsoiling between rows will help break up compacted layers and provide better infiltration of water. Subsoiling may be done later in the sequence if crop residue is a problem or if soils are too wet at this time.
5. Narrow rows: Reduce the width of rows to a manageable width based on your row spacing, the aisle width desired, and the earliness of renovation. A desirable final row width to attain at the end of the season is 12-18 inches. Wider rows lead to low productivity and increased disease pressure. This means that rows can be narrowed to as little as 6 inches during renovation. Use a tiller or cultivator to achieve the reduction. Since more berries are produced at row edges than in the middle, narrow rows are superior to wide rows. Narrow rows will give better sunlight penetration, better disease control, and better fruit quality.
6. Cultivate: Incorporate the straw and other plant material between rows and throw a small amount of soil over the row by cultivation. Strawberry crowns continue development at the top, and new roots are initiated above old roots on the crown, so 1/2 - 1 inch of soil on the crowns will facilitate rooting. This also helps cover straw in the row and provides a good rooting medium for the new runner plants.
7. Weed control: Pre-emergence weed control should begin immediately. Dacthal, Sinbar or Devrinol are suggested materials. See ID-169 and check the product labels carefully. Devrinol must be incorporated by irrigation, rainfall, or cultivation to be effective. Rate and timing of Sinbar application is critical. If regrowth has started at all, significant damage may result. Some varieties are more sensitive to Sinbar than others. If unsure, make a test application to a small area before treating the entire

planting. Use 2 to 6 oz/acre/application and no more than 8 oz/acre/year total. Sinbar should not be used on soils with low organic matter, or on sensitive varieties like Guardian, Darrow, Tribute, Tristar and possibly Honeoye. If Sinbar gets onto strawberry leaves, irrigate to wash it off.

8. Irrigate: Water is needed for both activation of herbicides and for plant growth. Don't let the plants go into stress. Ideally the planting should receive 1 to 1-1/2 inches of water per week from either rain or irrigation.
9. Cultivate to sweep runners into the row until plant stand is sufficient. Thereafter, or in any case after early September, any runner plant not yet rooted is not likely to produce fruit next year and can be removed. Coulter wheels and/or cultivators will help remove these excess plants in the aisles.
10. Adequate moisture and fertility during August and September will increase fruit bud formation and improve fruit yield for the coming year. Continue irrigation through this time period and fertilize if necessary. An additional 20-30 pounds of N per acre is suggested, depending on the vigor. (Bordelon)

Shoot Positioning and Canopy Management: Now that we are past fruit set and shoots have toughened-up, it's time to get serious about shoot positioning in grapes. Varieties differ in their need for shoot position due to their growth habit and vigor. Some varieties such 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 will vary depending on vigor of the particular site. 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 may need to be repeated two or three times during the summer. (Bordelon)

Indiana Blueberry Crop Guestimate: The Blueberry Growers of Indiana organization held it's annual meeting recently at Van Kley's Blueberry Farm near Demotte. Everyone enjoyed the farm tour, potluck dinner, and camaraderie. One of their goals of the meeting was to estimate the size of the crop this year. Most growers feel that they have an above-average crop, even after some damage from the May 3 frost. The organization is estimating that Indiana will produce 3.5 to 4 million pounds of blueberries this year. That is up from the 3 million pounds produced in 2004. Overall the crop looks very good this year. Some growers expressed the need for rain to increase berry size. Early varieties are just starting to ripen in the northern part of the state, and harvest is underway in southern areas. Many growers noted that Phomopsis cane blight is becoming more common each year. Control recommendations are listed in the Midwest Commercial Small Fruit and Grape Spray Guide and Midwest Small Fruit Pest Management Handbook, both available on the Purdue Fruit and Vegetable Connection web site (http://www.hort.purdue.edu/fruitveg/). (Bordelon)

American Society for Enology & Viticulture-Eastern Section Meeting: The 30th Annual Technical Meeting and Symposium of the American Society for Enology & Viticulture-Eastern Section will be held July 13-16 at the Millennium Hotel in St. Louis, Missouri. The program will feature sessions on "Cutting-edge Cultivars" Pinot gris, Trami-

nette, Norton, and new Cold-Hardy Cultivars Frontenac, LaCrescent, etc. The meeting also includes:

- Pre-conference tour of Missouri wineries - visit two of nation's oldest wine producing regions
- Technical presentations on viticulture and enology
- Viticulture Consortium- East (VCE) research summit
- Wine industry trade show & wine receptions
- Student paper competition
- Annual business meeting and banquet

The spectacular Millennium Hotel, on the banks of the Mississippi, is within walking distance of the Arch and the cultural attractions of downtown.

Registration forms and Meeting Information is posted at (http://www.nysaes.cornell.edu/fst/asev/)

This conference is held in conjunction with the International Grape Genomics Symposium, July 12-14. (http://mtngrv.smsu.edu/symposium). (Bordelon)

Trends in Farmers' Market Purchasing:
A recent study in Iowa shows that farmers' markets provide more than fresh produce, flowers, and baked goods. This form of direct marketing generates an estimated $20.8 million in sales and over 300 jobs for the Iowa economy. Researchers interviewed more than 4500 customers to find that farmers' markets in Iowa generated $12.2 million in economic activity. Farmers' markets continue to be the most attractive marketing channel for vegetable and fruit growers in the state. According to the report, the average customer ranged from 51 to 65 years old, frequented the market 13 times during a 21-week season, and spent approximately $11-20 per visit. More than 80% bought fruits and vegetables followed by baked goods at 40%. This study was conducted by the Leopold Center for Sustainable Agriculture and analyzed by Iowa State University. For the full report titled "Consumers, Vendors and the Economic Importance of Iowa Farmers' Markets" visit (http://www.valuechains.org) or call Rich Pirog at 515-294-1854. (Dennis)

Upcoming Meetings:

June 28-29: Farm Management Tour at Hubers and other horticultural operations in Clark Co. sponsored by the Purdue Agricultural Economics Department.

June 30-July 1: Indiana Horticultural Society summer meeting. Apple Hill Orchard, near Vincennes. More details in the next issue of FFF

July 13-16: American Society for Enology & Viticulture-Eastern Section 30th Annual Technical Meeting and Symposium. St. Louis, MO. See information above.

August 5: Workshop, "Exploring Opportunities in Specialty Markets". See article in the last issue of FFF.

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